

Asian Fisheries Society

*International Symposium on*

# WOMEN

## IN ASIAN FISHERIES



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Asian Fisheries Society

*International Symposium on*

# **WOMEN**

## **IN ASIAN FISHERIES**

FIFTH ASIAN FISHERIES FORUM

13 November 1998

Chiang Mai, Thailand

Edited by

M.J. Williams, M.C. Nandeesh, V.P. Corral, E. Tech  
and P.S. Choo



**DFID**



## **International Symposium on Women in Asian Fisheries**

Edited by  
M.J. Williams  
M.C. Nandeesha  
V.P. Corral  
E. Tech  
P.S. Choo

2001

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### **Disclaimer:**

These proceedings attempt to present a faithful record of the 1998 International Symposium on Women in Asian Fisheries. We, the editors, have retained the style and 'voice' of the contributors as carefully as possible, rather than striving for uniformity of style as is more usual in other scientific publications.



ICLARM – The World Fish Center is one of the 16 international research centers of the Consultative Group on International Agricultural Research (CGIAR) that has initiated the public awareness campaign, Future Harvest.

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Asia serves as the mainstay of world fisheries, accounting for nearly 77% of inland production and about 42% of marine production of the total global fish production of around 120 million tonne annually (FAOSTAT, 1997). Nine of the 19 countries which contribute more than 1 million tonnes each per year to global fish production are in Asia, namely, China, India, Indonesia, Japan, North and South Korea, Malaysia, Philippines, and Thailand. The region is also a cradle of aquaculture, the most rapidly developing area in the fisheries sector, contributing approximately 90% to the total annual global aquaculture production of about 27.8 million tonne (FAOSTAT, 1997). It is therefore not surprising that fish forms an important part of the typical Asian diet. In countries such as Japan, China, Cambodia, Thailand, Philippines, and Malaysia, a large part of the daily animal protein requirement is obtained from fish. Still, the majority of the region's population does not have adequate fish for consumption. To make matters worse, a severe fish shortage threatens to hit Asia as its population rapidly expands. To ensure adequate supplies of fish for Asians in the years to come, it is necessary to view issues affecting the fisheries sector from both technical and social standpoints.

Although no accurate estimates are available on the actual number of people involved in fisheries throughout the region, it is believed that several million men and women are engaged in fisheries and fisheries-related activities. The degree of visibility of women's participation in these activities varies from country to country and, within a country, from region to region, depending on prevailing social and cultural values. Traditionally, Asian women's roles in fisheries have been limited to fish marketing and processing, although today's changing circumstances are seeing an increasing number of them engaged in aquaculture, fisheries, fisheries research, and fisheries education. Asian societies are gradually recognizing the contribution of women to the fisheries sector, due to efforts of various government agencies and non-governmental organizations over the past decade. However, except for a few isolated studies, there is as yet no comprehensive effort to tackle the issue of gender awareness and accord equal status, access, and recognition to women in Asian fisheries.

The declaration of the UN Decade for Women in 1975 saw the launching of several initiatives that sought to identify the role of women in the fisheries sector and to incorporate gender-related issues in development activities. Yet today, development plans in many countries still fail to tackle gender issues.

The first workshop on "Women in Aquaculture", held in April 1987 under the auspices of the FAO's Aquaculture Development and Coordination Programme (ADCP), in collaboration with the Norwegian Agency for Development Cooperation (NORAD), reviewed the contributions of women in aquaculture in different parts of the world and recommended ways to enhance the role and participation of women in this emerging sector. Another workshop on "Women in Fisheries," organized as a prelude to the Fourth World Conference on Women by the Philippines government, with the support of the United Nations Development Programme (UNDP), was held in July 1995. The workshop had for its objective the preparation of a comprehensive statement on the status of women in fisheries through the consensus of

the different countries in the Asia-Pacific region. In May 1996, the Royal Cambodian Government, in collaboration with the non-governmental organization Partnership for Development in Kampuchea (PADEK), organized a seminar on "Women in Fisheries in Indo-China Countries" which was held in Phnom Penh.

However, efforts undertaken with the help of interested individuals and donor agencies were, and still are, isolated and sporadic. The fisheries sector has unique problems related to women, which have to be addressed not only from a technical standpoint but also from a social one. Towards this end, this Symposium on Women in Asian Fisheries is aimed at stimulating discussion and promoting well-planned research and development activities in this area.

We are pleased that the Symposium attracted a good number of participants and generated very active discussion. The keynote speech delivered by the Hon. Helena Z. Benitez, Chair, National Centennial Commission Women's Sector, the Philippines, and the 13 presentations, gave much food for thought and the lessons offered should be followed up with further action. These papers are a mix of research studies, reviews and thought-pieces based on the authors' work experiences in development.

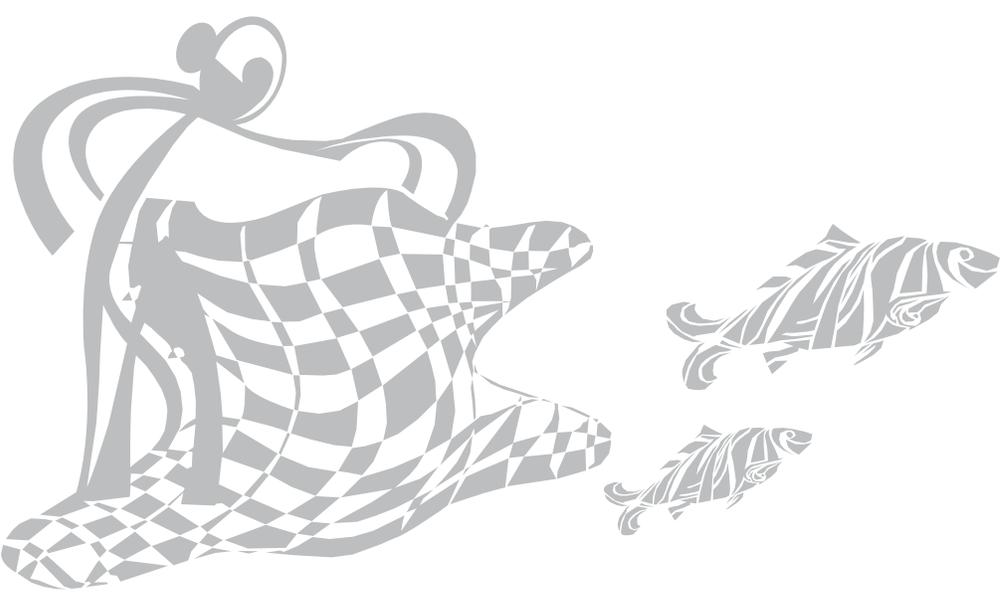
This Symposium owes its success to all the participants and sponsors. We would like to thank especially NORAD, the Asian Fisheries Society, ICLARM, PADEK, Department for International Development (UK) (DFID), CARE-Bangladesh and the National Centennial Commission Women's Sector (Philippines), and the efforts of the Editorial Committee, which is responsible for putting together the proceedings.

Professor Dr. M. Shariff  
President  
Asian Fisheries Society

Dr. M.J. Williams  
Director General  
ICLARM

Dr. M.C. Nandeeshha  
CARE, Bangladesh

# WELCOME REMARKS



## WELCOME REMARKS

M. Shariff  
President, Asian Fisheries Society

**The Honourable Director-General, Directorate of Fisheries of Thailand, Dhammarong Prakoboon; the Honourable Senator Helena Benitez; Dr. Meryl Williams, Director General of ICLARM; Dr. Piamsak Menasveta, Chair of the Local Organizing Committee (Fifth Asian Fisheries Forum); Dr. M.C. Nandeesh, CARE Bangladesh; ladies and gentlemen.**

**Good morning!**

**It is a great honour for me to be here amongst very great and committed partners in our society - the Women!**

**The challenges we face in the next millennium are tremendous and it will take concerted and dedicated efforts for us and the younger generation to focus on the issues that beset not only our countries but also the region as a whole.**

**I wish that the women and men who will be interacting in this very important meeting will take up a relevant issue - that of food security - for us, the young generation, and those that are yet to come. It will certainly benefit not only the women of the world but the men as well if other issues of concern in our homes and societies are discussed since the roles women play definitely set directions for our everyday lives. Let us also in passing consider aspirations, and issues like career paths. Let us be guided, without prejudice, so we can see a wider scenario where there is active and effective interplay between men and women.**

**Let us all join hands and transform our dreams into reality.**

## WELCOME REMARKS

M.J. Williams

Director General, International Centre for Living Aquatic Resources Management (ICLARM)

Senator Benitez, Director General Prakoboon, and colleagues.

I am proud to be associated with this special Symposium of the Fifth Asian Fisheries Forum (FAFF) and very pleased to see the Asian Fisheries Society giving prominence to this topic. The Symposium provides the opportunity to consider the issues of women in fisheries at the Asian regional level.

Today's Symposium has developed out of several earlier events, the first of which was the 1994 workshop on Women in Fisheries in Cambodia convened by PADEK, an NGO based in Cambodia. In 1996 PADEK organized a three-day seminar on women in fisheries in Indo-China countries, which I was privileged to attend. Dr. M.C. Nandeesh, then with PADEK, was the inspiration behind these two events, and in 1996, we realized that the topic should be addressed regionally, and when better to do this than at FAFF?

Fortunately, we have been able to hold this Symposium through the support of NORAD, PADEK, AFS, ICLARM and the Philippines Centennial Committee - Women's Sector.

Let me start with a disclaimer - I suspect that many of you would make the same disclaimer - I am no expert on women in fisheries. Rather, I am here as part of a voyage of discovery on this topic.

We at ICLARM recognize the importance of gender in our research program for aquatic resources management. We believe we have much to learn in this important field. The field itself is still underdeveloped.

There is a dearth of papers that concern women in fisheries in the scientific literature. Before 1975, for instance, less than one article on the topic was published per year. Between 1975 and 1979, the record improved slightly with roughly one paper a year published. From the 1980s onwards, about 17 papers have been published each year. Overall, however, only 0.25% of all published papers are related to women in fisheries, which shows the sorry state of women-focused research in fisheries.

Women in fisheries are also marginal in overall gender studies. For example, the Asian Development Bank published a sourcebook on gender and development in Asia which listed over 300 references. Only 1% of them relate to women in fisheries.

Why the low interest in women within fisheries studies? One reason proposed has been a certain amount of antagonism from within the sector for women's issues, maybe more so than in other sectors. As recently as the 1990s, women in fisheries were described by one fisheries officer in the Pacific region as a "mad aberration among aid agencies" because "women don't fish!".

Because women in fisheries is such a young field of study, its concepts and methods need further elaboration. On the question of concepts, for example, do we have the appropriate title for our Symposium today? Let me explain the dilemma.

The women in fisheries (WIF) perspective may be considered an offshoot of the women in development (WID) framework that arose in the 1960s. The WID, which was officially adopted by the United Nations in 1975, calls for the 'integration' of women in development. Women, of course, have always been part of these historical processes. Their contribution, however, is largely unrecognized and is made invisible by existing socio-cultural and economic institutions that have accorded women a subordinate status to men in society. A further limitation to the WID approach is its failure to address the need for substantial changes in these structures to improve the condition and status of women.

One alternative approach is the women and development (WAD) framework - and consequently a 'women and fisheries' (WAF) framework - which arose in the 1970s. WAD focuses on the relationship between women and the development process, and delves into such issues as social inequity and oppression based on class and gender, among others. The WAD framework also advocates the empowerment of women to bring about changes in gender roles and relations. The WAF framework perspective, therefore, would look at all factors that affect women's 'productive' work in the market and 'reproductive' work at home to meaningfully define women's contribution and role in fisheries.

In the late 1980s and early 1990s, the gender and development (GAD) concept emerged, which proposes a holistic view of societal organization that looks at the gender division of labour and women's access to and control over productive resources.

Gender-disaggregated data, for instance, will show us that as a general picture, men and women engage in different tasks in small-scale fisheries and aquaculture. In fisheries, men build the boats and catch the fish whereas women make and mend the nets, process and sell the catch. In aquaculture, men dig the ponds and stock them with fingerlings, while women tend the ponds and feed the fish. Men and women harvest the fish while women usually sell the harvest.

However, beyond roles and gender-based activities, other key factors come into play in a GAD perspective. Differential access to and control over the means of fisheries and aquaculture production by men and women, for instance, should be a major consideration when assessing the benefits of improved production techniques.

If we had used the GAD concept earlier on, this may have overcome the perception expressed to us by many male colleagues that this Symposium was not for them! In academia, however, the move to gender and fisheries (GAF) is not fully accepted. Some women fear that this approach will divert attention from women-focused issues such as women's multiple burdens, the increasing 'feminization' of poverty, and the need for empowering women.

Let me conclude my welcoming remarks then by posing a dual challenge for this Symposium to consider. Since the fisheries sector is undergoing great upheavals caused by internal and external factors, how can we (a) help shape policies and actions relating to gender in the sector, and (b) engage in women-focused research that needs special attention?

## WELCOME REMARKS

M.C. Nandeesh  
CARE Bangladesh

Distinguished guests of the day, Senator Helena Benitez, Chairperson of the Philippines National Centennial Commission, Women's sector, Mr. Dhammarong Prakoboon, Director General of Fisheries in Thailand, Dr. Meryl Williams, Symposium Chair and Director General of ICLARM, Professor Dr. Mohammed Shariff, President of the Asian Fisheries Society, ladies and gentlemen.

I am privileged to welcome each one of you to this important event being organized by the Asian Fisheries Society in partnership with various other organizations. With a good representation of participants from various Asian countries and from different disciplines of fisheries, we hope that the output of today's event will help in resolving many of the issues related to gender in Asian fisheries. Well-focused gender development programs in fisheries are still few in Asia and the need to ensure sustained gender programs by developing appropriate process-centred gender activities in fisheries is expressed by many. The Beijing international conference on women recognized the role of women in all facets of fisheries, and it was suggested that policies and programs that would benefit women in the fisheries sector need to be developed.

In Indo-China countries, owing to frequent wars, women are the major group contributing to food production and the economy. In view of the importance of fisheries for the people in the region, in 1996 a regional seminar on "Women in Fisheries in Indo-China countries" was organized by PADEK in collaboration with various government and non-governmental organizations. The participation of Dr. Meryl Williams in that event as the keynote speaker provided new direction to that regional event. Outputs from the Phnom Penh seminar demonstrated the contribution of women to fisheries in all four Indo-China countries, and the need for intensifying and developing programs in the region which were gender sensitive. The participants of the Phnom Penh seminar also took a decision that the dialogue initiated at the Indo-China level should be continued at the Asian level. It was decided that the Asian Fisheries Society triennial events, which bring together large numbers of Asia's best scientists and development personnel should be used to discuss this issue at the Asian level. Hence today's event is organized with a purpose of understanding the progress in research and development programs in respect of gender at the Asian level, and stimulating further development on this important topic. From my experience in the field, I am also of the opinion that there are more social issues related to fisheries development than technical ones. However, very little effort has been made to understand these social issues and develop appropriate programs to mitigate them. Unless available resources are efficiently used to address these social issues, in which gender tops the list, the fisheries sector may not be able to bridge the gap between supply and demand in the Asian region in the coming decades. We are optimistic that this forum will take note of these deficiencies in fisheries development and make coordinated efforts to solve the problems. I once again take this opportunity to welcome every one of you and I seek your active participation and contribution to enrich the symposium proceedings.

## WELCOME REMARKS

D. Prakoboon  
Director General, Directorate of Fisheries, Thailand

**Dr. Mohammed Shariff, AFS President; Dr. Meryl Williams, Director General; ICLARM, distinguished guests; ladies and gentlemen.**

**It is indeed my pleasure to deliver this speech on the issue of women in Asian fisheries to this gathering. At the outset, let me thank the organizers for inviting me to this very important Symposium. When I received invitation, I did not hesitate, but readily agreed to take part in this event as I have always realized the importance of the roles women play in the agriculture sector, including fisheries.**

**As we all know, this year the World Food Day, organized by the FAO, highlighted the roles of women under the short but meaningful theme of "Women Feed the World". I believe that all of you will agree with me that women carry many burdens, not only those associated with running a household. In the agricultural countries of Asia, women work hard in the fields as well.**

**The fisheries sector is regarded as a vital link to food security as well as providing employment and export earnings opportunities for many Asian countries. Asia is the biggest contributor to regional as well as global fisheries production. In 1996, marine and inland capture fisheries were as high as 40 million tons, accounting for 40% of global fisheries production. Capture fisheries in Asia tend to increase at an annual growth rate of 2-4%. Aquaculture production on the other hand reached 34 million tons, with a record of producing 90% of the total global volume. It has maintained an average annual growth rate of over 10%.**

**The success behind the fisheries and aquaculture development in Asia is partly due to the direct and indirect contributions of women to fisheries and fisheries-related areas. The statistic for women's involvement in this activity in Asia is unavailable. In Thailand, statistics show that roughly 162,000 fishermen are involved in marine capture fisheries.**

**The need to spend long periods at sea away from home limits the participation of women in deep-sea fishing. We do not expect that many women take a direct part in this difficult task. However, women may play supportive roles on shore and at fish landing ports. In many fishing communities, women make and repair nets, and have the primary responsibility for fish marketing.**

**According to a survey, there are 164,000 aquaculture farms in Thailand. If at least one woman commits to on-farm activities, then some 160,000 women participate in aquaculture production. Women's contribution to aquaculture may include farm monitoring, feed preparation, fish feeding, general management, and, eventually, fish marketing.**

**The sector in fisheries where I believe women have high potential is in fish processing.**

and preserve fish products. It can be expected that hundreds of thousands of women work in these enterprises. At a professional level, women show their talents as fishery researchers, fishery lecturers, and fishery extension officials.

Of the 3,000 fishery officials in the Department of Fisheries in Thailand, 1000, or 33%, are women. Therefore, the roles of Asian women in fisheries cannot be overlooked. Women are proud of their dedication and the contributions they make through their various fisheries activities.

I am glad to know that the issues of women in fisheries are once more being emphasized. This Symposium will again reveal to you newer aspects of Asian women in fisheries. I wish this Symposium every success and may it draw more attention to all women in fisheries. Finally, I wish all of the participants good health and a pleasant stay in Thailand.

Thank you.

# SUMMARY



## SUMMARY OF THE SYMPOSIUM

J.H. Primavera

Aquaculture Department, SEAFDEC, Tigbauan, Iloilo 5021, Philippines

P.B. Bueno

NALA, P.O. Box 1040, Kasetsart Campus, Jatujak, Bangkok 10903, Thailand

The approach of this Symposium was to view familiar issues in the light of scientific studies and carefully documented experiences. The Symposium has fashioned a set of useful conclusions and recommendations marked less by rhetoric and strident calls for a forceful struggle against the traditional agents of women's discrimination and exploitation than by firm expressions of aspirations for equality supported by objective assessments of the causes and manifestations of inequity. Measures to place activities that enhance women's roles, increase their opportunities for advancement and improve their welfare more prominently on the agendas of various national, regional and global bodies were proposed.

The keynote speech and the thirteen presentations (many resulting from scientific research and documented field experiences) described regional experiences and analysed case studies from Bangladesh, India, Malaysia, the Philippines, Taiwan, Thailand and the countries of Indo-China. They served largely to re-emphasize the various aspects of the theme of inequity resulting from social traditions, cultural orientation, and family and work place values abetted by poverty and the indifference, wilful neglect or abuse of power by a figure of authority. The impacts on women are well documented: too much work at home that goes unrecognized and thus unvalued, lack of useful education, no access or poor access to production resources, lack of opportunities for self - or paid employment, displacement by technology or new production arrangements, less chance for advancement, low wages, exploitation by employers, poor health and poor productivity. Although impacts on families are documented, food insecurity remains a constant threat. The social costs are even less clear and less quantified, but evidence has shown that if a mother has to travel great distances or spend time securing income or food for her family, children were likely to be neglected and intense strains in the family would likely break it up. Finally, one need not be an expert to realize that national development will be sluggish if the economic engine is only operating at half power; it is certainly to the economic detriment of a society if half the population cannot fulfil its productive potential.

Setting the tone of the Symposium, the keynote speaker, former Philippines Senator Helena Z. Benitez, a champion of human rights, drew attention to the UN resolution banning all forms of discrimination against women. She warned, however, that while adopting a declaration is a long way from actually stopping all forms of discrimination against women, the resolution did provide the global women's movement with a starting point and policy framework. Focusing on Asia, and speaking in the context of the conference theme of fisheries and food security, the keynote speaker outlined a course of action designed to promote the goals of any movement to enhance the status of women, from a community development project to a global campaign. Its foundation is objectivity. Get the facts, she admonished. Interpret the data and information in an objective way and understand their meaning. Information based

on facts and unbiased interpretations are infinitely more credible. Clear about their meaning, one can then confidently use the information in messages that people would readily understand. Then one can organize the information for advocacy, which she advised would be far more effective if it were embedded in concrete activities of a well-defined constituency with clearly focused objectives. Examples from the speaker's involvement with global, national and village programs for women (and in rural development) illustrated her points. The described course of action is noteworthy for its emphasis on objectivity, thus aptly setting the tone for the presentations that followed, most of which were based on scientific studies.

To counterpoint the keynote speech, C. Nozawa, a worker from a non-government organization, outlined a strategy for empowering women. Empowerment, she stressed, was based on changing the power relationship between genders. While there has been resistance to this (understandably from the men who dominate the power structures) there is now a growing support for empowering women at the personal, institutional and project levels. At the project level, research and development should desegregate information, incorporate gender needs, recognize the roles of women and build on women's skills. Stress was placed on the premise that equal power relationships between the sexes would enable full development of society because "the other half of society's membership is fully participating." The challenges to empowerment include organizing women, organizing information, capacity building and instituting gender sensitive activities.

The Thailand Director General of Fisheries, D. Prakoboon, is responsible for national policy making and for the implementation of national fisheries development programs. More than a third of the staff of the fisheries department, which he heads, are women and a growing number of women employees are occupying leading positions in management and research. Despite this, he admitted that there might still be room for bringing better access to services, means of personal improvement, and career advancement for women. There was growing awareness of the need, especially in government, to institute mechanisms that allow women parity with their male counterparts in aspiring for key posts in management and research. The fishing industry is an equal opportunity employer, he emphasized, although the reality is that women tend to find more employment in the post-harvest sector.

The speech of Thailand's Director General of Fisheries was given further flesh by one of the women staff members of his department, S. Suwanrangi, a scientist and head of a laboratory. She confirmed that there are proportionately more women workers (80%) in the post-harvest sector. In one university known for its agriculture, forestry and fisheries studies, 45% of those enrolled in fisheries courses are female. On the issue of technology and women, the introduction of technology with the aim of reducing drudgery and increasing efficiency has, in fact, tended to displace women workers (in her experience, in fisheries the displacement is as high as 35%). Related to this is the suitability of technology to women users; she suggested more participation by women in designing, developing and adapting technologies that were intended for use by women. She extended her suggestion to decision-making in research and development.

Two presentations described recent regional forums on enhancing the role of women in fisheries development in Indo-China and the resulting regional initiatives. The first, by M. Nandeesh, enumerated the issues highlighted in these forums; the second, by K. Matics,

described a networking initiative among the countries of Indo-China and Thailand. The issues included recognizing and putting a value to the contributions of women to various fishery activities, ensuring nutritional security by increasing the participation of women and making it more meaningful, credit in enhancing productivity and promoting self-employment of women, enhancing the roles of women in academe and government, providing policy guidelines with scientific studies and well-documented experiences, and exchanging research findings and experiences. The outcome was an initiative to set up a network in the Mekong Basin (which subsequently became a collaborative sub-regional activity spearheaded by the Mekong River Commission). The network aims to address research and development issues on women in fisheries, facilitate the exchange of research results, provide assistance to project formulation, and support the establishment of national networks of women in fisheries.

How do women perceive their worth? A thorough study by M.S. Chao and I.C. Liao in Taiwan showed that the educated woman - the subjects were teachers, researchers, and generally those with careers in industry and academe - saw their contribution to national and institutional policy-making as insignificant. They considered working in laboratories as perhaps the best that they could aspire to, followed by teaching. This perception was influenced by "external factors" affecting their careers, specifically, marriage, and having to rear children. The study showed women's preference for R & D work in fisheries. The findings offered an insight into how women's images of themselves can be used in career guidance programs. On the other hand, they also affirmed the theory that women's perceptions of self-worth influence their behaviour and their attitudes towards self-improvement. The more serious implication of the study is that women's perceptions of low self-worth could be a reflection of some social values that hold men as superior.

The first of two studies in the Philippines, by I. Siason, described the overall status of women and their roles in fisheries development. The second, by F. Sotto et al., focused on the subordinate role of women in a group fishing system. The first study indicated that Filipino women in fisheries perform a variety of roles from gathering and production, to the usual post-harvest processing and marketing, but also showed that they take part in fishing expeditions. Credit arrangements are biased towards men; banks only recognize men as borrowers with the result that women have to resort to borrowing from the informal sources that generally charge higher rates of interest. In family matters, women are invariably responsible for making up any shortfall in family income, which results in a variety of activities and longer working hours. An interesting finding related to enforcement of local ordinances on fishing violations is that the women are usually in the "frontline in enforcing these local regulations, confronting violators, and resolving conflicts".

The second study of an offshore group of seine-net fishing operations, underlines the issue that traditions, and even superstitions, conspire to discriminate against women. In the group fishing operation, where there is a very distinct hierarchy of roles, women and children occupy the lowest rungs and receive the smallest shares of the proceeds of the catch. Tradition does not allow them to become masters of the operation regardless of their skills, experience and leadership abilities. In addition, they are often blamed for poor catches and accused of being the "bringers of bad luck", a euphemism for the illicit relations between women and the married men during the long hours at sea. The low rank of women makes them vulnerable to abuse by the male members of the operation.

According to the Malaysian study, by J. Yahara, on the role of women in small-scale fisheries the contributions of women to the economy are not considered in national accounting. Their contribution to family income is usually in cash and unpaid family labor and they have little time (6 hours at most of a 12-14 hour work day) for paid work. Women are generally overworked, exploited and their services undervalued. Those marginalized by new arrangements or technology, have taken up jobs in the tourist and cottage industries. Still, fish processing provided the highest average income for women. However, women working in the fishing industry tended to be eased out of their traditional sources of livelihood by developments. This underlines the importance of including the social impacts on women in the assessment of development projects, and the need for policies to address alternative employment schemes for displaced workers.

The south Asian region yielded several encouraging community-based experiences including those of a development bank and NGOs together with one study that described the depressing status of women in the workplace. The underlying theme of the papers from the subcontinent was the contributions of women to family livelihoods and to ensuring food security. They also provided noteworthy lessons in social organization.

A national development bank has demonstrated that small-scale projects for women are bankable. S.C. Patak explained how the National Bank for Agricultural and Rural Development of India showed that financing schemes for small-scale projects can both help women generate gainful self-employment and at the same time improve the bank's performance. The bank had high recovery rates for loans to women. The bank had created a loan application section solely for women, and, in keeping with its mandate, has included model projects and technical assistance to borrowers in its credit schemes. It was pointed out, however, that credit schemes are greatly facilitated by a property-user rights scheme for women as well as for other disadvantaged sectors who could benefit from credit facilities. To be an effective instrument of development, credit should be complemented by appropriate production technology, skills training for women entrepreneurs, a market for produce, and the establishment of a self-help group among women in addition to policies on user rights especially for the landless.

M.A. Rahman described how a large Bangladesh-based NGO with national coverage, (PROSHIKA), has impressively shown that good social organization, clearly defined objectives and a practical strategy, based on cooperation with government rather than confrontation, can bring about empowerment and economic development among the very poor urban families that include the landless, small marginal farmers, petty traders and urban slum dwellers. The strategy integrates fishery and aquaculture into household and community activities to earn income and produce nutritious food, acquire further education, enhance health and maintain or improve sanitation, protect the environment, and undertake other income generating as well as community development activities. This has involved massive organizational efforts and mobilization of support that included skills training, credit provision, technical assistance, and demonstrations of technology through pilot projects. It also needed strong advocacy. While ensuring gender sensitivity in its activities, it is remarkable that the PROSHIKA scheme does not separate activities into male or female because projects usually involve members of both sexes. The NGO has been wary of the so-called "fake groups" (which avail themselves of credit without paying back) as distinguished from the NGO-organized groups; an impressive 94% of the PROSHIKA participants pay back their loans.

The role of gender in the fisheries sector in Bangladesh was broadly illustrated by another national-scope NGO, CARE Bangladesh. M.C. Nandeeshha described how gender discrimination is generally widespread, women have less access to resources and are more socially insecure, their labor value is usually less than that of men, religious "binding" is present, sexual harassment sometimes happens, and decision-making options are extremely limited. Under these weighty circumstances, CARE has followed a strategy that instills in the women participants of various projects critical thinking and decision-making ability. A prime example of how the decision-making capability is instilled and sharpened among CARE clients is the farmer field school that emphasizes less the traditional "show me and I'll adopt" extension approach and more the needs-assessment, diagnosis, information-seeking and solution-development mode of problem solving.

Tribal women in Bangladesh have not usually been subject to social "binding" so that their social and spatial mobility is not limited. The study by K.K. Ahmed and others on tribal women and their role in reservoir fisheries showed that this greater freedom has enabled the women to contribute more effectively to fishery production in oxbow lakes and reservoirs. They are primarily involved in setting up brush shelters (as fish aggregating devices), collecting fry with push nets, harvesting and retailing fresh fish, and sorting, icing and drying fish. Significantly their husbands were supportive and provided assistance. The lesson from this study is that the role of the tribal women in fisheries development was enhanced in large measure by the absence of a social stigma attached to their mobility. Women's exclusion from many activities is not a constraint in tribal societies.

Finally, a south Indian study by V.D. Nishchith provided two remarkable results: (i) a methodology to measure precisely the contribution of women in economic activities, and (ii) a description of the institutionalized oppression of women through labor practices. The study area has 1,237 processing-exporting firms with some 35,000 employees, three-quarters of whom are women. Some of the findings were that: cost of production was less with women workers because they were paid less; the women worked more hours than the men for the same pay; and more women were employed to do the same amount of work as a smaller number of men. From an economic standpoint, this translated into lower technical efficiency of factories because women's labor was under-utilized. Related social issues included job contracts that go around the law and women being overworked and stressed, and becoming ill. All of these impact negatively on productivity in the workplace and family welfare. The findings clearly show that economic efficiency is not necessarily helped by cheap and exploited labor. Extending this to the national level, economic productivity and development benefit much more from fair labor practices and enlightened policies on employment and the welfare of workers.

In summary, women make highly significant but little recognized contributions to fisheries and aquaculture, fish processing, retailing and fisheries sector services. Each presentation made recommendations, explicit or implied, to remedy the situation. Understandably, it is more difficult to describe ways to attack the root cause of the problem than its manifestations. Reflecting this, the presentations tended to give greater attention to alleviating symptoms; for instance, how to create better job opportunities, how higher or alternative income may be earned, how money could be borrowed on easier and less onerous terms, or how formal

or informal education can provide better opportunities, on how the numerous positive facets of traditions, culture and religion could be emphasized and harnessed to enhance the status of women in society instead of having the same social forces interpreted and used as instruments of suppression or oppression of women.

Nonetheless, the lessons offered by these studies and reports of field experiences are interesting, forceful and worthy of incorporation into policy and further plans of action at various levels. The Symposium outlined a set of recommendations to enhance women's roles in fisheries, increase their opportunities for advancement, and improve their welfare, among them:

- i. training and extension programs in fisheries should specifically target women in areas where they contribute to fisheries activities;
- ii. microcredit schemes, along the lines of the successful programs in Bangladesh and India, should be tried to benefit women in other countries;
- iii. networks should be formed at the national and regional levels with the active participation of all the actors, following the successful initiative of the Mekong River Commission for all the countries of Indo-China.

Finally, the Symposium's own advocacy was for objective messages and, as much as possible, the unbiased interpretation and use of information. This approach was appropriate since the Symposium was held in the broader-scope regional scientific forum -the Fifth Asian Fisheries Forum. Necessarily, such objectivity would be abetted by research, more refined research methodologies, and stronger research capacities to deal with women's issues, to which the Symposium has urged the Asian Fisheries Forum as well as the organizations and agencies supporting or conducting research and development to devote more attention, effort and resources.

# KEYNOTE ADDRESS



H.Z. Benitez

The Philippines Women's University, Taft Avenue, Manila City, Philippines

I am deeply honoured to be part of the Symposium on Women in Asian Fisheries in connection with the International Conference on Fisheries and Food Security Beyond the Year 2000. There is no need to further belabor the importance of and relationship between fisheries and food security in the coming century since I am sure we are all thoroughly aware of how crucial these are to the well being of humans in the coming millennium.

Rather than dwell on what you know well and realize, I shall go directly to what I propose to input into the Symposium.

It is not very often that a generalist is given the opportunity to address specialists such as those gathered in this Symposium. When such an opportunity comes, I try to take full advantage. My hope and intention is that the generalist's perspective I bring to the forum could make useful contributions to the proceedings; that my inputs and those of other generalists in this specialist's symposium would in some measure help in attaining its objectives.

According to the information kindly provided by the organizers, particularly Dr. Meryl J. Williams, ICLARM Director General, and Ms. Elsie Tech, executive officer of the Asian Fisheries Society, this Symposium is seeking to achieve two objectives, namely:

- i. To examine the progress made by recent research into women in fisheries in various Asian countries; and
- ii. To develop strategies to deal with important problems through networking and cooperative research.

These twin objectives therefore are my guides in making this presentation.

Your Symposium is being held within the larger context of events and developments affecting women and fisheries today and through the early years of the 21st century.

A new women's agenda was adopted by the United Nations at the International Women's Conference in Beijing three years ago. The United Nations conference provided fresh impetus and updated directions for the international women's movement that has now been going on for the better part of three decades. I had an active role in the early years of the women's movement as the first woman from southeast Asia to chair in 1969 the UN Commission on the Status of Women. It was during my watch that the UN General Assembly finally adopted the long-debated and much-awaited resolution banning all forms of discrimination against women. Adopting a declaration is of course a long way from actually stopping all forms of discrimination against women. However, the declaration provided the women's movement the needed starting point and the global policy framework.

This year in the Philippines a specific women's sector was created for the observance of our centennial of national independence. Correct me if I am wrong but I am not aware of any other nation observing a century of freedom that has accorded women the same kind of importance and regard. And by all accounts, the work of the National Centennial Council (NCC) women's sector is one of the highlights and crowning achievements of the Philippines National Centennial celebration. I ascribe these achievements to the enthusiasm, dedication, creativity, and effectiveness that Filipino women brought to the enterprise. That I am the commissioner for the sector is almost incidental. The ten million Filipino women who are members of the various women's organizations in the Philippines and the women in government that we mobilized for the Centennial were the real achievers. Maybe in my country there is some truth to the wisecrack that if you want to do a man-sized job, send women to do it.

In a few days, we will hold in Manila an International Women's Conference as the high point of the women's sector's participation in our National Centennial. The conference will examine and highlight the role of women in nation building, peace, and security. We expect an attendance of at least 6,000 women from all over the world. This is the last major event of our National Centennial celebration. Some of my friends jokingly tell me that this women's conference only serves to illustrate that women will always have to have the last word. In this case, I tell them, why not!

In the context of Asian fisheries, this Symposium is taking place during the International Year of the Ocean, which succeeds last year's International Year of the Reef. The International Year of the Ocean impinges on fisheries and food security in the next century. According to ICLARM, Asia is the backbone of world fisheries. The region accounts for 77% of inland and 42% of marine fisheries production. Nine of the 19 countries that contribute more than one million tonnes per year to global fish production are in Asia. On the other hand, Asia is home to two-thirds of the world's population. Fish being a major source of protein in the Asian diet, it follows that Asians are also leading consumers of fishery products. In addition, worldwide, as in Asia, there is a continuing and accelerating decline in the fish catch that fish-farming cannot make up for or offset. These factors must be carefully taken into account in the proceedings of this Symposium.

In the context of your conference theme, we can scarcely afford to enter the 21st century and the third millennium without a program for ensuring food security that would be consistent with the sustainable use and development of the resources of our lands and of our waters. We know, and research has shown, that the most severe impact of the on-going so-called Asian economic flu will be on children, women and minorities because these are the sectors least able to cope with the problems created by the crisis. It is expected therefore that Asian families and the women that nurture these families will be the ones most severely challenged in coping with the Asian economic crisis.

In the light of these contextual premises and of the objectives of this Symposium, I raise the following for consideration:

- i. Get the facts
- ii. Interpret and assimilate
- iii. Disseminate and advocate
- iv. Organize and implement

As scientists and specialists you know the facts are indispensable to effective action; that the more comprehensive and reliable the facts, the more appropriate and relevant the actions. In the case of women in Asian fisheries, getting the facts is not a simple or easy matter. When you look for the facts you will discover that national as well as global data acquisition and organization are neither gender-sensitive nor women-friendly. They are not even people-oriented despite the fact that the data and statistics result from what people do. Fish production and data about it are directly the results of what people do to catch or raise fish. Yet the data-gathers and statisticians ignore this.

Get the facts

In researching this presentation, my staff and I consulted various information sources including the 1997 World Bank Development Report and the 1996 Philippines Statistical Yearbook for data on fish production and the people engaged in this vital enterprise. Would you believe that neither of these statistical "bibles" says how many people, much less women, are involved? Both provided data on tonnage and monetary value of fish caught and/or raised in farms. However, neither have anything on the number of people that toiled to catch and produce the fish tonnage whose monetary value the statistics books quantify.

Having failed to find people in the section on fish production, as though the fish caught and raised themselves without involvement of people, we next tried labor and employment. We drew the same blank. Fisheries as an economic activity are lumped under agriculture and forestry with no distinction as to who are fishing, who are farming, and who are in forestry. And women in fisheries? I give you one guess as to whether such data is provided. Right! No such data is given!

This is not to say the data do not exist or that they have not been gathered. I am sure that in those voluminous survey instruments and questionnaires that the statisticians and enumerators use, the gender and other person information of respondents are included. But to ferret out this information is the challenge, so you can, to quote from the Symposium objectives, "examine the progress made by recent research into women in fisheries in various Asian countries" and, "develop strategies to deal with important problems through networking and cooperative research". Fortunately, there is the computer with its prodigious capability to process enormous amounts of data. However, we still have to see that the data are relevant and meaningful.

Interpret and assimilate

And that brings me to the second thing I would like to bring before the Symposium, interpret and assimilate. Information per se is not enough. Information has to be made meaningful

and usable. That calls for interpretation and assimilation. Often this would involve bringing together masses of seemingly unrelated or loose and isolated data and deriving a coherent interpretation and practical usefulness from them.

As we realize increasingly that everything in our world is connected or interconnected, we would naturally start looking at things in a holistic manner. We would stop being the seven blind men in Indian folklore that groped at the same elephant and reached seven different conclusions on what an elephant is. Rather we should, like the poet Shelley said, "See the world in a grain of sand and hold eternity in an hour". We should learn to use information not as a crutch to prop ourselves up, but as a lamp to help light our way to where we want to go.

The facts by themselves become truly useful only when they are correctly understood and meaningfully interpreted. Data on the number of people and women producing a given quantity and value of fish products become meaningful and comprehensible when these facts are related to the impact they have on the diet, health and economic well-being of the people who are in fisheries, on their families, their communities, and the world at large.

Making the facts meaningful may well call for additional research to discover the whys, wherefores and therefore of the facts. It would likewise call for organizing the data in people-oriented terms.

Disseminate and advocate

When the facts are known and their meaning is clear, we have a real basis for dissemination and advocacy. We need to disseminate and advocate because women still constitute an overwhelming minority in our society. This is not an oxymoron. Women are many in terms of numbers, but we are still a minority in terms of decision-making. By the same token, fishery is a major and crucial enterprise, but in the eyes of policy and decision-makers, it is a minor concern to be lumped with sundry other things. Moreover, we know the role of women in fisheries is vital but because of a lack of authoritative facts and data, the role is not properly appreciated and taken into account in economic, political and social decision-making, and implementation.

A friend of mine, the late Dr. Eric Carlson, former head of the United Nations Center for Planning, Building and Housing, used to emphasize to me that the causes we are espousing can be effectively pursued only if we are able to build a constituency for environment and habitat. Another friend, the famous anthropologist Margaret Mead, harped on the same thing. They might as well have been referring to women in Asian fisheries. We need to build a constituency for our cause.

With a constituency we can make our presence felt. We can get the decisions and actions we need. We will have a critical mass that can accomplish the tasks we set for ourselves. Confident of our facts and clear about their meaning, we should then disseminate the facts and their meaning and advocate on behalf of our cause. At the very least, we should advocate that the way the world organizes facts and data should be gender-fair and sensitive and that the data should be meaningful in terms of how people live their lives. We should disseminate the facts

and take our advocacy to those who set policies and promulgate action on them. In disseminating and advocating, however, the more pragmatic strategy and tactic might be cooperation rather than opposition, of working together rather than confronting. We should be firm and passionate about our cause, like Portia in the Merchant of Venice, rather than emotional and hysterical, like Medea. As Sinead O'Connor aptly said in her song Germaine, "The opposite of patriarchy is not matriarchy but fraternity. And I think it is the women that have to break the spiral of power and find the trick of cooperation".

We can build our constituency faster and more durably by cooperation and effective dissemination and advocacy.

Organize and implement

Having built our constituency and therefore formed a firm base, we should make the ultimate move - organize and implement.

God helps those who help themselves. Let us set up the institutions, create the networks, formulate the action plans, and carry them out. Whether it be to change data and information systems to make them people-friendly and gender-sensitive, or more substantive causes such as more sustainable fishery practices, it is best that we do it ourselves, take the lead role, as it were, and let the rest follow suit.

In this regard, allow me to cite an example from my own organization, the Philippine Rural Construction Movement (PRRM). The example I will cite, I think, neatly illustrates the four proposals I have made today.

My late father, Dean Conrado Benitez, together with another Asian visionary, Dr. James Yen, started the Philippine Rural Construction Movement shortly after the end of the Second World War or five decades ago. It was a civil society response to a challenge of its time - the rehabilitation of a countryside devastated by war. As the challenge changed over the years, the response likewise adapted and evolved accordingly.

Today, PRRM's concern is sustainable development of habitat and environment. Our sustainable development model is anchored on communities gaining control over the use and management of their natural resources bases. We seek to achieve three complementary objectives: community empowerment, improved quality of life, and the preservation and revitalization of the environment and habitat.

This concept is concretised and implemented in a program we have that I think is directly relevant to this Symposium. This is the PRRM Community-Based Coastal Reserve Management Program for Manila Bay or CB-RMP. This program considers the entire Manila Bay as its impact area. It is being implemented in 42 coastal villages across 15 municipalities in the provinces of Bataan, Bulacan, Cavite, Pampanga and in Navotas town in Metro Manila, the National Capital Region. All of them are on the shorelines of the bay.

Recognizing the complex problems of the bay, the main thrust of the program is the consolidation and strengthening of fishing communities around the bay. The main program

components are: Community Organizing and Leadership Formation; Participatory Research and Coastal Resource Management Planning; Alternative Livelihood Systems Development; Popular Education and Training; and Networking and Advocacy.

At present 45 people's organizations have been established at the barangay level - 24 in Cavite, 7 in Bulacan, 4 in Pampanga, 6 in Bataan and 4 in Navotas. There is a membership base of more than 2,100 individuals and a leadership core of around 330. They serve as mechanisms for pooling resources and energies towards collective action. They implement projects at the barangay level such as small-scale livelihood, coastal clean up, and social services delivery.

To consolidate and project the strengths and the capabilities of the people's organizations beyond the barangays, PRRM assisted in federating them at provincial level. The provincial federation in Cavite is called Nagkakaisang Maliliit na Mangingisda na Kabite, acronym NAMAMANGKA. Translated it means United Small Fishers of Kabite while the acronym NAMAMANGKA alludes to boat people.

One major accomplishment of the program is the formation of the Kalipunan ng Maliliit na Mangingisda ng Manila Bay, with the acronym KALMADA-MB. Roughly translated this means Federation of Small Fishers of Manila Bay. The acronym KALMADA also has a symbolic meaning. In Filipino kalmada is the term used to refer to a calm sea. KALMADA is the first and only bay-wide federation of small fishers in Manila Bay.

The Federation functions as the main advocacy arm of the small fishers that would facilitate and strengthen policy reforms and initiatives on bay-wide and national issues affecting the fisheries industry as well as the situation of marginalized coastal communities.

This is the background for the story of a remarkable woman and her organization that I will relate. Her story is published in the Rural Reconstruction Forum, a publication of the PRRM. I think you will see in her story the kind of women in Asian fisheries we should be looking for and researching on.

Her name is Nelia Don. She is in her 40s, mother of two, wife, homemaker, and helpmate to a tricycle driver. At certain points in her life, she sold fresh and smoked fish in Metro Manila, retailed clothes on credit, and eventually set up her own small tailoring and dressmaking shop. She is also an outstanding community leader and organizer.

She came to PRRM's attention in November 1993 when PRRM was organizing fisher folks of Barangay Wawa II in Rosario, Cavite. PRRM had already formed around 35 subsistence fisher folk into Samahang Agap-Sikap. We wanted to enlist other sectors to further facilitate efforts toward community-based coastal resources management. Nelia Don and her group, Akay Association, 84% of whose 38 members are women, was introduced to PRRM by the town's municipal agricultural officer.

After several meetings and dialogues during which both sides learned about each other including their common and respective expectations and concerns, Samahang Agap-Sikap and Akay Association forged a partnership. And it has proved remarkably productive for

both sides. The women of Cavite's coastal communities have traditionally played an important role in production. They are involved in practically every aspect, from preparing food and fishing gear, including mending the fishnet, to selling the catch. Their work is crucial particularly in the coastal towns of Cavite where both saltwater and freshwater fish and mussel growth is practised and possible - but has to survive against rapid urbanization and unplanned land use.

On top of their production duties, homemaking and motherhood, they have to help their men folk cope with difficulties brought on by a declining fish catch and diminishing family income. The majority of them, not educated and seemingly unskilled, resort to vending all sorts of things - vegetables, fruits, clothes, and anything that would return a little profit. Those with high school diplomas and still within the 16 to 25 year age bracket apply for work in the factories of the Cavite Export Processing Zone.

In spite of these productive contributions, however, the women remained chained to traditional perceptions that limit them to their reproductive and domestic capabilities. Because of their work at home and at their livelihood, most of the women cannot or do not involve themselves in community affairs. But a remarkable few, like Nelia Don, do.

Her involvement in the community started when she became a Christian in 1986 at the age of 31. With her new found faith came a deeper understanding of the problems of her community, and she associated herself with the larger community with the hope of helping transform it. In 1990, she became active as a volunteer Barangay Health Worker (BHW). Together with other BHWs, she fed malnourished children and constantly monitored their conditions. In 1993 with around 30 neighbours and church mates she organized Abot-Kamay (Clasped Hands) which later became Akay (Guiding Hand) Association.

As Akay president, she provided the leadership necessary for the organization. Among its projects was a small-scale pillow making business. She was instrumental in securing scrap fabric for use as pillow fillings from the Export Processing Zone Authority. She also provided sewing lessons to the women members to develop their skills. They have likewise sponsored voters' education training and facilitated the drafting of a people's agenda for the 1994 and 1995 local elections. The agenda outlines the different issues and problems in the Barangay and contained their demands regarding coastal resource rehabilitation and the delivery of essential services like deep wells, latrines and a functioning Barangay Health Center.

Now in partnership with Agap-Sikap, Akay is taking on the challenges of resource rehabilitation and conservation as well. Akay and Agap-Sikap have initiated cleanliness drives for the shoreline of Wawa II and preservation of coastal mangroves for fish breeding. They have joined their men folk in a campaign against dynamite fishing. Notably, they are now part of the water parade and fiesta events in addition to the traditional food service roles.

Under her leadership, Akay Association became an official part of the provincial federation of fisher folk, the NAMAMANGKA. In 1995, she was elected president of the NAMAMANGKA-Rosario chapter composed of five people's organizations in the town.

The emergence of Nelia Don as a leader evolved from long years of being victimized by the everyday problems of her community. Along with others like her, she is just now discovering the strengths of action and cooperation. In her own words: "Ngayon ko nakikita na marami pala tayong magagawa sa community natin o sa bayan. Ang mahalaga lang ay ang pagkakaisa at kooperasyon ng bawa't isa, lalaki man o babae, mangingisda man o tindera ng isda". (I have come to realize that we can achieve so many things for our communities and for the country. What is important is unity and cooperation, regardless of sex and whether one catches the fish or vends them.)

To that, I say amen.

Thank you and good day.

# SYMPOSIUM PAPERS



K. Rana  
Food and Agriculture Organization (FAO)

V.Q. Perrez-Corral  
International Center for Living Aquatic Resources Management (ICLARM)

**Promoting the full participation and empowerment of women in the fisheries sector has gained widespread recognition and support. When the United Nations declared the Decade for Women in 1975, an important step was taken to raise the profile of the age-old social, cultural and economic barriers that prevented and hindered women from being active agents and beneficiaries of development.**

Several consultations and workshops have since been conducted and papers written on the under-valuing of the role of women and children in fisheries. The World Fisheries Conference in Rome in 1984 stressed the vital contribution that women make - directly and indirectly - to fisheries, fishing economies and communities. In Africa, a regional workshop in Zimbabwe in 1990 stressed that addressing gender needs both practically and strategically will enhance women's participation in fisheries development (ALCOM, 1991). Participants at an Asia-Pacific regional workshop in 1995 recommended a more holistic strategy aimed at women's empowerment and self-fulfillment that would take cognizance of their multiple roles in the family and community (Anon, 1995).

During this international symposium on women in fisheries, several common issues emerged. These included, inter alia: empowerment of women, traditional roles played by women in capture fishery and aquaculture, the slow rate at which women enter the sector, multiple roles of women in society, improved food security, impact of technologies, attitude and perceptions of societies, and the lack of relevant data.

The extent and manner in which women are likely to contribute to fisheries is very much linked to the diversity of cultures worldwide, and the socio-cultural differences in society. We should acknowledge that traditionally a woman's principal role in food production or procurement, particularly in rural and peri-urban areas, centered on the welfare of the family. This paper considers two key interrelated issues. First, women's contributions in fisheries, and second, how women's participation and empowerment in the fisheries sector can be enhanced.

Where are women in fisheries?

It is important to acknowledge from the outset that the gender issues surrounding the roles and participation of women in both capture and culture sectors are not unique to fisheries. Hence, a better understanding of the constraints and challenges that women face, and the actual and potential contributions of women (and children) in fisheries requires a holistic approach that encompasses the many roles played by women in the case of fisheries in rural and peri-urban societies. These roles are usually associated with the central role of women in agriculture and in attempting to secure food for their families. Consequently women engage

in fisheries as a part-time activity, allocating time between household duties, agriculture and fisheries. Women and children make highly significant but socially undervalued contributions to capture and culture fisheries, for example in processing, marketing and other ancillary services. The fisheries sector has often been mistakenly viewed as mainly male dominated. Fishing activities undertaken by men are the more visible while the post-harvest and shore-based activities dominated by women remain largely unreported and therefore invisible.

In many countries, a gender-differentiated profile of the fisheries sector would show a division of labour along gender lines. Recent studies, however, show that women are taking on more of the tasks typically undertaken by men in addition to their own traditional tasks. The following sections provide an overview of the various roles and contributions to the fisheries sector that are made by women.

#### Women in capture fisheries

In many regions of the developing world, women and men are engaged in complementary activities in capture fisheries. In general, where men crew large boats used in off-shore and deep-sea fishing, women manage smaller boats and canoes nearer to the shore. Long periods of absence from their children and families, multiple responsibilities in the household, the physical nature and environment of off-shore fishing and superstitions about women on board fishing boats have traditionally restricted women to onshore and near-shore based activities. Women are therefore more visible in artisanal fisheries. Women mostly fish with small complements, wade and glean the shores for shellfish and harvest seaweed.

Women are also involved in inland capture fisheries in many countries. In Africa, they fish the rivers and ponds. In Asia, where fish is an integral part of the diet of many cultures, women are active in both artisanal and commercial fisheries. In parts of India, women net prawns in backwaters. In Lao PDR, they fish in the rivers and canals. In the Philippines, they fish from canoes in coastal lagoons.

In small island states in the Pacific islands where aquatic resources are an intrinsic part of people's lives, both men and women are responsible for food gathering and preparation, whether from land or from water (Matthews, 1995). In fisheries, men are generally associated with the more visible and commercial activities (small-scale artisanal, industrial fishing) while women dominate the subsistence and non-commercial sectors, particularly collecting invertebrates.

#### Women in aquaculture

With the unprecedented growth of aquaculture and the diminishing fish harvests of recent years, aquaculture appears to be a promising avenue through which to achieve food and nutritional security in developing countries. It now represents the fastest growing agricultural industry. Asia leads production worldwide and in many areas women continue to play a leading role in its rapid growth.

In countries where aquaculture has long been a traditional activity, women and children typically catch fry, produce fingerlings, manage ponds, and feed the fish. Women integrate these tasks with other on-farm activities like tending ducks, pigs and livestock, and cultivating

fruit and vegetables for family consumption. As with household work, women's on-farm work is largely unpaid. Any extra income women derive from selling surplus fish contributes directly to the family's well-being.

Many women have successfully adopted and developed aquaculture production. Women often feed and harvest fish, and process the catch. They also raise fry to produce fingerlings for stocking ponds, provide water-replenishment services during the transport of fingerlings from the hatcheries to the farms and grow fish in ponds.

In Bangladesh, integrated agriculture-aquaculture technologies adopted by poor women's groups helped improve household incomes and nutrition. Landless men and women were able to farm fish in many under-utilized water bodies with assistance from NGOs and government agencies in securing lease rights over the water bodies, and in providing microcredit. Women achieved confidence and self-esteem from their new skills and in the knowledge they could now afford to send their children to school.

Women in fish processing and marketing

Women in artisanal fishing communities are mainly responsible for the skilled and time-consuming tasks that take place on-shore, for example making and mending nets, processing and marketing fish. The processing of the fish catch includes sun drying, salting, smoking and preparing fish and fish-derived foods such as fish paste and cakes. These activities are usually cottage-level industries and are areas in which appropriate technologies can bring more benefits to women.

When social customs do not prohibit it, women are important suppliers and vendors of fish in local markets. More enterprising women have become important fish entrepreneurs in some developing regions. They earn, administer and control significant sums of money, financing a variety of fish-based enterprises and generating substantial income for their households as well as their communities. Women's distribution and marketing functions ensure low-cost services for fishermen and help to maintain low fish prices for local consumers.

Women entrepreneurs, however, are dominant in the retail rather than the wholesale fish trade, as large-scale transactions tend to be the prerogatives of men. Moreover, women exercise control over the marketing of low-value rather than high-value species. The absence of women from the wholesale and high-value fish trade has been attributed to lack of financing for women and the lesser mobility of women traders. With the introduction of more sophisticated fish distribution and marketing systems, the dominant role of women fish traders in low-value species and the retail trade is gradually being eroded.

Women in fisheries resource management

Many fisheries have collapsed in recent years due to the combined pressure of over fishing and harmful fishing practices. The downstream effect of land-based activities that include farming, forestry and construction of dams and irrigation systems is degradation of the aquatic environment. Clearly, urgent measures are needed to promote more sustainable utilization and management of fisheries resources.

In many countries in Asia, Africa and the Americas, shared governance through rights-based management, community-based management and co-management are replacing open access and centralized governance of aquatic resources. The new management regimes redefine resource access, encourage fishers to shift to non-destructive practices, and institute measures to guard the coastal waters from poachers and illegal fishers. They also present new challenges to women users of fisheries resources.

Women, organized as interest groups to effect change, can become key players in more effective fisheries management. After all, it is women's livelihoods which are most affected and marginalized when aquatic resources are degraded and depleted. When reefs and mangrove areas are destroyed, for instance, women fishers who use simple gears are relegated to shell gathering or to seek alternative sources of income.

Women need to band together to ensure control over the scarce resources that provide sustainable livelihoods for their families. Involving women in joint leasing and preservation of mangrove forests, collective protective custody over critical areas, restricting harvests through closed seasons, banning destructive fishing methods, and introducing sound conservation strategies (e.g. restocking reefs with valuable species such as trochus and giant clam whose numbers are diminishing) are some management measures currently utilized. Women, more than men, are at the forefront in many of these strategies. In conflict resolution, for instance, women are deemed better negotiators than men, particularly when management regulations need to be enforced and violators confronted.

Women, however, can only become efficient resource managers if their multiple burdens are reduced and they, as with the rest of the community, gain more control over the resources of the environment. Women's longer-term strategic interests should go hand-in-hand with the practical need to protect the environment. In taking on roles as caretakers of the environment, women should not be further burdened without accompanying compensation, either monetary or through the sharing of their burdens at home and in the community.

#### Women in modernizing fisheries

Women's changing roles in fisheries can be best understood within the context of the wider changes taking place in the sector. Increasing mechanization and an export orientation tend to overlook the importance of subsistence fisheries where women are important contributors. The integration of local fishing economies into global markets affects fish trade, fishing and post-harvest technologies, and women's traditional roles in these sub-sectors. Technological and economic shifts that are currently taking place have direct implications on women and the gender division of labour.

Improvement in technology has led to mechanization, larger and better-equipped vessels, more efficient gear, and freezing, preserving and processing facilities. Increased mechanization has reduced women's labor in the family fishing enterprise and, in some cases, replaced the family fishing enterprise altogether (CIDA, 1993). Technologies such as net-weaving machines and new yarns for nets, introduced to improve efficiency have reduced employment opportunities for women. Bulk buying and the growth of a large wholesale trade has reduced the role of small fish traders to a considerable extent, and women fish traders are the first to be displaced.

Moreover, as fisheries developed to commercial and industrial scales, women's activities intensified from fishing for the family, to accumulating a surplus for outside markets. Women will increasingly exploit fisheries resources beyond subsistence food needs for their families because of the increased demand for fisheries products.

Women in fishing communities are also employed in industrial fisheries and canneries. Because their skill and education levels are generally lower than men's, more women are relegated to lower paid, lower-skilled jobs in regimented settings than men. Inhuman living and working conditions and violations of labor laws are often reported.

#### Empowering women in fisheries

Development efforts have shown that sustained improvements in productivity, and the sustainable use of fisheries and other natural resources, can be achieved if the crucial role played by women is acknowledged. Women should be equal partners and productive participants in fisheries activities that will improve nutritional and living standards for themselves and their families. Opportunities to acquire appropriate technologies that will enable them to contribute effectively to sustained fisheries development and growth should be provided. It is therefore essential to increase women's participation and decision-making in fisheries.

The roles played by women in the fisheries sector may often be governed by decisions beyond their control. The major issue and entry points, together with the major roles played by women in capture fisheries and aquaculture, are shown in Figure 1. The distribution of women along this pathway, particularly at levels above that of primary producer is likely to largely depend upon a combination of a high literacy rate and a proactive policy to employ women in decision-making positions.

Women's literacy rates are lower than those for men. In south Asia, for instance, female literacy rates are only around 50% those of males. With better opportunities in secondary and tertiary education, more women have enrolled in training and research institutions. This signals a better potential for the participation of women in fisheries development and planning.

Despite the major roles of women in the sector, most women lack access to and control over physical and capital resources, to decision-making and leadership positions, and to training and formal education. Access to these critical resources and services would improve the efficiency, profitability, and sustainability of their activities. In the process, women would be empowered to become active agents in economic and social changes that will uplift their lives and those of their families.

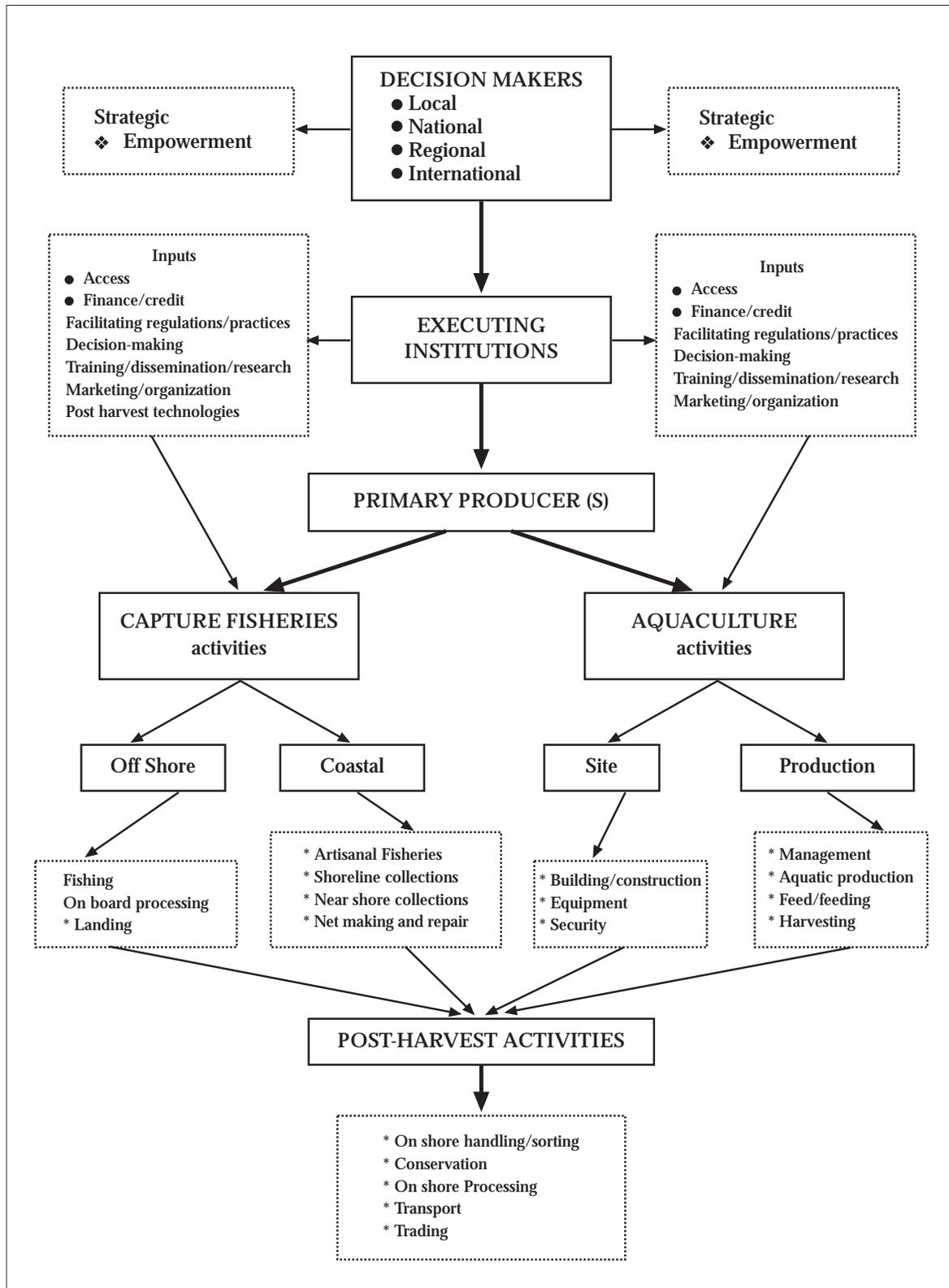


Fig.1. Dominant issues and their pathways influencing the role of women in capture fisheries and aquaculture. Roles and entry points of activities usually undertaken by women are shown by an (\*). Crucial issues and practical inputs are indicated by (♦) and (●).

Institutional and cultural constraints also need to be addressed. In developing assistance programs for women (e.g. training, microcredit, access to water bodies), there needs to be a greater understanding of gender roles and relations within the family or household, and the institutional contexts within which these roles have evolved through time.

Targeted interventions for poor women are needed to ensure the effective adoption of appropriate technology. Education and other extension programs, for instance, frequently exhibit a degree of misdirection. More men than women receive training in all areas of capture fisheries and aquaculture, even in those tasks that women tend to dominate.

High priority should be given to subsistence inshore fisheries, the traditional domain of women, which provide the main source of protein foods for coastal communities. In aquaculture development, secure access to land and water, credit, and markets for women producers are preconditions for them to benefit economically and socially. The role of women in resource conservation and management is also central, and needs to be supported by training programs. Appropriate measures are required to address women's increasing marginalization as fisheries are enlarged or mechanized.

Due to inadequate knowledge of the various roles of women in fisheries, the impact and value of these and other endeavors are not well understood. The continued pursuance of this topic would indicate that much is still needed to achieve an acceptable level of equality and opportunity for women in the fisheries sector. Gender-sensitive research in fisheries must take into account the fact that men and women tend to undertake different tasks in fisheries, aquaculture, and fish processing/marketing, and in resource management, and are affected differently as fisheries modernize.

The papers presented in these proceedings are one effort to address the knowledge-gap on women in Asian fisheries.

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# HELP ME TO HELP MYSELF: HIGHLIGHTS OF PHNOM PENH SEMINAR ON WOMEN IN FISHERIES IN INDO-CHINA COUNTRIES

M.C. Nandeesha

CARE Bangladesh, 1209, House 65, Road 7/A, Dhanmondi, Dhaka

## Abstract

A regional seminar on Women in Fisheries in Indo-China Countries was organized from 6-8 March 1996 in Phnom Penh, Cambodia by PADEK (Partnership for Development in Kampuchea), a non-governmental organization, in partnership with various NGOs and government organizations. The event brought together over 100 participants from all the four Indo-China countries, namely, Cambodia, Vietnam, Thailand, and the Lao PDR. Twenty-five papers were presented in the seminar. These addressed various facets of women's involvement in aquaculture, fish processing, fish marketing, education, research, and development. In all the Indo-China countries women contribute significantly to various fisheries activities. However, programs and policies to help these women enhance their knowledge and skills are lacking in these countries. Based on the seminar presentations and discussion, it was recommended that women should be given a high priority for training and the provision of microcredit to enhance their participation and profitability in the fisheries marketing and processing sectors. Special provision should be made to attract women students to fisheries courses in order to meet the shortage of women staff in various sectors of fisheries. In addition, formation of national and regional networks to strengthen research and cooperation among various sectors involved in research and development should be planned. Discussion on gender issues in various forms and forums needs to be prolonged, so as to ensure changes in attitudes and make programs more gender sensitive.

## Introduction

Women are the most undervalued and inappropriately utilized human resource in the developing world. With the global efforts to increase gender awareness, noticeable changes in the attitude of people towards using this un-utilized/under-utilized human capacity have been seen in the last decade. In Indo-China countries women are active in the whole economy, and particularly so in the fisheries sector. However, as in the other sectors low importance is attached to gender issues in the fisheries sector as well. Women in fisheries encounter many problems, both social and technical in nature, but there is a paucity of effort to understand these problems and find solutions. With a view to developing a better understanding of the contribution made by women to the fisheries sector, and the problems encountered by them, a regional seminar on Women in Fisheries in Indo-China Countries was held from 6-8 March 1996 in Phnom Penh, Cambodia. The background to this regional initiative is presented below.

### Women in Cambodian fisheries

Cambodia, with a population of about 10 million people has more women than men due to decades of war. There are many female heads of households, and the continuing internal conflicts have added many challenges to the lives of women. Women form an important workforce in various fisheries activities in Cambodia. In recognition of the role of women in the fisheries sector, Partnership for Development in Kampuchea (PADEK) organized a national workshop on the role of women in fisheries in November 1994, and laid the foundation for discussions. With the active participation of several agencies, the workshop was able to highlight the crucial role women play in the fisheries sector. Some of the important recommendations of this workshop were:

- Women contribute significantly to many fisheries activities in Cambodia. It was suggested that in-depth research should be conducted to understand the role of women and the problems they encountered in various fisheries activities and to build an information database to assist policy makers and development agencies.
- Credit schemes for women were recognized as important and should be supported to enhance their activities in the fisheries sector.
- Programs to build gender awareness should be implemented to ensure gender balanced development programs in fisheries.
- Information exchange should be increased between the Indo-China countries, as there are many similarities between these countries. Lessons learned would be useful across countries and sharing information could avoid wastage of resources.

Based on the recommendations of this workshop, PADEK, with the support of various organizations, conducted a regional Indo-China seminar from 6-8 March 1996 at Phnom Penh, Cambodia with the following objectives:

- i. To assess the role of women in various sectors of fisheries in Indo-China countries;
- ii. To identify areas which require support to improve the skills and knowledge of women; and
- iii. To provide a forum for discussion and promote the establishment of networks.

More than 100 participants attended this regional seminar. Dr. Meryl Williams, Director General of ICLARM, delivered the keynote address and called for urgent attention to be paid to gender issues, with a view to hastening the process of healthy gender-balanced development of the fisheries sector. Her keynote address touched on several important issues confronted by women in Indo-China. Increasing scarcity of fish supply, rapid changes in the economic development of the region and the effects of development on women, the internal conflicts in the area, which have resulted in women taking on greater family responsibilities, were the major issues covered in her presentation. She emphasized that the consequences of fish scarcity in the Indo-China region would be enormous since most of the population in the region derives most of their protein from fish. Over-fishing, destructive fishing practices, the construction of dams across the productive Mekong River and its tributaries, the use of pesticides in rice fields, and the increasing pollution of water ways, are some of the factors which might cause further reduction in fish yields from open waters, and have a negative

effect on the population. In addition to the dependence of the people on fish as the primary source of protein, a large proportion of the population in the region also depends on fish as the primary source of income, and reductions in yields would severely affect them. Women need to find alternative ways to cope with the decline in income from fisheries resources. She highlighted the loss of many lives from two decades of war. Women now head many families in the region. In view of the importance of fish to the families, she pointed out that it is necessary to ensure that women are provided with skills to enhance productivity from both capture and culture fisheries. The rapidly changing economy in the region is providing opportunities for women to earn income from alternative sources. However, it is necessary to avoid excessive stress on women in earning this additional income to meet family needs. She called for increased investigations of gender issues in fisheries, and the development of gender sensitive programs and policies based on field necessities.

In addition to Dr. Meryl Williams, two other invited speakers provided direction for the seminar agenda through their presentations. Dr. Kathleen Matics, from the Mekong River Commission, dealt with the contribution of women to fisheries development in southeast Asia. She noted that, in the fisheries sector, projects are formulated by men for men and women's needs are ignored. She mentioned that there are limited educational opportunities for women and this has severe consequences for long-term fisheries development in the region. Hence, she emphasized the need for providing education to women. She suggested the formation of networks as useful tools for information exchange.

Mr. Pedro Bueno, from the Network of Aquaculture Centres in Asia, addressed the issues related to gender in fisheries development. He proposed a framework for undertaking research in the area of gender, and developing action plans to implement research.

Besides these three papers, twenty-two other papers were contributed by authors from the region: 11 from Cambodia, 4 from Lao PDR, 2 from Thailand and another 4 from Vietnam. Issues raised in these papers are summarized and presented below.

#### Women's participation in fisheries activities

Papers from all four countries highlighted the participation of women's fisheries activities in the region. Women play key roles in the fisheries processing and marketing sectors of all four countries. In the aquaculture sector, which is expanding rapidly in the region, women are active contributors. In the area of research and development, in Vietnam and Thailand women form sizeable percentages of the staff (30-40%), but in Lao PDR and Cambodia, women's representation was reported to be poor. It was recommended that special emphasis should be placed on attracting women candidates to fisheries courses in these countries, and that adequate numbers of women must be trained to meet the increasing demand for human resources from private, NGO and government sectors. It was emphasized that in all the countries, women carry out fisheries activities in addition to their normal household work and child-bearing. Hence, technological interventions and inventions should lessen the women's work burdens, and be woman-friendly.

In Vietnam, technological advancements in rice cultivation permitted women more time for other activities. Similarly, technological developments in fish processing in Thailand, for

example the introduction of better processing equipment, have relieved women of some of the hard work. Holistic approaches are considered essential in order to derive full benefit from the development process and help women.

#### Food security

As stated earlier, fish is an important component of food supply throughout the Indo-China region. Though all countries seem to have attained self-sufficiency in rice production, there are increasing shortages of fish to meet the needs of the population. Fish is becoming expensive for the consumer and there is a need to reduce production costs and at the same time increase profitability for the producer. Current levels of production from capture fisheries do not meet all the needs of the population for fish. Fish stocks must be better managed and alternative production methods such as aquaculture will need to be better developed. New technologies, which would specifically benefit women, should be developed and promoted. In all the four countries of the region, it was shown that women, with the support of children, perform most of the tasks in aquaculture, and hence women should be specifically targeted for training. Women will benefit if aquaculture pond inputs, such as seed and feed, are made available locally. In order to ensure that women can carry out most aquaculture activities independently, it is necessary for technological innovations to consider women's needs and capabilities. Efforts should be directed to developing aquaculture techniques which would contribute to environmental improvement rather than being destructive as is the case in some forms of shrimp farming.

#### Financial management

Greater participation of women in fisheries activities and their contribution to increasing family income give them better control of finances and a greater say in decision making. Women engaged in activities such as fish marketing and fish processing earn substantial incomes and contribute significantly to family welfare. In Vietnam, women earn good incomes from fish nursery activities and derive many benefits, including an improved status within the family. However, women involved in selling fish often face hardships due to unhealthy competition among themselves, resulting in lower profit levels. Also women tend to attract higher interest on their loans. Lack of capital is one of the major constraints to women gaining a good profit. Cooperation of men in the home is essential to ensure women's increased participation in fisheries activities and their contribution to the development of fisheries.

#### Extension and training

Though women participate actively in various fisheries activities, training programs tend to be misdirected. As a result, more men continue to be trained than women. Some groups in society, like the ethnic minorities in Lao PDR, were completely deprived of training opportunities. The low rate of literacy was recognized as one of the factors responsible for the poor training of women. "One stop shop" approaches were recommended in order to help women with, for example health, hygiene, family spacing, literacy, fisheries, etc. In Cambodia as well as in Lao PDR, the population growth rate is very high as there is poor knowledge of various birth control measures. The use of mass communication media such as radio, video, and television to disseminate fisheries information, as well as other information, was recommended.

### Credit programs

Most of the results presented in the seminar highlighted credit as one of the major constraints to women's involvement in the sector. Microcredit was suggested as a possible solution. In countries like Cambodia, a fluctuating currency was reported as one of the major problems in implementing any credit programs. The size of loan required for the operation of a small enterprise poses problems for agencies to undertake to manage such small-scale credit programs. It was recommended that to help women microcredit programs appropriate to each area be evolved.

### Natural resource management and conservation

In the Indo-China countries, the level of knowledge about natural resource management is poor. This area requires urgent strengthening taking into consideration the potential for indigenous information to contribute to fisheries conservation and management. In areas where the natural fishery resources are still abundant, aquaculture could be used to complement the natural resources. Appropriate aquaculture systems, which complement the natural resources, should be promoted and special emphasis should be placed on promoting indigenous species based aquaculture systems.

Women can contribute substantially in natural resource management by encouraging their family members to follow conservation measures. Some studies have demonstrated how the ignorance of women has contributed negatively to safeguarding natural resources. Building dams across the Mekong was considered to have a significant negative impact on fisheries resources and consequently the lives of women.

Based on the papers presented and discussions held, the following major recommendations emerged from the seminar:

- Training and extension programs should set numerical targets for increased participation of women.
- Women should receive intensive training in fish processing and in aquaculture because though their work dominates these subsectors, they lack technical information.
- Extension officers should be trained to train others in applied technology, for example those at the village and community level.
- Departments of fisheries and universities should recognize women in the fisheries sector and give voice to women's issues through specific programs and courses. These agencies should also pay attention to recruiting women staff and promoting their careers.
- Development and rural assistance programs should initiate efforts to help women to better manage their time and to design strategies such as sharing tasks among women in communities. This could help in solving women's dilemmas such as having too many tasks to perform. Research may be required to design and pilot culturally appropriate ways of improving women's time management.
- Every effort should be made to raise the level of respect for women in fisheries and to improve their profile. Men's and women's roles should be balanced and there should be mutual respect.

- Government agencies should better utilize the mass media (radio, television, and video) for disseminating information on fisheries and other issues of relevance to women (e.g. health, education, family planning).
- A network of researchers and others interested in women in fisheries should be formed. To formulate a method of operating, the Asian Fisheries Society, PADEK, MRC, NACA, AIT, ICLARM, SEAFDEC, and national partners should meet to work out a strategy. The purpose of the network should be to disseminate information, research exchanges between partners, and to formulate joint projects.
- Development agencies should assist governments and NGOs to develop guidelines for projects that target women in fisheries using the network to coordinate activities and research.
- In Indo-China countries, national capacities for research on women in fisheries should be strengthened and encouraged by special in-service courses in social science research methods. The network members can help to organize and design these courses to meet the needs.
- Research and development agencies should be encouraged to undertake more national and regional comparative studies on women in fisheries to allow better targeting of planning and development intervention.

Her Royal Highness Princess Marie Ranariddah graced the closing session of the seminar. She expressed appreciation for the initiative taken by PADEK in organizing the event and assured support from the government for the implementation of the recommendations.

#### Conclusion

The Phnom Penh seminar provided a good foundation to initiate discussions on gender issues in fisheries at the regional level. It not only brought together all the four countries of the region, but many international and regional organizations such as ICLARM, MRC and NACA took part in the event and provided broader perspectives for the initiative. Since the discussions had implications and relevance to other countries as well as to those of Indo-China, the participants decided to urge the Asian Fisheries Society to initiate discussion at the Asian level at the triennial Asian Fisheries Forum to be held in Thailand in 1998. In the intervening period, the WES (West, East and South, cooperative project funded by the Government of The Netherlands) project at Can Tho University and the Mekong River Commission in Bangkok took the initiative to organize a follow-up round table discussion on Women in Fisheries in the Mekong region from 9-11 April 1997. The round table discussion further reviewed the recommendations of the Phnom Penh seminar and took steps to establish networks in all the four countries of the region. This is a significant contribution made by the WES project and the MRC to further discussion and initiate concrete activities.

#### Acknowledgements

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# THE ROLE OF NETWORKS IN ADDRESSING RESEARCH AND DEVELOPMENT ISSUES ON WOMEN IN FISHERIES: FISHERIES NETWORKS IN THE MEKONG BASIN

K.L. Matics  
Catch and Culture, Mekong River Commission Secretariat,  
P.O. Box 1-18, Bangkok 10100, Thailand

Apart from many household tasks which are considered as exclusively women's duties, women in Southeast Asia have participated in social and economic activities such as education, agriculture and fisheries, business and industry, as well as producing handicraft and managing cottage industries to supplement family income.

In terms of agricultural and fishing activities, many women are the heads of their households who bring up and educate their children, and make a living for the entire family. Even if the head of the household is a man, usually the woman holds the power because she manages the household's resources. Women also share the decision-making authority with their husbands.

In the fisheries sub-sector, women participate in almost all activities including preparation of meals, fishing materials, and processing the fish. Some help with the construction of fishing gears, fishing boats, fish sorting, fish handling, fish processing, etc. Some women even participate directly in fishing activities with their family members in open lakes, rivers and streams. Women almost exclusively operate fish selling.

Although women are involved in almost all activities of society, very little data has been recorded or studied, especially in the fishing industry. Therefore, women do not receive adequate working conditions and facilities or training and exchange of information. Women's invaluable and important contribution to fishing and related activities is often forgotten or overlooked and their problems are often not seen.

Major problems facing women in fisheries in the Mekong Region

Many of the landless women in the Mekong Region are the poorest of the poor women in fisheries. Various social problems underline the plight of some unfortunate and indigent women in fisheries along both sides of the Mekong River. The wide spectrum of problems faced include:

- i. Lack of basic education and training targeting women in fisheries activities, particularly related to fish processing and marketing;
- ii. Training and extension are not gender sensitive and there is a need for appropriate extension programs which truly meet the needs of women in fisheries;
- iii. Few women are promoted in the government sector;
- iv. Mass media is not sufficiently employed to improve the quality of life in rural communities in a holistic manner; and
- v. Changes in the role of women in fisheries brought about by mechanization and commercialization of both capture fisheries and aquaculture.

Government officials at high levels are addressing some of these issues. Quite a few non-governmental organizations (NGOs) show interest, but their diverse efforts are not coordinated as a whole. There is a need to create a mechanism to do this on national and regional levels in the Lower Mekong Basin.

Initiatives of PADEK in recognition of problems facing women in fisheries

Considering the major problems faced by women in fisheries, the Partnership for Development in Kampuchea (PADEK) initiated the first Workshop on Women in Cambodian Fisheries in 1994 at the Bati Fisheries Station in Prey Veng Province. In October 1995, PADEK organized a Photographic Competition on Women in Asian Fisheries during the Fourth Asian Fisheries Forum held in Beijing, China. The Mekong River Commission (MRC) won the first prize, and their photograph was chosen to be on the cover of the AFF Proceedings (November 1998). Then in March 1996, PADEK arranged a Regional Seminar on Women in Fisheries in Indo-China Countries, in Phnom Penh with the participation of women (and men) from Cambodia, Lao Peoples Democratic Republic (Lao PDR), Thailand, Vietnam, and several agencies and non-governmental organizations. During this event, a list of important recommendations was drawn up.

Round table discussion on women in fisheries

Although many recommendations were made at the regional seminar addressing the plight of women in fisheries in the Indo-China countries, the women at the national level could not put most of them in practice. Therefore, the MRC Fisheries Programme and the WES Aquaculture Project in Can Tho, Vietnam, jointly organized a Round Table Discussion on Women in Fisheries in the Mekong Basin in April 1997. At the meeting, each riparian country agreed to create a national network for women in fisheries.

A regional network will link these four national networks. The regional network is important for the users sharing the Mekong Basin resources. Many of the people involved in this networking exercise participated in the Fifth Asian Fisheries Forum in Chiang Mai, November 1998, which included a Symposium on Women in Asian Fisheries.

The round table discussion was held to:

- i. Evaluate the status of women in fisheries by exchanging information and experiences relevant to the Mekong Basin;
- ii. Show how the participants can improve the lives of women in fisheries through supporting programs (i.e., training opportunities, developing management skills, providing credit and loans, offering access to open communication and information services, etc.);
- iii. Facilitate the establishment of national networks (including national leagues of women in fisheries) and a regional network to coordinate basin-wide activities; and
- iv. Begin drafting a systematic action plan, including both short-term actions up to November 1998 and long-term expectations (such as providing equal opportunity to participate, equal access to education, resources, credit, etc.).

### Starting point

Time was spent to review, build on, and respond to the recommendations of the Seminar on Women in Fisheries in Indo-China Countries in March 1996 in Phnom Penh. The participants regrouped the recommendations in order to transform them into initial actions and activities.

Recommendations 8 to 11 deal with research while recommendations 2 to 4 address development issues.

### Research

Recommendation 8 suggests the forming of a network of researchers to disseminate information, exchange research results, and formulate joint projects.

Recommendation 9 considers how research and development agencies should assist government agencies, NGOs, and development assistance agencies to develop guidelines for projects targeting women in fisheries.

Recommendation 10 favours special in-service courses in social science research methods.

Recommendation 11 encourages more national and regional comparative studies on women in fisheries.

### Development

Recommendation 2 recommends training for women in fish processing and marketing, as well as aquaculture.

Recommendation 3 suggests that extension officers should address the special needs of women.

Recommendation 4 urges departments of fisheries and universities to conduct specific programs and courses, as well as recruit women staff and promote their careers.

One of the priorities identified at the Can Tho meeting was to establish national networks in each of the riparian countries, with the participation of government agencies and NGOs.

The meeting also focused on activities to be presented at the Symposium on Women in Asian Fisheries during the Asian Fisheries Society Forum in Chiang Mai, 13 November 1998. To do so, the three following working groups were established.

- i. Research on Women in Fisheries
- ii. Training and Extension on Women in Fisheries
- iii. Women in Fisheries Networks (national and regional)

Additional research on specific topics related to women in fisheries is needed, as there is a lack of information and data on women in fisheries. This research is a precondition to developing meaningful training approaches and extension tools aimed at improving conditions of women in fisheries, including their working and living conditions in general.

The participants felt that women were particularly suited for fisheries management, stock assessment, fishery statistics, aquaculture, fish handling, fish processing and marketing. The Working Group on Research indicated the following objectives of research to develop elements of decision-making for:

- i. Environmental protection and resources management;
- ii. Improving health conditions and alleviating the heavy workload of women in fisheries (Note: we are reminded of the excellent poster produced in Bangladesh showing a woman with many arms and the caption, "My wife does not work!");
- iii. Improving the standard of living of fisheries households;
- iv. Strengthening the representation of interests and establishing platforms for capacity-building;
- v. Developing the application of adequate tools for communication, training and capacity-building;
- vi. Shaping development activities according to given leadership and cultural patterns;
- vii. The establishment of information channels; and
- viii. Prioritizing target groups.

In order to streamline research on women in fisheries and make approaches comparable, participants at the round table should exchange experience and information on future research interests. The grid table developed for this purpose might also be helpful to identify research experience on women in fisheries in each of the riparian countries.

Specific topics

The Working Group on Research identified nine topics for further research:

- i. Gender-specific use of natural resources;
- ii. Working conditions (level of technology, organization of work);
- iii. Living conditions (sanitary and hygiene, health, number and spacing of children);
- iv. Women's organization (at different levels in a society);
- v. Educational level of women;
- vi. Time allocation (housekeeping, fishing, and/or fisheries activities, leisure time for herself);
- vii. Gender-specific decision-making processes (in household/community);
- viii. Access to information; and
- ix. Vulnerable groups (widowed, disabled, aged).

The full list is a tall order to address and requires a mechanism to be able to actively address these issues.

Establishing national networks in the Lower Mekong Basin

The implementation of networks, which focus on communication, and the exchange of ideas, experiences, and approaches, will contribute to addressing some of the constraints in women

in fisheries. Each country should assess its genuine needs and identify ways for establishing a national network on women in fisheries.

With the assistance of the Interim Regional Coordinator (Dr Kathleen Matics), the riparian countries have held various meetings to establish their respective national networks for women in fisheries. The setup of each national network is different as it corresponds to the modalities in the respective country.

Thailand

Meeting on women in fisheries in Thailand

On 1 August 1997, the MRC Fisheries Programme convened a meeting in Bangkok to discuss a national network for women in fisheries in Thailand. This meeting was the first of a series of others held in the riparian countries. After the national networks are established, the MRC Fisheries Programme is planning a regional network meeting.

For Thailand, the national network is anticipated to improve the quality of life of women in fisheries, including their households. This is an opportunity to effectively utilize the human resources potential of women in fisheries in Thailand.

The "brain storming" meeting tried to ascertain whether there is a need for a national network for women in fisheries in Thailand. The meeting concluded that it is important to have a network for training and information exchange. The network could also formulate and implement projects to help the women in fisheries improve their quality of life.

Objectives and scope of the national network for women in fisheries in Thailand

To compare with the three other national networks in the Lower Mekong Basin, the Thai network should start with freshwater fisheries. A way of raising awareness of the role of women in fisheries should be found. At present, there does not seem to be enough information available on this topic. One output of the network could be a bibliography on women in fisheries. It is important to have a Mekong element within the national network for Thailand to exchange information on a regional level. A research group was created for this purpose.

The meeting agreed to the following objectives of the national network in Thailand:

- i. Increase awareness of women's role in fisheries;
- ii. Information exchange;
- iii. Support for research: how the network can study issues that need to be addressed; and
- iv. Enhance gender sensitivity at the government level.

The scope of activities could include:

- i. Collect information on research done to date;
- ii. Respond to requests for information;
- iii. Offer advice and training opportunities on gender research methodology; and
- iv. Prepare and maintain a contact list of network members and those interested in its activities.

Various constraints are apparent in identifying core funding for the network. For example, most of the Thai participants were not able to attend prior meetings on women in fisheries and did not have enough information at their disposal nor the decision-making authority to represent their respective organizations. All participants were already committed to many other activities and could not undertake new tasks at that time.

The MRC Fisheries Programme can assist with the preparation of a project proposal and the identification of potential donors to support it. The need for reliable gender specific information and statistics should be emphasized, as well as assistance to standardize research methodology.

Thai task force

Although it was not possible to establish the national network for women in fisheries in Thailand nor to select a national coordinator at the August meeting, a task force was formed consisting of representatives from: (a) Chulalongkorn University; (b) Asian Institute of Technology (AIT); (c) Krirk University; (d) the SEAFDEC Training Department; and (e) the MRC Fisheries Programme.

Research topics

The participants completed a table that was developed at the Can Tho meeting. Some of the major issues that emerged included:

- i. Lack of socioeconomic data by gender  
To plan for women's participation in community-based fisheries management, it would be useful to collect socioeconomic information by gender. This would include statistics establishing the number of women engaged in capture fisheries and aquaculture, employed as labour in the fishing sector, and as fish processors and in fish marketing.
- ii. Lack of information and statistics on women in fisheries in the Mekong Basin  
It would also be useful to have information on those women in fisheries who are responsible for both earning income through fisheries and contributing to family and child care, including numbers (statistics) of women who are in this role, time spent in the activities, locations and fisheries involved, as well as women's status in the community.
- iii. Need to achieve greater recognition for women in fisheries  
One factor inhibiting women's participation is the fact that women are not recognised by their male peers in public meetings and other decision-making situations. Approaches to increase women's participation in fisheries management are required as women tend to think about the "quality of life" factors, and this is an important consideration for sustainable management of fisheries resources. This perspective of the long-term could help improve fisheries management decisions. Case studies would help to indicate useful

ways to generate more recognition of women by male fisher folk and by fisheries managers. For example, research could help determine how recognition of women's participation has been achieved or why it has not.

#### Suggested research topics for Thailand

- i. How changes in the fisheries sector have impacted women  
Study the evolving role of women within the context of changes occurring over the last 20 years in the fisheries sector, and notably the increase in the commercial industry and how this has affected women.
- ii. Alternative livelihoods for Thai women during the spawning season: ways to assist women in fisheries during the migration and spawning period  
During the spawning period when the fishery is closed, women do not have a supply of fish. Many find it difficult to find anything to sell. Male members of the household tend to migrate to urban centres, leaving their women with small children at home. Programs to find alternative means of generating income during this period need to be formulated.
- iii. Review of the fishery laws of Thailand and how they impact women  
This would be a policy-level research project.
- iv. Women's role and constraints in aquaculture  
This could be a joint activity with the Network of Aquaculture Centres in Asia (NACA).
- v. Women's access to and management of fisheries resources  
In terms of fisheries management, fisherwomen should be trained on how to conserve the fisheries resources. Women should be targeted for this type of training, as they may be able to influence their husbands in the direction of adopting sustainable fishing practices.
- vi. Women's role in community fish pond management in northeast Thailand.
- vii. Distribution of benefits between men and women: are these balanced?
- viii. Case studies on empowerment of women in fisheries: are there successful examples?

#### Summary of the Thai discussion

The results of the Thai discussion can serve as examples for others.

- i. There is a need for the national network and the will to organize it.
- ii. A working group consisting of a larger group than the meeting participants is required to discuss implications of the network in detail.
- iii. A research network was established from 1 August, starting with work in the Lower Mekong Basin (i.e., north and northeast Thailand). After this initial step, the scope may be extended to include the entire country.
- iv. The Social Research Institute of Chulalongkorn University was selected to be the focal point and to begin the work. A research network was established initially.

- v. The MRC Fisheries Programme has only a limited amount of money at its disposal for networking activities. However, it has expertise in approaching donors and assisting in identifying funds to support interim tasks.
- vi. A Task Force or "Steering Committee" is preparing a draft project proposal and considering steps to establish an interim network.

#### Follow-up actions for Thailand

The Task Force or "Steering Committee" for the National Network for Women in Fisheries in Thailand held its first meeting at the Social Research Institute, Chulalongkorn University, on 28 August. An outline of a project proposal was prepared to seek funding support to continue work on the network. The MRC Fisheries Programme offered advice regarding the preparation of the draft proposal, including budget items and potential donors.

A Research Network on Women in Fisheries was established. Mrs. Napat Gordon was chosen as the Research Network Coordinator. The ultimate goal in future is to establish a national network for the entire geographical area of Thailand, but that may occur at a later stage.

The SEAFDEC Training Department has collected information for the list of potential members of the network and the inventory of assistance provided to women in fisheries in Thailand.

#### Cambodia

##### Establishment of the Cambodian network

With the assistance of the MRC Freshwater Capture Fisheries Management Project in Cambodia, a meeting about the establishment of the network in Cambodia convened at the Department of Fisheries on 7 October 1997. The meeting was a "brain storming session" where the participants discussed:

- i. The results of the Can Tho round table discussion and assessed their relevance to the Cambodian reality;
- ii. If there is a need for a national network, who should be the main players? And
- iii. Identification of the interested institutions and sectors in women in fisheries in Cambodia.

It was apparent that there is strong participation by women in fisheries in Cambodia. There is also a need to strengthen the exchange of information on women in fisheries topics, a precondition for designing sound sectoral policies. The establishment of a network, which functions as a platform of sharing and creating ideas and experiences, identifying constraints and developing solutions for improved working and living conditions of the indigent women in the fishery sector is considered to be necessary for a country like Cambodia.

The main objective of the 7 October meeting was to begin a thinking and discussion process about the needs and possibilities for setting up a national network on women in fisheries in Cambodia among institutions and projects involved in the fisheries sector. A later meeting (held in the Khmer language) identified the necessary procedures or first steps to be taken.

Moreover, the selection of research topics for discussion at the Symposium on Women in Fisheries in Asia (Chiang Mai, 13 November 1998) was another objective accomplished. The topics emerged due to an inventory of existing research experiences on women in fisheries in Cambodia. Although there are a number of articles and descriptions of women's participation in the fishery sector in Cambodia, the main question, "What are the women's real problems in fisheries, and how can these problems be addressed from a sectarian point of view?" has not been fully investigated or answered. Moreover, the existing literature on women in fisheries in Cambodia does not always differentiate between issues related to the fishery sector and other sectors such as health and education, as well as the more general cultural, sociological, and political system in the country.

Working Group on Cambodian National Network on Women in Fisheries

As networking has to do with work in the form of coordinating activities and gathering and sharing (of information) as established in the main objective, the meeting decided to select a working group, which will start with basic information gathering activities.

The female participants selected the following representatives to form the Working Group on Women in Fisheries in Cambodia: Ms. Keo Sovannary (Department of Fisheries, as leader) and three others from the Department of Fisheries and the Asian Institute of Technology.

It is assumed that while the working group is gathering information and promoting communication between interested institutions and organizations involved in women in fisheries, the national network of Cambodia itself will become focused on identified needs. The working group discussed the needs and objectives of a national network on women in fisheries in Cambodia and focused on the following topics:

- i. Need for clear identification of the problems of women in the fishery sector in Cambodia;
- ii. Sharing the experience of the problem identification process;
- iii. Gathering and exchanging information on women in fisheries through the establishment of an inventory of women in fisheries specific knowledge, experience, methodologies and research, etc.; and
- iv. Sharing information within a network should contribute to policy analysis on women in fisheries in Cambodia and lead to future research topics and approaches.

The following immediate objective for the establishment of a national network on women in fisheries in Cambodia was formulated:

Information gathered and shared on women in fisheries in order to lead to research and policy formulation approaches.

To achieve this immediate objective, some baseline activities were identified. These aim at institutional strengthening as well as at clarifying the overall spectrum of existing institutions, organizations, projects, people involved and research activities realized and ongoing in women in fisheries in Cambodia. The work program considered two activities:

- i. Elaborate an inventory on women in fisheries in Cambodia; and
- ii. Develop guidelines for a network on women in fisheries in Cambodia.

These main activities were broken down into smaller, more concrete activity steps and the working group was encouraged to modify and improve the work program according to the needs which might appear along the way and while implementing the planned activities. The work program is only the first step, and requires periodic preplanning in order to keep in touch with reality.

The working group, led by Ms. Keo Sovannary, has drawn up a schedule and indicators for their operational planning according to their usual work obligations.

## Vietnam

### National network in Vietnam

Since September 1997, the Ministry of Fisheries Steering Committee for Women in Fisheries has conducted a series of planning meetings. Unlike the other countries in the Mekong Basin, Vietnam has already institutionalized a specific committee to address women in fisheries issues. A proposal to obtain funds to conduct a larger three-day meeting including women from all parts of Vietnam was approved by the Embassy of Denmark in Hanoi. The proposed meeting is considered as the "Founding Meeting of the Women in Fisheries Network in Vietnam." Participants from the Can Tho round table discussion, as well as NGOs active in the field, along with members of the academic community and the private sector will attend the meeting. The Ministry of Fisheries Steering Committee for Women in Fisheries will convene this meeting.

To organize the national network, attention will be given to defining points of unity and forging joint plans. The general aim of the undertaking is to help promote the rights of women in fisheries through network building, and organizing various groups involved in this area. The nature of the proposed network is a multidisciplinary, tripartite group bringing together the government, private, and academic sectors.

At the Can Tho meeting, the Ministry of Fisheries volunteered to facilitate the setting up of a national network in collaboration with Can Tho University, the University of Agriculture and Fisheries in Ho Chi Minh City, the MRC Reservoir Fisheries Project in Dak Lak and others.

In Vietnam there are many different groups working in the field of fisheries, each with their own efforts at addressing the concerns of women in fisheries. However, these efforts may not have sufficient impact because they are not coordinated. The field of women in fisheries is also relatively new in Vietnam, and a sharing of the experiences and lessons is needed. Networking among the different groups on women in fisheries has become crucial to better ensure the impact of the development efforts.

The direct target group of the meeting in Vietnam includes government agencies, non-governmental organizations, and the academic community. The indirect target group comprises

the women and fishers in the communities where the organizations are working. Government agencies involved are: the Ministry of Fisheries, Research Institute for Aquaculture 3 (RIA-3), Vietnam Women's Union and the MRC Management of Reservoir Fisheries in Dak Lak Province. Academic participants will come from Can Tho University, the College of Agriculture and Forestry in Ho Chi Minh City, the Institute of Tropical Biology and others. The private sector and NGOs will also be represented. This proposed meeting would be a further step toward developing a regional network.

The main goals of establishing the national network in Vietnam are to improve the welfare of women in fisheries and to improve the information exchange on all levels. Its specific objectives are to:

- i. Define the content and form of the national network in Vietnam;
- ii. Formulate a general plan of action, with concrete tasks leading to active participation in the regional network on women in fisheries;
- iii. Organize communities and spell out functions in the implementation of the plan of action; and
- iv. Consider and define the relationship of the national network with the national strategy for women in development in Vietnam.

Expected results

- i. Formalization of the National Network on Women in Fisheries in Vietnam (clarification of membership and functions, and coordination mechanisms);
- ii. General plan of action (for the next three months); and
- iii. Documentation of the proceedings and dissemination of the results.

Lao PDR

National Network for the Lao PDR

The Department of Fisheries and the Lao Women's Union in Vientiane will plan a national network for the Lao PDR. As in Vietnam, a proposal needs to be prepared to secure funding for the preliminary meeting.

Funding the national networks and the regional network

Running a network efficiently requires appropriate funding. At the present stage where national and regional networks on women in fisheries are being initiated, no specific funds are available yet. The MRC Fisheries Programme is actually providing some economic assistance to the interim coordination, without a specific budget line designated for this purpose (See Annex 6 of Summary Report on the Thai National Network for Women in Fisheries, August 1997). The MRC Fisheries Programme can provide advice on preparing project proposals, as well as advise on how to approach possible donors who may have specific budget lines for networks and/or women (in fisheries) or gender related interests.

Role of women in water resources development

**Several members of the respective national networks for women in fisheries participated in the Basin-wide Seminar on the Study of the Role of Women in Water Resources Development in the Lower Mekong Basin held in December 1997 in Nong Khai, Thailand. This seminar, organized by the MRC Secretariat, offered yet another opportunity for networking and exchanging information among the four riparian countries and the Interim Regional Coordinator.**

# EMPOWERMENT OF WOMEN IN ASIAN FISHERIES

C.M.C. Nozawa<sup>1</sup>

Nordic Agency for Development and Ecology (NORDECO)

Protected Areas and Wildlife Bureau, North Avenue, Diliman, Quezon City, Philippines

## Context

Most Asian societies are male dominated. Most decision-making bodies including those managing fishery resources and its associated activities are male dominated as well. Most research and development organisations around the world continue to be male dominated. These factors form part of the context under which the fishery sector operates today in Asia.

There is also growing awareness of inequality and discrimination against women in Asian societies. Although more women's organisations are being formed a very small percentage of women hold the leadership position. There is a growing body of information illustrating women's contribution, knowledge and multiple roles, and assigned functions in the fishery sector and in addressing food security concerns. Most presentations at the Symposium and in previous meetings on women's issues will and must have illustrated some of this basic information. This also forms part of the context under which the fishery sector exists today in Asia.

Empowerment of women in Asian fisheries must be seen within this context. There is conscious and unconscious resistance to empowering women in Asian fisheries. Changes, particularly those that would reduce men's dominance in fishery communities, in fishing households, in fishery research and development work will naturally meet resistance in one way or another because it allows for the shifting of more privileges towards women and more responsibilities for men. Institutions such as UNICEF have identified different forms of resistance to integrating gender in development. UNICEF itself has identified ten forms of resistance. As more privileges and opportunities open to more women, more support for empowering women in Asian fisheries will be observed.

## At the personal level

There are key questions that require honest responses from each research and development worker. The responses are very personal - at the individual level if one hopes to work effectively on empowerment of women in fisheries. Reflecting on the individual's responses is relevant to Asian fisheries. The following are important questions for reflection.

Do you believe that there are no gender issues relating to fisheries? Do you believe that once the major issues are resolved, gender equality will be a natural outcome? Or do you believe that gender issues are divisive and we should respect people's culture? Do you address gender issues as add-ons or special considerations to your initiatives/programs? Do you consider that gender is a separate issue that has to be integrated into your work? Or do you consider gender as an essential and non-negotiable principle in organizing your entire work and agenda?

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(1) Vice-president, Haribon Foundation (in the Philippines)

What have these questions to do with empowerment of women in fisheries? The answers to these questions reflect our view on women's issue, and how we consider this in our work. As individuals we can do our share towards empowerment of women.

Everywhere we are, at home or at work, our personal and professional relationships are subjected to the dynamics of gender relations. The same is true for the men and women in the fishery sector, in a coastal community and in a household in the coastal village; the opportunity to empower women exists both at home and at work. Every social relationship engaging both genders therefore also presents a potentially empowering experience for women and men. At the same time, it can also reinforce the position of disempowerment against women. It can also reinforce existing inequality and discrimination against women.

At work and in your institutions

Gender sensitive women and men in research have a critical role to play in empowerment because they generate information that can help us understand this unequal situation better so we can try to provide solutions for them. Research can also be empowering for all those involved in the research. Each one of us can look at our actions more closely and begin to determine if this perpetuates the inequality and discrimination or if it contributes to our empowerment or the empowerment of other women.

We can also continue to learn and discover how we view gender issues at work. As professionals, we can continue to be conscious of gender issues in our work and our institutions. At the institutional level we can strive to:

- i. Deepen our own understanding of women's issues;
- ii. Be open and critical of our own institution's policies and practices;
- iii. Make women's issues integral elements of our own projects, programs, and institutions;
- iv. Provide more opportunities for women in fisheries development and research;
- v. Sensitize more women and men colleagues on women's issues (maybe next time we can have some men presenting results of gender-based research work for example); and
- vi. Organize women's groups to ensure that the above are undertaken.

For projects and programs, research and development workers can:

- i. Disaggregate information and approaches in research and development work;
- ii. In addition to ordinary needs assessments, incorporate gender needs assessments and consultations in to project or program planning and implementation;
- iii. Recognize the role and knowledge of women in the community, the economy and the environment and incorporate these into the design of projects;
- iv. Ensure that women's needs are addressed in fishery research and development efforts;
- v. Build upon women's current activities and skills; and
- vi. Incorporate gender-based monitoring and evaluation tools.

(Adapted from Polotan-de la Cruz 1994)

In the communities and in Asian societies

Empowerment presumes an unequal power relationship between men and women. Power itself is not intrinsically associated with one specific gender. Society assigns specific roles to specific genders. It is the society, the culture, and the community that associates power to a specific gender. It is society, the culture, and the community that associates greater power to men than to women. However, society, culture, and the community are not fixed entities. These are ever changing and not to be used as an excuse for inaction or indifference to an oppressive or unequal power relationship among men and women. This inhibits the development of the very society, culture, or community where men and women belong.

Fisheries as a sector will only achieve full development if women involved in the sector have equal opportunities with men. Coastal resources management can only work if both men and women fully participate.

The fear or often-asked questions are "Aren't we focusing too much on women and therefore benefiting women, and being unfair to men?" Francisco (1997), a gender and development expert explains why. She says that, "The struggle on the gender front is not about handing over power to a majority that has been subjugated by an elite minority. Rather it is about removing gender-based barriers to the control of one's life and equalizing the life options of women." It is about male and female members of a fishing household having equal means and equal opportunities to engage in the same types of activities. It is recognizing both men's and women's contributions to maintaining the household and measuring each other's contributions using the same yardstick. It is having a woman director of an international institution as part of the norm rather than the pioneering exception to the male. It is having as many women willing to or currently engaged in each level of decision-making as there are men. It is having gender sensitive leaders involved in the governance of society.

Gaps and non-gaps

There is an existing gap in research and development work on children and the young in fishing communities or in fishing households. Children in the fishery sector learn the gender roles assigned by societies to men and women early in their lives. They have to contribute to the household subsistence at very young ages. These formative stages of children are an important opportunity for empowerment of women in the fishery sectors. There is great potential for empowerment in working with young individuals in the fishing communities.

Information on women's contributions to fisheries can provide further opportunities for gaining support for women's empowerment in Asian fisheries. Factual statements such as the following are powerful tools in sustaining the efforts to empower women:

- Between 50-75% of pre-post harvest activities in fishing communities are done by women (Hourihan/ADB as cited in Polotan 1994);
- Women contribute an average of 40-54% of total household income; and
- The per capita income of women derived from fish marketing and processing is higher than the per capita income of their husbands and sons from fish capture (Unifem as cited in Polotan 1994).

The development of methodologies and approaches that take into account the existing inequality between men and women in fisheries provide an opportunity for empowering women and men in research and development as well as women and men in local fishing communities. Methodologies such as those used in upland communities called PRAGEN are attempts to create gender oriented development work such as resource management. PRAGEN is a gender participatory methodology that aims to link participation and gender in grassroots development. It is a combination of participatory rural appraisal (PRA) and environment, community organisation and gender analysis (Ututalum and Lopez 1994).

Monitoring and evaluation tools also need to be gender conscious. The same goes for training methodologies. Ensuring such methods are gender fair is a challenge for research and development workers. Gender disaggregated information on the impact of a project, for example, can show where and why a project may have failed or succeeded.

But these need not be reinvented. Existing works in gender in other sectors can show women in the fishery sector what can possibly be of use to ensure that these works are empowering by themselves and for everyone involved in the initiative. Good examples will possibly be found by looking at analytical frameworks already developed by those currently working on gender issues.

Challenge for Asian Fisheries Society (AFS) and other fishery oriented institutions

But what can we directly do? The challenge is three fold. The challenge for any institution is to create space for empowering women at the personal level, at the project or the program level, and at the institution level. This can begin by assessment of the institution's own gender sensitivity and fairness in terms of policies and programs. It can then initiate projects and activities that are empowering for women members and staff.

Women's groups or women development and research workers have long provided for gender sensitivity training. Capacity building with preference for women participants can go a long way for fishery institutions.

Empowerment is kept alive through practice, not through training alone. If you have not used your tongue to speak for a long period, it is always difficult to begin to speak again. If you have not walked or used your legs for sometime, it is not easy to begin to run. Empowerment of women in fisheries requires patience and time. It is true as well for women's participation in a great range of activities perceived to be traditionally in the men's domain. It takes time and tremendous energy to encourage women to begin to engage in greater decision-making, active community discussions, and to take on other leading responsibilities ordinarily taken by men. It takes time and great openness to assist men to be supportive rather than have them feeling threatened with more women engaging in decision-making, community discussions or other activities traditionally perceived to be men's work. It needs a high level of confidence for men to take on more responsibilities traditionally associated with women e.g. home making. The overall challenge in empowerment of women in fisheries is to effectively work towards equal opportunities for women and men in the home, in areas of work and among communities.

AFS or other international institutions can initiate Asia-wide projects that will involve women from various Asian countries, and generate information and tools for use around Asia. This Asia-wide information can provide data showing the extent of women's contributions to fisheries around Asia.

Lastly, AFS can aim for gender disaggregation of data in a greater number or a majority of the fisheries information reports and papers for presentation at the next AFS conference. Guidelines for paper presenters can include this particular disaggregation of information.

Challenge for women in fisheries

There are two major challenges for women in fisheries today. The first is the challenge to organise women in Asian fisheries at the researcher/development worker level, at the community level, and at the institutional level. It is important to establish a woman's organisation in Asian fisheries that can focus on:

- i. Gender sensitive and fair institutions;
- ii. Information exchange;
- iii. Gender balanced fishery policies at various levels; and
- iv. Promotion of more women in to decision-making positions.

The other big challenge is sustained capacity building which will result in more women engaging in fishery research and development, and which is focused on building the skills of the women and men in research and development so that they are more aware of gender issues.

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# TECHNOLOGICAL CHANGES AND THEIR IMPLICATIONS FOR WOMEN IN FISHERIES

S. Suwanrangsi  
Chief, Fish Inspection Centre (Bangkok)  
Fish Inspection and Quality Control Division,  
Department of Fisheries,  
Thailand

When given the opportunities and resources, women have proven to be active partners in development - efficient, dynamic, and open to innovation. In fisheries, a large number of Asian women are involved in capture, aquaculture, handling, preservation, processing, trading, research, development, and management.

Technology has changed so rapidly over the past 15 years that the multitude of activities that women are able to do may present overwhelming choices. Technological changes may make women's work a little easier and less threatening. However, as technology changes, women in fisheries need to decide whether their work or business needs new technology or equipment, or to decide on a method or equipment. Has their work and business reached the point where they need new equipment or are they ready to make changes? Women in the fish processing industry are required to learn and practice new technology day-to-day, and adapt to changes as quickly as the market requires them to, while women in research are required to do in-depth as well as applied research. Their work involves the operation, management, and maintenance of sophisticated equipment. Women in fisheries management have to cope with and adapt to information technology to keep up with fellow workers and the world.

Women's participation in decision and policy making in selecting new technology should be increased, for it requires women to fully develop and utilize diverse knowledge and abilities.

## Women's roles in fisheries

The roles of men and women in fish production, processing, and marketing vary but women usually play a pivotal role. In most regions of the world including Asia, women manage small boats, make and mend nets, process and sell the catch. They have also assumed a leading role in the rapid growth of aquaculture. Women not only shoulder all the responsibilities, but face increasing workloads as men migrate to cities in search of labor, leading to a feminization of fisheries. When the catches are landed or harvested, women generally do most of the fish processing, preserving, and storage as well as selling the fish at the markets. Despite their involvement in the fishing sector, women's operations are often small-scale and their incomes are low as compared to those of their male counterparts. They face various constraints, including credit and finance problems, a lack of training, inadequate markets and transport problems. Compared to their male counterparts, women have less access to distant markets. The simple reason here is that most women are reluctant to travel or are forbidden by their husbands to travel far to trade their products. Hence they lag behind in the equitable distribution of incomes.

Women in fish processing have contributed to reduced post harvest losses, increased food security, and economic growth in the past century in most Asian countries. The ability of these women to learn new techniques and technologies contributed to increased export earnings in most Asian countries.

#### Women and technology

Rural women in the region spend long hours every day performing tedious and mostly unpaid labor-intensive and time-consuming agricultural and domestic work. Consequently, there is a real need to develop appropriate technologies for women to reduce their workload in unpaid activities, as well as to increase and improve the quality of their income-generating work.

The use of labor saving technology (agricultural machinery and tools, transport, running water, electricity, sewage facilities, kitchens, ovens and fridges, etc.) appears to be gender specific, and has been beneficial to women in some cases but detrimental in others.

In technologies developed for fishery production, such as mechanized pond preparation, feeding, harvesting and post-harvesting activities, men have taken control, leaving the non-mechanized and more labor-intensive tasks, such as feeding, and net mending, to women. While mechanization has freed women from many tedious operations, it has also replaced an important source of income for many women who depended on these tasks to generate additional income for their families. In addition to mechanization, modern irrigation tools and transport also appear to be used predominantly by men.

On the other hand, the increase in the use of home-based technologies such as electricity, piped water, sewage disposal, cooking stoves and cold storage devices, have reduced women's workloads by reducing or eliminating trips to collect water and fuel. These technical advances have also improved household hygiene. In many rural areas, however, these technologies are still not available. Many rural households do not have running water and depend on women to carry water for daily use.

To date, labor-saving technologies specifically developed to make women's work more effective in fish production and technology for small-scale fish preservation and processing are inadequately introduced. These technical short-falls negatively affect efficiency, income, quality of fish, and hygiene of production and product safety.

The educational status of women in the fisheries sector is inferior to that of men and women do not have special training programmes in technological improvements. However, the number of women seeking higher education in fisheries is on the rise in Thailand, although female enrolment rates remain considerably lower than male rates. Women students tend to major in subjects such as fish technology and nutrition, biology and management, while subjects such as aquaculture and marine sciences remain male-dominated. Table 1 gives the number of students in the Faculty of Fisheries, Kasetsart University, Thailand for 1990-1998.

Table 1. Number of students in the Faculty of Fisheries, Kasetsart University, Thailand 1990-1998.

Major	Total	Male	Female	% Female
Fishery Management	157	91	66	42.0
Fish Biology	140	45	95	67.9
Aquaculture	274	168	106	38.7
Fish Technology	143	70	73	51.0
Marine Sciences	174	119	55	31.6
TOTAL	888	493	395	44.5

**Female participation in Thai government fisheries is 34.2%. Although there are fewer women than men, their participation in research and technological work is up to 42%. In the area of research and technological work, the percentage of women is very high, for example in the area of post-harvest fisheries women constitute 85.7% of the workforce. Men are still dominant in the areas of aquaculture, fresh-water fisheries, and marine fisheries.**

Table 2. Number of Professional Staff of Department of Fisheries.

Professional staff	Total	Male	Female	% Female
All professional staff	3065	2016	1049	34.2
Staff in research/technology	779	445	334	42.9

**Working women in the government fisheries sector are involved in research, technology development, technical services, technology transfer, and management. Women in research are required to do in-depth as well as applied research. Their work involves the operation, management, and maintenance of sophisticated equipment. Research identification and planning skills are still needed by women. They need access to relevant information and training to upgrade their skills. They also need opportunities to perform their work and demonstrate their capabilities and abilities.**

**Women in fisheries management have to cope and adapt to information technology to keep up with their fellow workers and the world.**

Table 3. Number of professional staff involved in research and technological work by discipline

Department of Fisheries professional staff	Total	Male	Female	% Female
Marine Fisheries	154	92	62	40.2
Freshwater Fisheries	322	186	136	42.2
Coastal Aquaculture	183	113	70	38.3
Post-harvest Fisheries	42	6	36	85.7
Others	78	48	30	38.5

**In commercial fisheries, men are involved in fishing, aquaculture, fish processing, and marketing activities. Women on the other hand, dominate the processing lines of fishing companies, working on shift duties either as permanent employees or as casual labor during peak production periods. Women's labor dominates the fish processing industry in Thailand, and accounts for as much as 90% of the workforce. Women in the fish processing industry learn and practice new technologies day-to-day through training, instruction, and supervision.**

They need to quickly adapt to changes as demanded by the market. In the fish processing industry, women workers are involved in handling, unloading, quality control, sorting, trimming, packing, and in operating processing equipment that is both light and heavy, such as retorts, steamers or filleting machines that are designed to be used by men. Women's skills and endurance are often exploited. Women are assigned to on-line quality checking which in most cases relies on visual inspection without equipment and tools to facilitate work. In addition, they also work in laboratories that are involved in microbiological, chemical, and physical analysis, and testing for quality and safety.

#### Implications for women

##### Increased productivity

Women in poor countries are usually less educated than men yet studies have shown that increased education for women not only improves productivity but also significantly improves household health and nutrition. A World Bank study concluded that if women received the same amount of education as men, farm yield would rise between 7-22% (Telefood, 1998).

##### Reduced work hours

The Food and Agriculture Organisation of the United Nations (FAO) reported that in Africa and Asia, women work about 13 hours more than men each week. Statistics have shown that women generally work for long hours, 16-18 hours per day. They are very active in the productive sector of the economy and generally shoulder virtually all the domestic work in the home. They occupy strategic positions in food production processes, engaging in farming, food processing, marketing and distribution, often with crude tools and limited facilities that are time consuming to use. Introducing new technology may cut down women's work hours by making their work a little easier and less time consuming.

##### Extra income generation

Changes in technology will present women with choices for generating income. Certain technologies in processing and handling could generate incomes for families in rural areas. Indirectly, utilization of those technologies will also reduce post-harvest loss. However, as technology changes, women in fisheries may be faced with making decisions about whether their work or businesses need new technology or equipment, or a new method or equipment. They will need to decide whether their work or business has reached the point where they need new equipment or are other changes required.

##### Replacement of the female labor force

In some cases, technology could adversely affect women by eliminating their jobs. Tools can replace women's paid labor in large-scale fish processing. For example, the introduction of a shrimp grader or mechanical filleting machine can reduce labor input by 55%.

##### Factors that make it difficult for women to obtain relevant technical skill

Women have strengths and weaknesses. Most women are threatened by new technology, because of their basic nature, knowledge, and education. Tradition and culture, social and religious norms and values, political and economic factors contribute to the lowering of opportunities for women.

Separation of the roles and responsibilities for men and women in society prevents women from sharing equal rights, opportunities, and privileges with their male counterparts.

Women's voices are not heard when research programs are designed. In most cases, research and technology development occur in spite of the needs and priorities of women. Frequently, technology, developed in response to the needs of commercial farmers who are mostly men, is not suitable for women. The equipment or machinery is too heavy and complicated for women. In some cases, machines are developed to do the work usually performed by women.

What is needed?

New technologies can enhance women's roles in fisheries especially in research, post harvest activities, and technological development. Women can develop technology through research and development.

Women should be given opportunities to participate in decision-making processes in the planning or selecting of technology that would suit their needs.

For women's full potential to be realized, women must fully benefit from the development of technology. For that to happen, women must have full and equal access to essential resources and services, as well as access to education and training. In addition, once educated and trained, women need opportunities. By nature, women still need leadership, instruction, and reassurance of support from men and fellow workers to be fruitful.

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# WOMEN IN FISHERIES IN THE PHILIPPINES

I.M. Siason  
University of the Philippines-Visayas (UPV)  
Miag-ao, Iloilo City, Philippines

## Overview of the fisheries sector

The Philippines is an archipelagic country of 7,100 islands and is endowed with vast aquatic resources. Its sea area is about seven times larger than its land area of 300,000 km<sup>2</sup>. The country's marine resources of coral reefs, mangroves, and fish stocks, consist of 220 million ha within the Exclusive Economic Zone. Of these, 26.6 million ha are coastal and 193.4 million ha are oceanic waters. The continental shelf area is about 18.46 million ha. The length of the coastline is 17,460 km.

The Philippines is a world-significant fish producer, ranking eleventh among the 80 fish-producing countries of the world. The fishing industry contributed 3.8% to total GDP and 18.6% to GVA in the agriculture industry group, valued at P34 billion (constant prices). The importance of this sector is further emphasized by the fact that fish is the major source of animal protein in the diet of the average Filipino, and constitutes 12% of total annual food intake.

Approximately 990,872 people are employed in the fisheries sector, about 5% of the country's labor force. Of these, 68% are employed by municipal fishing, 26% by aquaculture, and 6% by commercial fisheries. The 1995 census of population reports that 91.7% of those employed in fisheries are male and 8.2% are female, indicating that fisheries is a male dominated field. On the other hand, the aggregate employment proportions by sex in the rural population are 70% male and 30% female. However, as demonstrated in a later section and revealed by various studies, the participation rate of women in the fishing sector is underestimated.

## Social, demographic, and psychological characteristics of women in fishing households

Several studies on gender dimensions in fisheries (de Castro et al., 1986; Hondrade and Rodriguez, 1994; Illo and Polo, 1990; Israel-Sobritchea, 1994; Ardales, 1997; Villacorta, 1998) show that the majority of female respondents have completed an average of 4 to 6 years or less of education. Their level of education is not very different from that of the men. While this figure is similar to rural women in general, it is lower than the average among women in urban areas (6.9 years).

Accurate income data are difficult to obtain, although in the above studies when household income is reported, the range has been from P13,740.00 (USD327.00) to P37,000 (USD880.00) in 1991. Data from the 12 bays in the Philippines (PRIMEX-ANZDEC, 1996) reported an average annual income of P25,426 (USD605.00) in 1992. Therefore, despite the importance of the fisheries sector to the national economy, the majority of those who engage in it as a livelihood earn average incomes way below the poverty threshold.

The following characteristics of the communities reported in the 12 bay studies (PRIMEX-ANZDEC 1996) reveal the living conditions of fisher households:

- Average age of household head is 41 years.
- Average age of spouse is 37 years.
- Average family size is 5.1 (although the range reported in the studies cited above is from four to nine members).
- Eighty-two per cent own their houses.
- Forty-four per cent of houses are made of nipa and bamboo, and 34% of nipa and wood.
- Forty per cent own the lot where their house stands.
- Fifty-one per cent have toilet facilities.
- Twenty-five per cent of households are members of community organizations.
- Twenty per cent have used loans, 83% of which came from informal sources.

In the five study sites, both the women and men were members of the local fisher folk association. The other women were mainly active in homemaker types of organizations such as those for health and social welfare. However, they usually represented their husbands in assemblies of fisher or farmer organizations, which are male-dominated.

The attitudes of women regarding their roles (Hondrade and Rodriguez, 1994) project the gender division of labor prevailing in most of Philippine society. They believe that men are the "foundation and the head", while women are the "light" of the household. The men should support the family financially and handle the heavy work load. On the other hand, women attend to all the problems and needs of the family and household, safe keep and allocate the husband's meagre earnings, and manage the household budget. The women view themselves more as supporters than leaders, and are proud of the success of those they have assisted. They have a self-sacrificing attitude in pursuing their home obligations.

These beliefs about roles are manifested in the activities performed daily. They include childbearing, child rearing, dishwashing, laundering, house cleaning, vegetable gardening, fuel and water gathering. An additional feature, which is typical in rural households, is the case of domestic livestock. As a means to augment meager household incomes and to provide for family food needs, the women resort to rearing pigs or poultry in their backyards. Feeding and cleaning livestock adds to their multiple household chores.

Women's involvement in community decision-making and leadership is limited. Some serve as barangay (smallest political unit in the Philippines' governance system) captains, especially if they happen to belong to political parties associated with the higher income strata, the more educated, and usually the landed, and if it is more convenient that the woman rather than the man assumes the responsibility and authority. More often however, the women assume lesser positions such as secretary, treasurer, or "muse" of organizations, and become top officers only in all-women associations (Hondrade and Rodriguez, 1994). Women themselves believe that men are more decisive than they are. Such a perception reinforces the already male-dominated leadership and decision-making structures and processes. Despite

these structures, it has been observed that more women than men regularly attend community meetings (Hondrade and Rodriguez, 1994; Abregana et al., 1996). Thus, without realizing it women may actually have an active influence in the decision-making through their participation in these meetings.

#### Role of women in fisheries

Fishing is an occupation dominated by men because of the image that only men go to sea in their fishing boats. In most cases, women in fishing communities are not allowed to go with the fishing vessels, but this prohibition is tied mostly to the need for them to remain within the premises of the household so they can attend to their designated responsibilities in the home. Due to this, they have little direct involvement in fish capture. However they are involved in shell and fry gathering/gleaning, spear fishing in rivers, reef fishing using scoop nets, traps and fish baskets, all of which tend to be near-shore activities (Villacorta, 1998, Lachapelle, 1997). These activities nevertheless either contribute to household income or provide direct food for the table. Though less common, Muslim women in fishing villages in Davao (southern Philippines) go on fishing expeditions with their fisher husbands (Israel, 1993). Women likewise are known to join their husbands in hauling nets and lines (de Castro, 1986; Villacorta, 1998) and installing and maintaining stationary gear (Lopez-Rodriguez, 1996a).

Fishing as an occupation is more than just fish production. The participation of women before and after fish capture has been given little importance, leading to the near invisibility of women as contributors to this sector. However, these pre- and post-production activities are significant in terms of their economic and social value. These include net mending, sorting fish upon landing, fish vending, trading and market retailing, and processing and preservation (salting or drying). It has been observed that men are involved in marketing activities mainly when dealing with intermediaries and the fish caught is of high commercial value (tuna, abalone). Otherwise, women handle the small scale marketing that involves inexpensive fish varieties. Fish processing and preservation is mainly the arena of women because it is associated with food preparation. Women engaged in post-harvest fishing activities constitute 40% of such workers and substantially increase the total income of their households (Legaspi, 1995). The social value of such activities lies in the support and assistance wives give to their fisher husbands, and in its reinforcement of relationships within the community, such as in dealing with their suki or favored buyer.

In seeking credit, while banks and other formal credit institutions recognize the men as borrowers, the women transact loans from relatives and neighbors through informal community links. When household incomes are inadequate, the women take on the role of seeking such informal credit.

#### Women's participation in

##### Community-based Coastal Resources Management (CBCRM)

Due to the steady decline in marine fish production and the alarming degradation of the marine environment, there has been a marked shift towards developing strategies in favor of managing and sustaining coastal resources through the involvement of different stakeholders. In the past decade, such an emphasis has gained ground and it would be worthwhile to

examine the extent to which women as a distinct group have been involved. Several reports on experiences in CBCRM have been published e.g. (Lopez-Rodriguez, 1996a).

A perusal of these reveals that the gender issue is not reported as a distinct component in the discussion except in Lopez-Rodriguez' article (1996b), which focuses on women's issues and gender roles in the project site in Batan, Panay Island. In this project, the men, women, and children were trained in tilapia cage culture - feeding, sampling, cage cleaning, and harvesting. The women were assigned the tasks of financial recording and record keeping. Among the significant outcomes of the experience, in addition to the generation of additional income, are: the reinforcement of women's entrepreneurship in fish vending; the fostering of unity among cooperative members; training in leadership; and the appreciation and recognition by men of women as partners at work and at home. The sensitivity to gender issues, which was part of the training in community organization, has also resulted in men increasingly assuming some share of household chores.

The other reports make no distinction of who-does-what in interventions in the CBCRM process. At most, they mention that women's groups are among those that have been established as part of the essential community-organization component. Whether this neglect is only in the reporting may not be a trivial matter. Nevertheless, the recommendations should have reflected a specific concern for women's issues.

Interviews with a few NGO personnel reveal that women's issues are given some emphasis in their respective CBCRM programs. However, their experiences are not published, which reflects the lack of a publication culture in the country. This deprives the public of needed information that would have been useful in fostering the integration of women in fisheries development.

These interviews also reveal that women, more so than men, serve on the front line in enforcing fisheries regulations and confronting violators regarding, for example, the use of illegal gear, use of dynamite in fishing, etc. The women are seen as better negotiators and more level-headed in handling conflicts than men.

#### Non-fishing related activities

The participation of women in fishing activities takes place alongside their non-fishing production activities and household responsibilities. Coastal communities engage in a combination of fishing and farming as a way of coping with the seasonal nature of these occupations. Table 1 drawn from Rodriguez (1996b) illustrates the gender-desegregated profile of activities in fishing communities. The profile shows that women play multiple roles beyond the child-bearing and community maintenance ones with which they are mainly associated.

Table 1. Activity profile: Camaligan, Lalab, Magpag-ong, 1993 Source:Lopez-Rodriguez 1996b. The Fishers of Talangban. In Ferrer et al. Seeds of hope

Activity	Adult Male	Young Male	Adult Female	Young Female
<b>A. Household</b>				
Cooking			***	***
Washing dishes			***	***
House cleaning			***	***
Fuel gathering		***	***	***
Water gathering	***	***	***	***
<b>B. Aquaculture Production</b>				
<b>1. Pond Preparation</b>				
Cleaning of pond	***			
Drainage/drying	***			
Fertilizing	***			
Filling of pond	***			
<b>2. Releasing of Fingerlings</b>	***			
<b>3. Harvesting</b>	***	***	***	***
<b>C. Marine Fisheries Production</b>				
Letting down the nets	***	***		
Raising of nets	***	***		
Mending of nets	***		***	
Processing of catch	***		***	
Selling of catch			***	
Shell gathering		***	***	***
<b>D. Community Activities</b>				
Local government	***			
Church activities	***	***	***	***
Social dances	***	***		***
Market days	***		***	
Cockfights	***			
Athletics	***	***		***
<b>E. Farming</b>				
<b>1. Land Preparation</b>				
Plowing	***	***		
Harrowing	***	***		
Dike repair	***	***		
<b>2. Planting</b>				
Seedling preparation	***	***	***	***
Transplanting	***	***	***	***

Activity	Adult Male	Young Male	Adult Female	Young Female
3. Maintenance				
Fertilizing	***			
Pesticide application	***			
Herbicide application	***			
Weeding	***	***	***	***
4. Harvesting				
Cutting	***	***		
Threshing	***	***	***	
Drying	***		***	
5. Poultry/Livestock Raising			***	
6. Home Gardening			***	
F. Copra Gathering				
Gathering of coconuts	***	***		
Halving of nuts	***	***		
Preliminary drying	***	***		***
Extraction of meat	***	***		***
Drying of meat	***	***		***
G. Nipa Thatching				
Cutting of nipa stalks	***			
Slicing leaves from stalks	***	***		
Bundling	***	***	***	
Transporting	***			
Pipis sewing			***	
Selling	***		***	
H. Daet Weaving				
Acquisition of buntal			***	
Fibre extraction	***	***	***	***
Pagkiskis			***	***
Combing			***	***
Washing			***	***
Boiling			***	***
Solar drying			***	***
Connecting fibers			***	***
Sabungon			***	***
Subponon			***	***
Eikison			***	***
Weaving			***	***

It is common for women to engage in work outside the home, such as sewing, weaving, running sari-sari (variety) stores, selling beauty products, and food peddling. Women have also been implementers and beneficiaries of livelihood projects offered by both government and non-government agencies.

Women are easily recruited as community volunteers and development workers, especially in domains that seem to be an extensions of their traditional roles. These are time-consuming unpaid jobs such as day care workers, nutrition scholars, barangay health workers, and church volunteers.

Problems/Issues involving women's sectoral participation

Post-capture activities, such as fish marketing and processing which women have assumed, can be enhanced beyond being day-to-day enterprises that depend only on the husband's catch. However, this will require capitalization that poor fishing households cannot afford. While credit programs for artisanal fishers exist, these are generally intended for the fisher's production activities, such as for gear improvement, construction of artificial reefs, fry gathering, crab-fattening, etc. Moreover, such loans are made available primarily through the male-dominated fishermen's cooperatives. Thus, there is no credit facility primarily intended to respond to the needs of the women who sell fish or process the catch. Such credit may be used to buy the catch of other fishers for bigger processing operations.

Technical assistance, training, and extension have been designed to target only the male fisher, not mindful of the real situation in the sector where women are just as active in many spheres of fish production. Women do not learn new technology nor are they consulted on technical problems they may encounter in their productive activities. Usually their source of knowledge on such things is through their fisher husbands, who learn directly from the fisheries technicians.

Reduction of post-harvest losses in fisheries and improved fish processing technology will be an important challenge for the future because fish stock exploitation may have reached maximum levels. Women's participation is crucial because they play an important part in the post-harvest domain. In training and support with regards to processing, storage, packaging and distribution of fish, and the management of their enterprises, women should be a major target group.

Fish marketing and trading activities are limited as women are less mobile and are expected to operate close to the domestic front. Thus, information on prices and market trends are not available as these are usually available only in the central fish markets.

Low educational attainment and socio-cultural constraints hamper the full participation of women in development activities of the sector. Their ability to use and access available information is affected by their level of literacy. Their belief in their own lack of competence and ability, vis-à-vis their male counterparts affects their self-confidence in independently pursuing projects.

Women's participation in income-generating activities and other development tasks, such as attendance at meetings and training courses, are observed to be short-lived, especially when monitoring by granting agencies ceases. One reason for this is the time required from women. Considering the multiple burdens of regular domestic and productive activities, additional activities would be an imposition. Unless provisions are made to deal with other commitments, full involvement in development programs will not be sustained.

Women's work is most disadvantaged and marginalized when coastal and marine resources are degraded and depleted. When reefs and mangrove areas are destroyed, women fishers who use simple gears are relegated to shell gathering or to vending the produce of nearby fish ponds (Lopez-Rodriguez, 1996a). Younger women leave the fishing villages to seek employment as either domestics or factory workers. The men, on the other hand, could acquire more powerful vessels to take them further to sea. These concerns highlight the need for the deliberate inclusion of women in CBCRM, as they are significant stakeholders.

There is no research program that systematically tackles gender issues, women's participation and integration in fisheries development. Database which are sex disaggregated and which may be used in more effective planning and implementation in this sector hardly exist.

#### Recommendations

Extension programs intended for fisheries should incorporate gender concerns into the planning and design of the activities. This may manifest itself in interventions to assist the traditional roles of men and women in society, and at the same time open up avenues for new or expanded roles and responsibilities for women. For example, the opening up of credit packages more suitable to women.

In the same vein, technical assistance for improved fish processing technology, a major domain of fisher's wives, should be instituted. This may go beyond the traditional sun drying and salting processes, and into newer technologies, but with adequate support in equipment and related facilities.

Training for entrepreneurship should be another priority. Women are already engaged in small trading enterprises. They would benefit from inputs on risk-taking, better business practices, and financial management.

An improved market information system will benefit fishers' decisions on fish prices and make them less dependent on prices offered by intermediaries. The object is to increase the fishers household's profit margins.

Development activities should not add to women's work burdens. While interventions intended to benefit women in the sector are desirable, provisions to provide them with some time to attend to these added activities should be included. For example day care services, child-minding centres, and possible pooling of cooking responsibilities.

There should be stronger advocacy and actual conduct of gender sensitivity training for both men and women in the communities. This will aim to sensitize the community to the issues brought on by the culturally constructed gender division of labor, the relative valuing of

men's and women's works, gender stereotypes, and to lead them toward gender-fair and gender-sensitive interactions. This can likewise surface and address issues on domestic violence and reproductive health and rights (Lopez - Rodriguez, 1996a), which affect women in general, and if adequately addressed will definitely improve women's status and participation in the fisheries sector.

Research programs that will systematically examine women's participation and impact in coastal resource management should be pursued. Action research which tests the workability of new roles and new responsibilities for women, for example as information disseminators, or as recipients of formal credit for entrepreneurial activities, should be carried out in order to identify factors influencing the effectiveness of these role changes.

Interventions to strengthen and formalize women's role in CBCRM and other community development initiatives should be instituted. Gender perspectives in environmental issues and resource management should be incorporated into training programs and management structures.

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# WOMEN'S PARTICIPATION IN SAPYAW (HAUL SEINE) FISHERY ON THE EASTERN COAST OF BARANGAY SILLON, BANTAYAN ISLAND, CEBU, PHILIPPINES

F.B. Sotto, C. Laron, M. Lim, and T. Heeger

Marine Biology Section, University of San Carlos, Cebu City 6000, Philippines

## Abstract

Women's involvement in fishing activities is usually limited to near-shore activities such as gleaning (panginhas), fish processing (e.g. salting, drying, canning) and marketing of the catch. In Barangay Sillon, Bantayan Island, Cebu, in the Philippines, however, the women actively participate in an offshore fishing operation called sapyaw. Sapyaw or haul seine was claimed to be an innovation of a certain Arsenio Escaran in 1973 and is unique to Barangay Sillon. The women participate in the setting, retrieving and mending of the net. Since the start of sapyaw fishing, the motivation for their participation has been to increase family income and food consumption. To those who are involved in the sapyaw operation, women's participation is viewed ambivalently, as both important and not important. Positively they contribute to the work force. And negatively, because they brings bad luck or dimalas because of illicit relationships with the male crew or the male owners. In the organizational structure of the sapyaw, the women occupy the patawan and bolero, which are the lowest two positions in the hierarchy. Correspondingly, these two positions also get a smaller share of the catch. A woman becoming a maestro, which is the highest position and wields power over the crew and the operation, is very unlikely. Although most of the informants agree that there is a possibility of a woman becoming a maestro, the male respondents when asked would not consider it possible because of the "risks".

## Introduction

In small island communities, men and women share the responsibility of food gathering and preparation, whether from land or water. In fishing activities, men are generally associated with visible and varied commercial activities like small-scale artisanal fishing to supply local markets and large industrial fishing operations to catch tuna for export markets. Women dominate the subsistence and small-scale fisheries, especially the collection of invertebrates, for example mollusks, crabs, sea cucumbers, and sea urchins. They also process and market the fish. Women are commonly engaged in gleaning, hand lining, spear, and scoop net fishing in the near-shore areas, mangroves, and reefs. In some coastal areas during the incoming tide, women, accompanied by their children, collect bangus fry at the shoreline.

For women to fish offshore is to venture into the domain of men. Notwithstanding this gender polarization of fishing domains, in Barangay Sillon, a small fishing village in the Municipality of Bantayan, Bantayan Islands, Cebu Province, the Philippines, the fishers practice sapyaw, a fishing technique unique to Barangay Sillon (Ushijima, 1994). Sapyaw involves women and children in setting the net and retrieving and sorting the catch. Barangay Sillon, is one of the three project sites of the Bantayan Island Integrated Seapark Development Program (BIISDP) implemented by the Marine Biology Section of the University of San Carlos.

### Objectives

In this paper we propose to address the following:

- i. The extent and significance of women's participation in the sapyaw fishery in Barangay Sillon;
- ii. Social relations between fishermen, women and the children during the sapyaw fishing operation;
- iii. Women's share of the catch and profits;
- iv. Reasons why some sapyaw owners allow women to participate in the fishing operation while other owners do not; and
- v. Criteria for a maestro or arais (crew chief) and the possibility of a woman becoming a maestro.

### Methodology

Data was obtained from interviewing 15 randomly selected respondents, eight males and seven females (Table 1). These respondents, in one way or another, have been involved in sapyaw fishing. Their ages range from 10-70 years. In addition, community leaders and residents were interviewed, and they provided significant insights into the participation of women in sapyaw. Arsenio Escaran, the known innovator of sapyaw gave valuable information on the history and organization of sapyaw. The data were gathered from March to August 1998. The researchers went fishing three times with the fisher folk to document the actual sapyaw operations.

Table 1. Respondent's Profile

Age Range	Gender		Status		
	Male	Female	Married	Single	Widow(er)
10-15	x	1	x	1	x
16-20		x	x	x	x
21-25	x	x	x	x	x
26-30	x	x	x	x	x
31-35	x	x	x	x	x
36-40	1	2	3	x	x
41-45	1	1	2	x	x
46-50	1	1	2	x	x
51-55	2	1	3	x	x
56-60	x	x	x	x	x
61-65	1	1	1	x	1
66-70	2	x	2	x	x
Total	8	7	13	1	1

The site of the sapyaw fishing operation

Bantayan Island is divided into three municipalities: Bantayan, covering the island's southwestern and northeastern portions; Santa Fe, located on the south; and Madridejos, on the north. Barangay Sillon is one of 25 barangays, and the fifth most populated within the Municipality of Bantayan. On the east, Sillon faces Hilantagaan Diot (Small Hilantagaan or Sillon Islet) on which a pearl farm is located, and Hilantagaan Island, a barangay under the jurisdiction of Santa Fe (Fig.1).

Barangays Tamiao, Atop-atop, and Sillon make up the three study sites of the Bantayan Island Integrated Seapark Development Project (BIISDP) funded by the Philippine Council for Aquatic and Marine Resource and Development (PCAMRD) of the Department of Science and Technology.

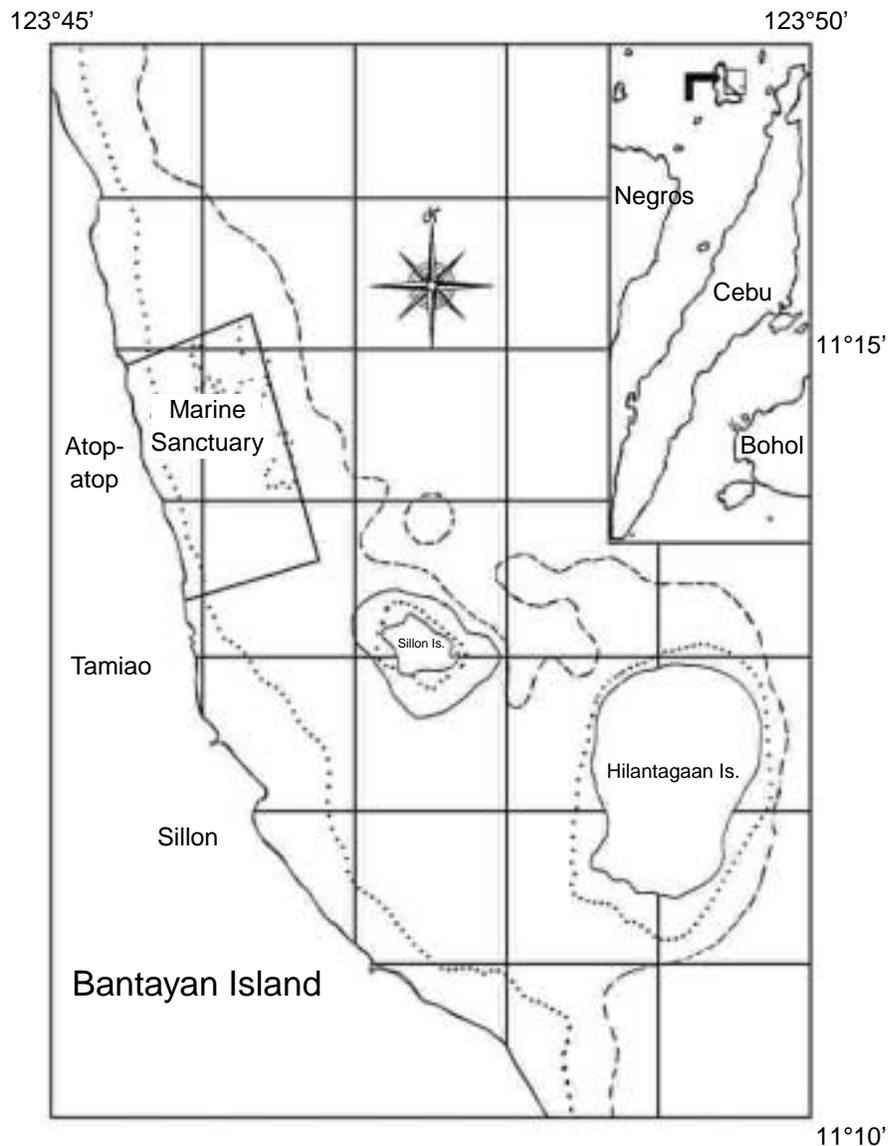


Fig.1. Location of Bantayan Island in the Visayas Region and the three barangays involved in the Bantayan Island Integrated Seapark and Development Program (BIISDP).

### Demographic profile of Sillon

Based on the 1990 census, Barangay Sillon had a population of 3,451, occupying a total land area of 7.49 km<sup>2</sup> with a population density of 460.7 per km<sup>2</sup>. In 1970, when Barangay Baigad was still part of Sillon, the population during the 1980 census decreased to 2,921. However, in the 1990 census, Sillon had grown by 18% over a ten-year period from 1980-1990. Although lower than the municipal growth rate of 27.71% for rural areas covering the same period, it is significantly higher than the national growth rate of 2.4%.

### Results and discussion

#### The sapyaw or haul seine fishing operation

Sapyaw or haul seine is claimed to be an innovation of Arsenio Escaran devised in 1973 and is now widely used in Barangay Sillon. The gear is designed primarily to catch anchovies, locally called bolinao (*Stolephorus* spp.) and the balidbid, a species akin to bolinao. Other species tamban/tuloy/tabagak (*Sardinella longicep*) and guno, silverside (*Atherina* sp.) might also be caught but are rarely sold. The crew, gear and procedure in sapyaw fishing are described below:

#### Crew

The sapyaw fishing team is usually composed of 20-25 persons headed by a maestro, or crew chief, and assisted by segunda maestro (second in command). Presented in Table 2 are the position, gender, and the specific tasks of each crew member and the number of such persons generally involved in a team. Other members are the lampitaw, manunuga, ungdador/pundero (Fig.2), patawan and bolero or temporary workers. Four to six crew set the net (baling) in place (taktak) and draw it back in. They also manipulate the sapyaw or haul seine. In the organization of sapyaw fishery, the women occupy the two lowest ranks of patawan and bolero.

Table 2. The Hierarchy in Sapyaw Fishery

Position/Status	Sex	Task	Number
1. Maestro/ Arais	M	<ul style="list-style-type: none"> <li>▶ Act as the boat's captain</li> <li>▶ Oversees the overall sapyaw operation</li> <li>▶ Decides where to fish and orchestrates the movements of the boats and net</li> <li>▶ Signals the small boats (subiran) to light their petromax and separate from the outrigger banca</li> <li>▶ Signals the 2 large bancas to set and pull the net</li> <li>▶ Determines the share of the catch for each crew member</li> </ul>	1
2. Segundo Maestro	M	<ul style="list-style-type: none"> <li>▶ Assists the maestro/arais in his tasks</li> <li>▶ Take charge of the boat's engine</li> <li>▶ Assists in determining the share of the catch for each crew member</li> </ul>	1

Position/Status	Sex	Task	Number
3. Lampitaw	M	<ul style="list-style-type: none"> <li>▶ Informs the maestro when a school of fish is sighted</li> <li>▶ Ensures that the fish net is properly placed</li> <li>▶ Gives signal for the small lighted boats to move towards each other once a school of fish is detected</li> <li>▶ Gives the signal to the boatman to leave the area and extinguish the petromax, once they have brought the school of fish in to one section</li> </ul>	4-5
4. Manunuga	M		
Huwat		<ul style="list-style-type: none"> <li>▶ Determines the direction of the currents</li> <li>▶ Draws the school of fish (using lighted petromax) and moves it towards their designated convergence point</li> </ul>	4-5
Peon		<ul style="list-style-type: none"> <li>▶ Assembles the school of fish</li> </ul>	
5. Ungkador/ Pundero	M	▶ Tigbira sa pundo one who pulls out the anchor. This process starts when the net has been set and is ready for hauling	4-5
6. Patawan	M/F	▶ Tigbira sa pataw ug pukot one who pulls the net or the buoy	3-4
7. Bolero	M/F/ children	▶ Temporary crew. They are assigned either in patawan or pundo or pukot and given other menial jobs	Range 10



Fig.2. The ungdador/pondero pulling the anchor.

### Gear

Three to four small outrigger boats are each equipped with four petromax lanterns called subiran (Fig.3.) Two bancas are used, each with an outrigger only on one side, one has an outrigger on the port side, the other on the starboard side. A net with a mesh size of 1cm but without bursa (pocket) is used. The net is usually 500-1000m long and 5-6 fathoms high.



Fig.3. The subiran boat with petromax lamps.

### Procedure

The fishing team of about 20-25 people sets out to sea in the late afternoon (Fig. 4) while there is still some light to spot telltale signs of fish concentrations, for example birds hovering over a specific area. The maestro then designates the tulungdon or the area to be fished. As soon as it gets dark, the two to four small boats are deployed in a triangular pattern around the bancas in the center, usually 100 m from each other, while the two big boats (with one outrigger each) are lashed together and carry the net. The 3-4 small boats, or subiran, then light their petromax and draw the bolinao into the circle of light emitted by each (Fig.5). As soon as the school of fish (dangan or duot) is detected, the small boats slowly move towards each other to gradually reduce the radius (Fig.6). Once the boats are close to each other (roughly 20 m), the maestro signals the two large one-outrigger bancas to separate and slowly draw the net over the concentrated school without colliding with the small boats (Fig.7). Once this is done, the net is slowly hauled back to gradually reduce the area and aggregate the fish into an increasingly dense concentration (Fig.8). At this point, a crew member starts scooping the bolinao using a scoop net (Fig.9.) and places them into large baskets called kaing or kaha (Fig.10). On a good night, the operation may yield 35-50 baskets (1 basket = 40-50 kg of fish).

A variation of this operation is being carried out in Hilantagaan Diot (Sillon Island) by Arsenio Escaran. Being shore-based, this operation does not need the two large out-riggered bancas used to carry the nets. Instead, only one large two-outrigger banca is used to put the net in

place. The mamamangga gradually draws the school of bolinao to the shore close enough for the nets to completely encircle them. Once this is done, the crew starts hauling in the net from the shore until the school of bolinao are aggregated enough to be collected with scoop nets.

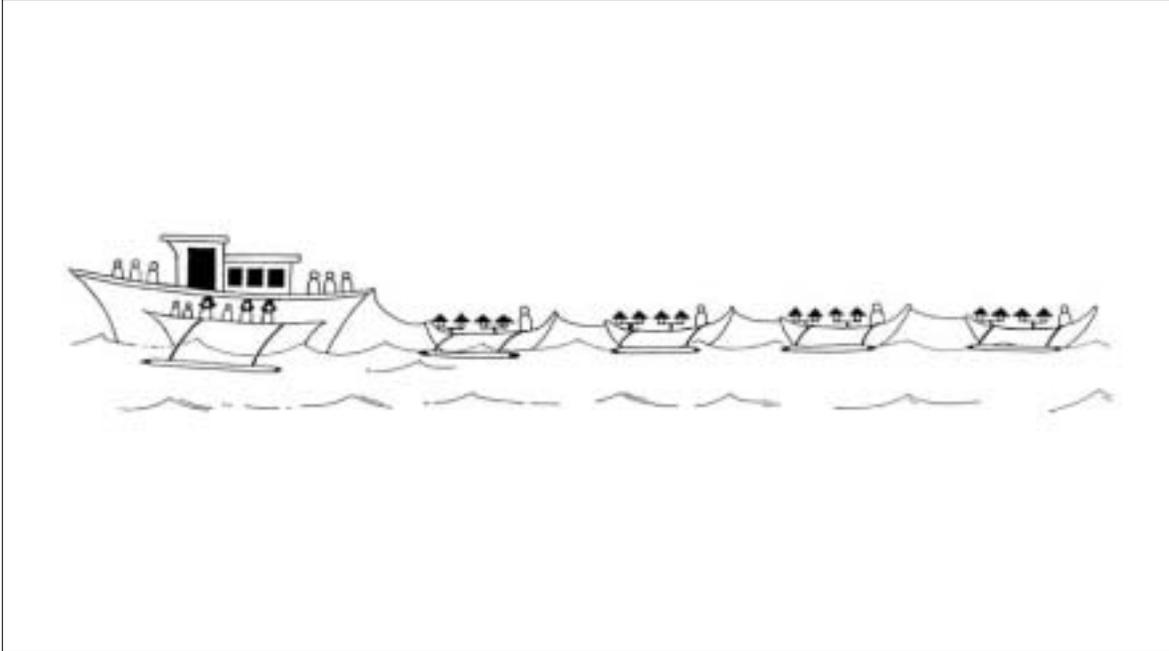


Fig.4. The sapyaw team sets out to the sea in the late afternoon at around 5 o'clock in the afternoon.

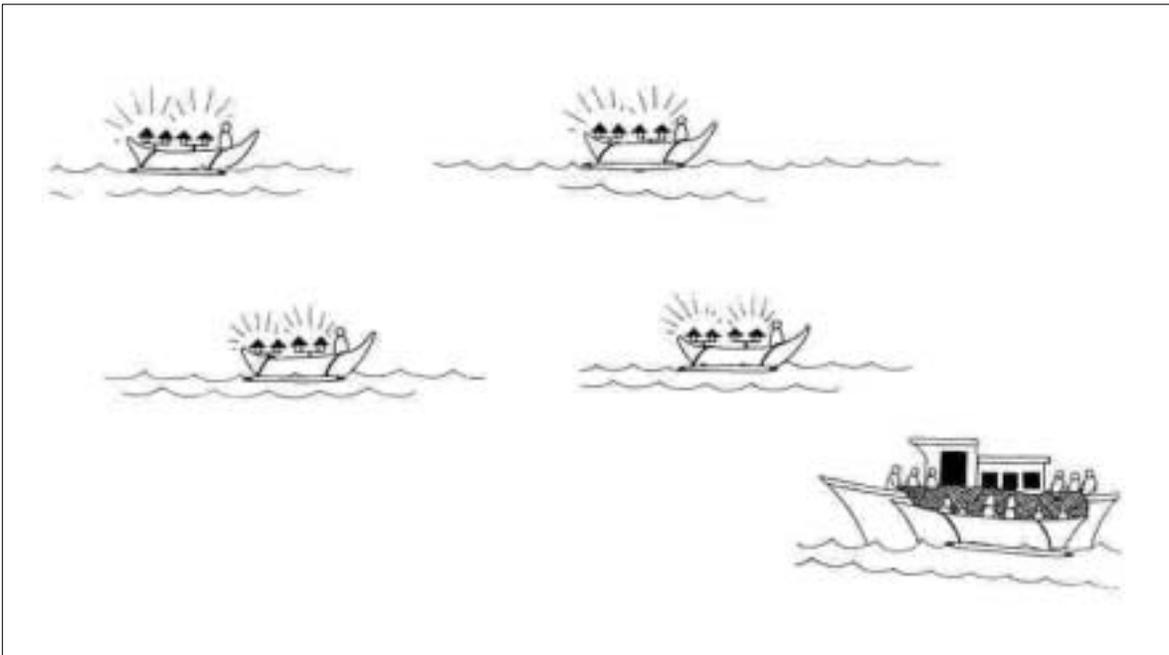


Fig.5. The boatmen in the subiran attract and draw the fishes into the light while the crew in the big bancas maghuwat or wait for 2-3 hours for the fishes to concentrate. While waiting most of the crew in the big banca sleep.

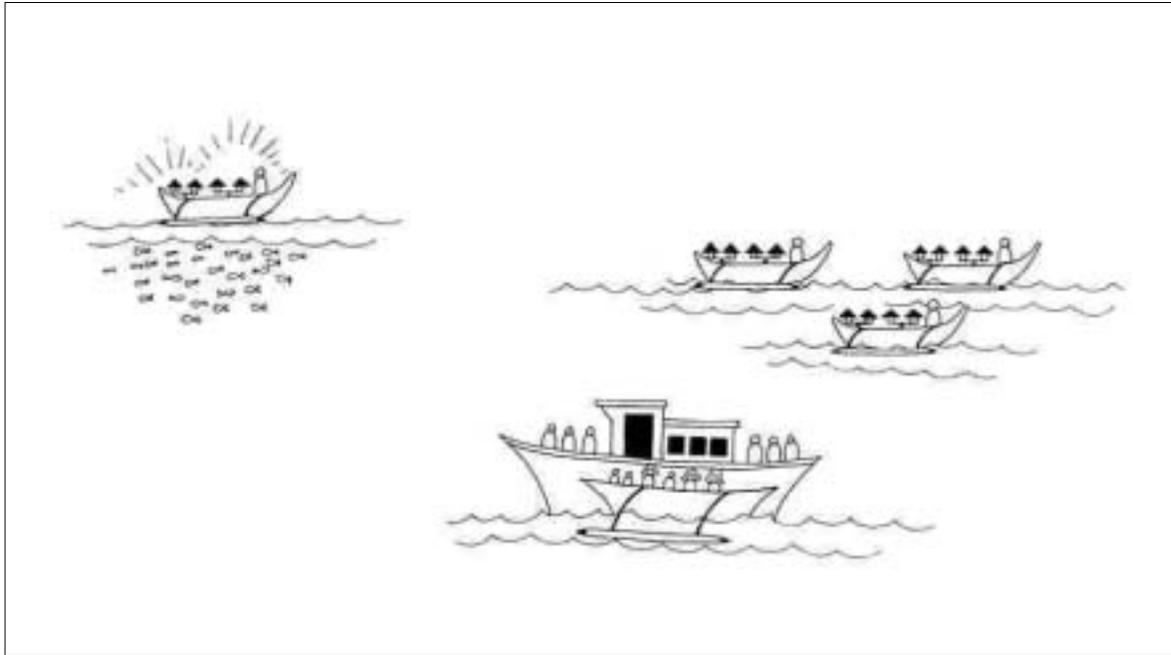


Fig.6. Once the fishes start to concentrate three of the four subiran will have their lights off while one or the huwat still has its light on and brings the school of fishes in one area. The two bigger bancas get ready for the operation.

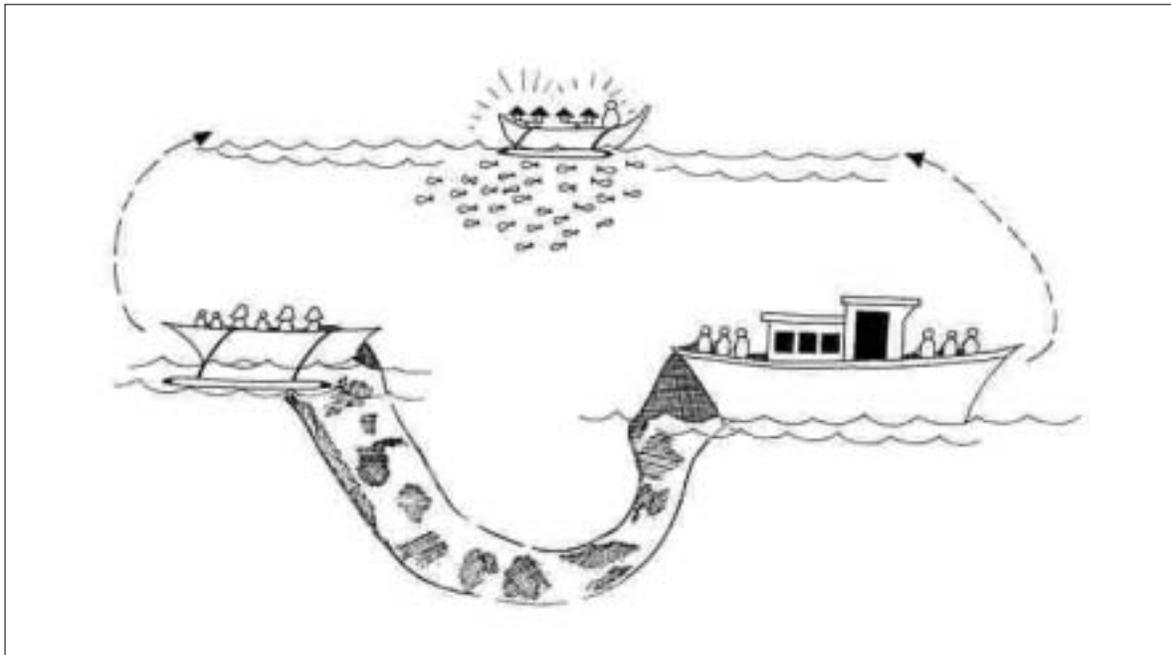


Fig.7. The two bigger bancas separate and draw the net over the concentrated school of fishes.

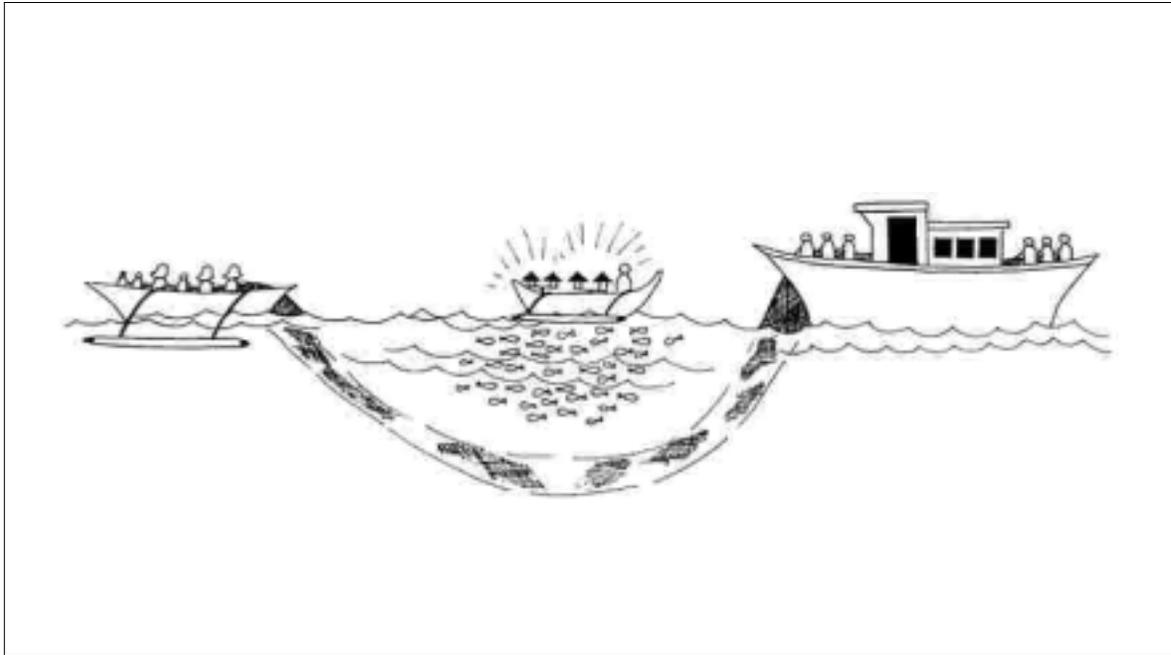


Fig.8. The net is hauled back, the radius is reduced until the fishes are trapped and concentrated in a small area.

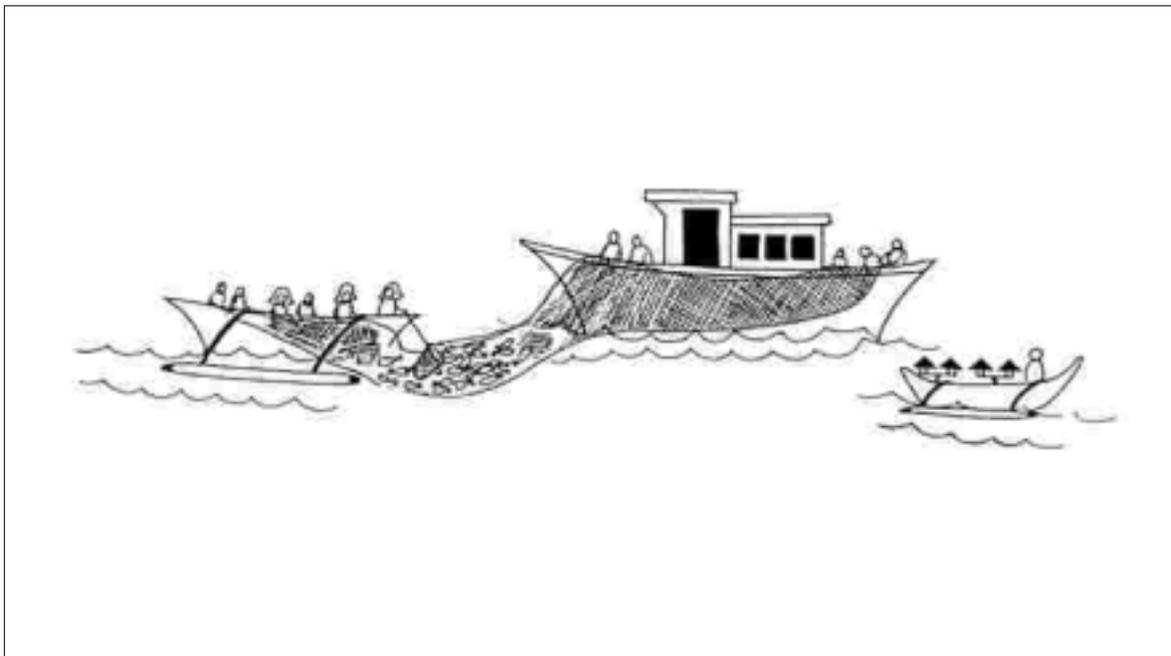


Fig.9. Scooping of the bolinao using the scoop nets.



Fig.10. Bolinao (*Stolephorus* spp.) catch in a ka-ing or kaha during a sapyaw operation.



Fig.11. Handling the net while on board the banca.

#### Women's involvement in the sapyaw fishing operation

Before the invention of sapyaw, the women in Sillon were involved in activities like reef fishing, fishing with hook and line, and seining. Before 1976, beach seining, locally known as baling, was commonly practiced in the barangay, and women and children comprised a large number of the fishing force. They got their share for panud-an or viand, and many families depended on beach seining for food. When Arsenio Escaran introduced sapyaw, it was not difficult for the women and children to try the new fishing method. He did not limit

the new fishing method to men as he anticipated that women might be eager to join in to contribute to their families' basic food needs. Although off-shore fishing is generally regarded as a male occupation since it requires strength and endurance, Escaran was more practical and did not pay much attention to this gender expectation.

Working hours of women involved in sapyaw fishing

The average number of hours women put into their involvement in sapyaw has been quantified and is shown in Figs. 12a. and 12b. Since women are responsible for domestic tasks, they have to settle their domestic chores before they can proceed to work. Women who participate in the sapyaw fishing operation have to cook supper for the family at 3:00 p.m. in order to get to work on time. Usually, the women are free of house chores by 4:00 p.m. After which, they walk for 30-45 minutes, if they live outside Barangay Sillon, to arrive in time for the team's departure at 5:00 p.m. Women's work in sapyaw starts at 5:00 p.m. and usually ends at 4:00 a.m., which in total amounts to 11 hours. There are nights when they stay out fishing for only 4-5 hours depending on the availability of bolinao.

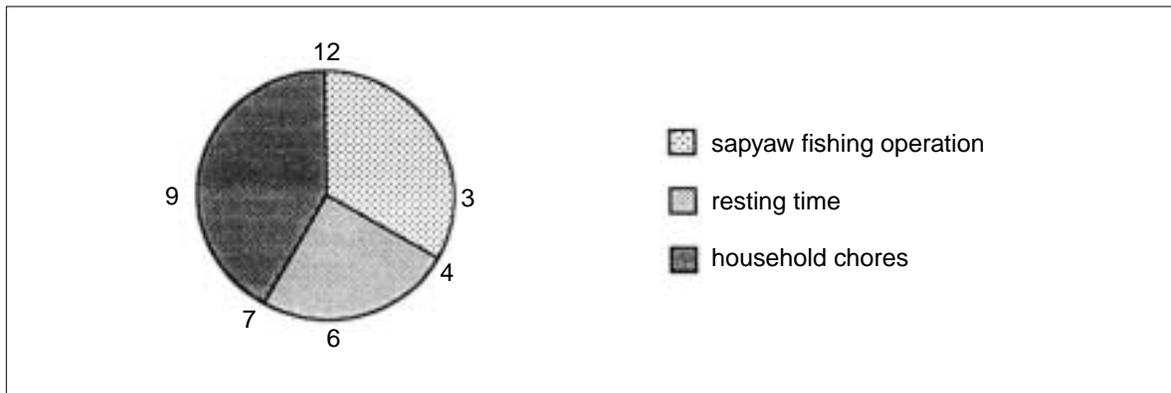


Fig.12a. 12-hour morning daily routine of the female sapyaw fishing participants.



Fig.12b. 12-hour afternoon daily routine of the female sapyaw fishing participants.

During the operation, there is huwat, or waiting time (Fig. 5), when the manunuga (boatmen) draw the school of fish towards the light using the petromax lanterns. At this point, the women and the rest of the crew members sleep for about three hours. The sapyaw operation usually takes six hours on average. Depending on the lunar phase, the team goes home at the earliest by 9:00 p.m. and at the latest by 4:00 a.m. Out of the 28 day lunar cycle, sapyaw fishing operates for 20 days.

After fishing, the women still have to market their share of the catch to supplement the family's income. They are also expected to perform domestic chores. One woman confessed that she gets just three hours sleep on nights when the sapyaw fishing takes 11 hours.

#### Women's role in sapyaw fishing operation

All the respondents agreed that since the start of sapyaw fishing in 1976, the women of Sillon have been part of its operation. The main reason for their participation is to supplement their families' basic food needs, a fact that has not changed for more than 20 years. Before the fishing team departs, the men prepare the boat, the net and other fishing paraphernalia, while the women patiently wait for the maestro or arais' signal to embark. Once they are in the boat, they check for any tears in the fishnet and mend it accordingly (Fig. 13).



Fig.13. Mending the nets on board.

During the operation, the women are mainly in charge of setting (Fig. 14) and pulling or retrieving (Fig. 15) the fishnet, which are the tasks of a patawan. The assignment is based on strength. Among the roles and tasks in sapyaw, the setting and pulling of nets is considered the lightest work, hence its delegation to women (Table 3). However, if the crew lacks men, the women may be called on to do tasks typically assigned to men such as ungdador and pundero.



Fig.14. Setting the nets.



Fig.15. Retrieving the nets.

Table 3. Activity profile of men, women, and children in the sapyaw fishing operation (\* predominantly male or female).

Activity	Male	Female	Children
1. Preparation of fishing paraphernalia		*	
2. Hinubig (removing water from the boat)			
3. Mending the net		*	
4. Setting & retrieving the net			
5. Pulling the anchor, rope & cable		-	
6. Pulling the buoy		*	
7. Determine & distribute the share of the fish catch (by the maestro only)	*	-	-
8. Drying the fish catch		*	

Perception of women's participation by their co-sapyaw fishers

Table 4 shows women's involvement in the sapyaw fishing operation as viewed by their co-sapyaw fishers. Of the 15 respondents, eight are females and seven are males. On the positive side, 27% of the informants who were females recognized their contributions as significant in terms of both economics and operations. They agreed that their share in sapyaw solved their food problems for the family. Occasionally, when they have more than enough, they sell the extra fish to their neighbors and use the proceeds to defray other expenses. They considered the profits and the catch as a supplement to the family's finances and food needs. Thirteen percent said that women are of great help in repairing and mending the fishnet (Table 4).

Table 4. Perceptions on women's involvement in sapyaw fishing by other sapyaw participants

	Percentage
Buwisit (bad luck)	33.0
If short of men, the women take on their tasks except for maestro and segundo maestro	27.0
The profit and share add to the family income and food consumption	27.0
Good in mending the net	13.0
Trustworthy	7.0
No difference	7.0

On the negative side, 33% see the involvement of women as bad luck, or buwisit. According to them, men during the sapyaw fishing operation, especially during the huwat, or waiting time (three hours), get attracted to the female crew members and later develop an illicit relationship. There were experiences in the past when some women, married and single, became involved with male crew members and even with the sapyaw owners. The men believed that such illicit affairs bring negative energy and bad luck to the fishing business.

Twenty-seven of the respondents considered women merely as replacements or substitutes for the male crew members when men are not available. They also consider sapyaw fishing too risky and heavy for women.

It was also found that of the 14 sapyaw owners (Table 5), only 31% allowed women to join in the operation. Listed in Table 6 are the reasons the sapyaw owners gave for accepting and refusing women in sapyaw fishing. Sixty-seven per cent of the sapyaw owners viewed women's participation as bad luck, or *makabuwisit*, as some of the women may get intimately involved with the male crew or owners.

Table 5. Sapyaw owners in Barangay Sillon

1. Arsenio Escaran	Sillon Diyot, Bantayan
2. Joel Aballe	Evacuation, Barangay Sillon
3. Ingke Batayola	Barangay Sillon
4. Pablo Yhapon	Barangay Sillon
5. Godofredo Desales	Barangay Sillon
6. Primitivo Dirdir	Barangay Sillon
7. Carido Escaran	Barangay Sillon
8. Ramona Guia	Barangay Sillon
9. Lucio Hubahib	Barangay Sillon
10. Ismael Dirdir	Barangay Sillon
11. Sarah Paragsa	Barangay Sillon
12. Pilo Layos	Barangay Sillon
13. Lecing Dirdir	Barangay Sillon
14. Titing Sarabia	Baigad, Bantayan

Table 6. Reasons why some sapyaw owners allow and do not allow women participation

Those who allow	Percentage
Augment the family income	40.0
Women are allowed if accompanied by a relative	20.0
Good in mending the net	7.0
Good luck	7.0
Main livelihood	7.0
Those who do not allow	
Women bring bad luck/can develop an illicit relationship	67.0
Women are weak	13.0
Non-fishermen husbands get jealous	7.0
Women are not trustworthy	7.0
Do not know the reasons	27.0

Forty per cent accept women for the sapyaw fisheries with their main reason being to help the women earn additional income for the family, while 20% allow women only if they are accompanied by relatives.

The social relations among the men, women, and children during sapyaw fishing operation

It has been observed that three generations are currently involved in sapyaw fishing, the elderly, the middle-aged, and children. Due to the age range, complex social relations can

be observed. On the surface, during sapyaw fishing there is a semblance of a family or a community activity. The traditional patriarchal structure prevails during sapyaw fishing, where older men head the overall operations due to strength and experience, while the women are left with the lighter tasks of setting and pulling the net, and children take on the menial jobs like removing the water from the boat (Fig. 16). The maestro, or crew chief, true to his role and tasks, will do all the "commanding" and the rest of the crew obey him and fulfil their tasks without question. This is to ensure that the operation will proceed smoothly and harmoniously. A good social and working relationship among all those involved in the sapyaw operation has to be maintained in order not to disrupt the flow of the operation. So far, none of the respondents complained about the tasks assigned to them and their share of the catch. The perception is that for children, sapyaw fishing is fun, and their share from the catch is something to look forward to.



Fig.16. Hinubig or removing the water from the bilge.

#### Women's share in the catch and profits

Since the primary purpose of the women participating in the sapyaw fishery is to increase their family income, it is deemed necessary to know how much the women are earning from sapyaw in relation to the other members of the crew. In the sharing system of the sapyaw fishery, the owner gives the maestro the discretion to decide the amount of catch to distribute to the crew. In practice, the maestro usually sets aside 1-2 baskets from every 10 baskets of fish caught for distribution to the crew. This is done every fishing trip and the daily share of the fish catch allows the crew members and their families to survive until the monthly balansi, or accounting. At the end of every lunar fishing cycle a balansi, or accounting, is conducted to determine the shares and income of the crew members. Sapyaw owners follow a formula to deduct gasoline and diesel costs from the gross income. Then, the net catch is divided into three shares: 41.6% for the owner, 33.4% to be divided by the crew, and 25% for the manunuga. The sharing is based on the price of the dried fish, mostly bolinao, and is determined by the lowest price over the period.



Fig.17. Women mending the nets during the sapyaw off-season.

A woman who participates in all 20 fishing days renders an average of 120 hours work which, when divided by 8 hours, the working hours allowed in Philippine Labor Law, is the equivalent of 15 working days. With the minimum wage pegged at P165 per day in Cebu, the women should be receiving P2,475.00 for 15 days work. However, the actual take home amount per month hovers between P200.00 to 300.00. Table 7 shows the distribution of shares among the crew members. The number of shares per crew member varies depending on his designation.

Table 7. Distribution of shares among the crewmembers

No. of individuals	Designation	Number of shares	Total no. of shares
1	Maestro	8	8
1	Segundo maestro	7	7
5	Lampitaw	1	5
4	Manunuga	4	16
5	Ungkador/Pundero	5	25
4	Patawan	4	16
10	Bolero	-	-
30			77 shares

The total number of shares by which the share for the crew members shall be divided is 77. The share for the crew members is called koma. If for one lunar cycle the total net income is P50,000.00, the share for the crew members, which is pegged at 33.4% is P16,700.00. This amount is divided into 77 shares, which means the value of each share is P216.98.

Table 8. Average income per crew member

Designation	Income (in pesos)
Maestro	1,735.04
Segunda maestro	1,518.16
Lampitaw	1,084.40
Manunuga	867.52
Ungkador/Pundero	1,084.40
Patawan	867.52
Bolero	-

The maestro aside from his share from the koma also gets an incentive from the sapyaw owner. The incentive is P5.00 for every basket of fish brought to the owner. The huwat likewise gets an incentive from the owner. The least paid are in the patawan, which are mostly women.

When asked what they do with their share of the catch, all the respondents (100%) said they either sold their share or used it for family consumption. If sold, the price depended on the species, for example, the price of bolinao and bilabid is P8.00 per caltex (a caltex = 1 kg) while guno or silverside is P2.00 per caltex. The minimum share is 1/2 caltex and the maximum is 10 caltex.

In the present organizational set-up of the sapyaw fishery, the women only occupy the positions of patawan and bolero, which are the second lowest, and the lowest positions respectively. Their shares of the fish catch are also lower.

Woman as a crew chief or maestro

In determining whether a woman can qualify for the position of a maestro or chief crew, it is necessary to know the criteria for becoming a maestro. Table 9 shows the qualifications of a maestro. The two most important criteria are the ability to run the entire sapyaw operation and the skill to repair the engine.

Table 9. Criteria of a maestro or arais

Criteria	Percentage
Able to run the entire sapyaw operation	2.0
Knows how & where to set the net whenever there is a school of fish	7.0
Knows other skills such as engine repair	27.0
Trustworthy	7.0
Experienced in fishing	13.0
Have experienced the difficulties at sea	7.0

## Conclusion

Although off-shore fishing is still a predominantly male activity, it is not true that women do not have any role in this type of fishery. In sapyaw, or haul seine, an off-shore fishing operation claimed to be unique in Barangay Sillon, Bantayan Island, the women are allowed to participate. In Bantayan Island the main opportunity to earn a living is fishing, therefore it

is inevitable that women are involved in this line of work. Discussed herein is the extent of their involvement, and their social and economic contributions.

As in most fishing activities, women get involved primarily to augment the food needs of the family. This is understandable as women are the ones who control the family purse. When resources dwindle, the burden of making ends meet rests on the women, and they assume additional responsibility for augmenting the family resources. But in spite of their contribution to the food needs and income of the family, their participation in sapyaw and any other fishing for that matter, is still viewed as informal, invisible and marginalized with no socioeconomic impact. In the Philippines, for example, fishing is seen as male-associated, hence, women's contribution is dismissed as minimal and government fisheries agencies are not keen on looking into the extent of the socioeconomic impact of their activities. According to Cornelia Quist (1997), "The role of women in fisheries is invisible in statistics and policies because it is perceived as supportive and supplementary to the activities of men. Hence, [their role is] ignored particularly by fisheries planners by assuming that they only play a marginal role."

The roles assigned to women during the actual sapyaw fishing are the lowest in the hierarchy and the tasks are lighter. Hence, it follows that their share of the catch and the profits is lower compared to the rest of the male crew.

Off-shore fishing is still being identified with strength and endurance, and is perceived to be too risky and heavy for women. The possibility of a woman becoming a maestro is slim. There are also physiological and biological constraints; so far, no sapyaw women participants have small children or babies. In sapyaw fishing, the traditional community spirit is still very much at work where men, women and children are involved.

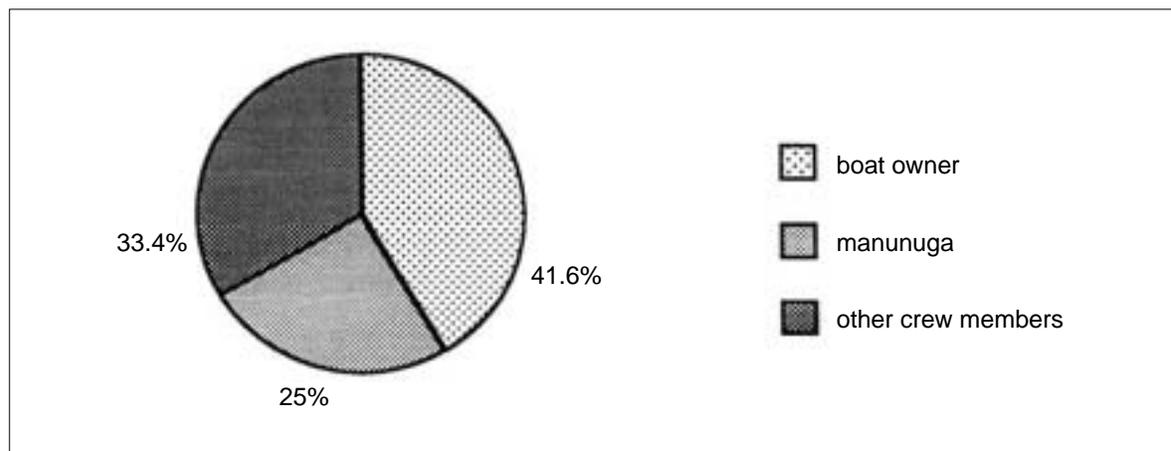


Fig.18. Percentage of crew shares from sapyaw catch



Fig.19. The three generations involved in sapyaw fisheries in Barangay Sillon, Bantayan Island, Cebu, Philippines.

#### Acknowledgements

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# WOMEN IN SMALL-SCALE FISHERIES IN MALAYSIA

J. Yahaya

Faculty of Economics and Administration, University of Malaya,  
50603 Kuala Lumpur, Malaysia

## Abstract

Like their counterparts in other developing countries, women working in the small-scale fisheries in Malaysia are usually not recognized as being economically active. Yet, general observations and empirical studies show that Malaysian women in small-scale fisheries daily put in long hours of work, with half their time spent in self-employed, income-earning activities. Unfortunately, there is no census or survey that adequately documents the full extent of the economic participation in the small-scale fisheries sector. This paper, which forms part of a larger study on the same subject matter, provides an overview of the socioeconomic status and participation of women in the Malaysian small-scale fisheries sector. The study also aims at highlighting the potentially significant role of public policies and programmes in enhancing the women's economic participation in small-scale fisheries development. The focus of the study is the "women in fisheries" in the two east coast states of Kelantan and Terengganu where the women are more economically active than their counterparts elsewhere in the country.

## Introduction

In the past, significant contributions by women to sustaining the socioeconomic well-being of their families has been neglected or taken for granted. As a result, women's economic contribution and potential are underestimated. In recent years, however, there has been considerable concern about the need to acknowledge and stimulate women's economic contribution and participation in development. The United Nations Declaration of the International Decade of Women in 1975 only served to enhance this concern and awareness as manifested by the proliferation of research projects and studies on the roles of women in development.

In a developing country like Malaysia, the concern for increasing women's economic participation can be seen within the socioeconomic condition of poor households, especially those in the rural sector. Persistent poverty and deteriorating economic conditions have forced many women from poor rural households to work outside their homes and venture into various economic activities while continuing to perform their traditional household duties. It has been generally observed that women in many Malaysian households actually work for as long as 15 to 16 hours daily, carrying out household chores such as cooking, washing and cleaning, taking care of the children, working in the fields either as unpaid family labour or as paid seasonal workers during peak seasons, and engaging in other income-generating or income-substituting activities. Women are no longer confined to their traditional gender roles as wives and mothers but are now wage paid workers and income earners for their families.

Despite these changing roles, however, women, particularly in the rural sector, still occupy a lower socioeconomic status than their male counterparts. Their freedom and chances of enjoying equal access to employment and educational opportunities are often hampered by religious, social and cultural constraints, besides the numerous household chores and responsibilities by which they are bound. It is also a common knowledge that women's involvement in socio-political matters, particularly in decision-making and leadership roles, is limited. Furthermore, women in the rural communities have long been neglected in most development programmes. A few specific attempts have been made by the various government agencies like KEMAS, FELDA, RISDA, LPP, and Lembaga Kemajuan Ikan Malaysia (LKIM) to integrate women into rural development plans. Past experience has shown, however, that programmes aimed at women in the rural sector were too welfare-oriented while programmes to promote their genuine economic opportunities were seriously lacking. As a result, women in the rural sector have been deprived of the direct socioeconomic benefits generated by the many rural development projects.

#### Economic activities of women in Malaysian fisheries

As with their work in other sectors of the rural economy, women working in the small-scale fisheries are usually not recognized as being economically productive. This is aggravated by the fact that they are primarily engaged in subsistence rather than commercially oriented activities, and female labour is customarily classified as "unpaid family worker". Yet, general observations show that Malaysian women in small-scale fisheries daily put in long hours of work, with half the time spent in self-employed, income-earning activities. There is no denying that such activities do indeed supplement the average fishing household's income-earning capacity. Unfortunately, there is no census or survey that has adequately documented the full extent of women's economic participation in the small-scale fisheries sector. Hence, women's economic contribution to the fisheries economy has not only been sadly neglected but also grossly underestimated.

Economic activities in which women actively participate are:

#### Fisheries production and processing

The contention that women in fishing households are not economically active is arguable. Even though traditions and superstitions which link women with poor catches inhibit their involvement in direct fishing, women are known to perform essential but generally underestimated roles in fisheries-related activities such as unloading, sorting, gutting, net mending, processing, and distribution and marketing. These supplementary and supportive roles played by the womenfolk were succinctly described by Rosemary Firth (1943), who noted that "when the fisherman comes in wet and tired after a day's fishing he expects his wife to be down on the beach, to throw skids for the boats, help in the sale of fish, distribute the free catch allowance to crew members and carry back the husband's fishing gear to the house". Hence, as far as the men are concerned, their share of the work is completed once the boats return with their catch, and the women are expected to take over from there on. Although not all the tasks completed by women are necessarily paid for and are often taken for granted, they are critical in creating form, place and time utilities which in turn will have a significant impact on total fisheries production and distribution. In fact, it may be argued that it is the post-fishing and distribution activities undertaken by the women that have ensured the persistence of low-cost services and goods which are affordable by the local communities.

The notion that women are completely banned from fishing is not absolutely true since there are instances when women do fish. Interestingly, women's participation in actual fishing is evident only in the east coast states of Kelantan and Terengganu and, to a lesser extent, in Kedah on the west coast of Peninsular Malaysia. These "fisherwomen" fish mainly from the shore or in shallow protected waters using simple hand-operated gear such as hooks and lines, scoop nets or traps. The catch is used primarily for home consumption while the surplus may invariably find its way to local fish dealers, village retailers, friends and relatives. It is reported that an increasing number of women in small-scale fishing communities in Kelantan are accompanying their husbands to sea owing to the lack of income-earning opportunities in the villages. To some other women, accompanying their husbands fishing is just a way of life. With their fishing background and the years of exposure to the sea, the inclination of these women to fishing activities is natural.

Women's involvement in shore-based activities in small-scale fisheries is most evident in the seafood-processing sector, involving both small home-based establishments and large industrial fish/prawn processing plants. These small-scale, home-based establishments are usually operated on a family or household basis. Characterised by small-scale operation, low capital investment, simple labour-intensive technology, these establishments produce a wide range of fishery products such as fish crackers, fermented fish, fish balls, fermented fish sauce, shrimp paste, dried jelly fish, dried anchovies, salted fish and fish satay. These businesses usually employ a high proportion of daily-paid female labour, the majority of whom are the wives and daughters of fishers. Their main job activities include sorting, gutting, cleaning, drying, curing, and packing of fish and/or prawns. It is understood that such employment provides low cash incomes, usually in the range of RM5.00 to RM8.00 a day.

Beside the small fish processing establishments, women in fishing communities are also employed in the large industrial fish/prawn processing plants. Because of their general lack of education and skills, women workers in these large processing plants are once again restricted to low paid labour-intensive work such as sorting, dressing, and packaging. On the other hand, activities like the management of the plants, supervision, and operation of machinery remain very much the monopoly of the male workers.

#### Fish marketing and trading

Another economic activity involving extensive women's participation is fish trading and marketing. It is generally observed that women's involvement in fish trading is most significant in the north-eastern state of Kelantan, and diminishes in importance, as one moves southward into the states of Terengganu, Pahang and eastern Johor. There are two categories of women fish traders, namely, those selling only the catch brought in by their husbands, and those who are engaged in the buying and selling of the fish traded in the market. Invariably, a majority of these women fish traders turn out to be the wives of fishers wanting to generate a supplementary income for their households. With limited capital and other financial constraints, most women traders can manage to trade only small amounts of fish at a time, and the fish are usually taken to inland markets where prices are slightly higher. Other marketing outlets for the fish handled by the women traders are the bigger fish traders (or daganans as they are called on the east coast of Peninsular Malaysia), the small retailers who sell from house-to-house, and the village retail shops. In some cases the fish are gutted and cleaned before they

are sold, thereby increasing their value. The marketing functions undertaken by women fish traders, besides earning them a supplementary income, are indeed very productive in the sense that they are able to create place and form utilities. This invariably pushes the price of fish higher than if they were sold ex-vessel or on the beach. In other words, as aptly pointed out by Yap (1980), the handling and distribution activities performed by the women fish traders provide "fishermen with additional bargaining power that otherwise would not be available if they had to sell on the beach". Given the additional marketing channel, it is believed that the fishers are less susceptible to exploitation by middlemen. Furthermore, the petty distribution and marketing functions undertaken by the women fish traders ensures the existence of low-cost services for the fishers and affordable fish prices for the local consumers.

Unfortunately, this important role of the women fish traders in small-scale fisheries is gradually being eroded with the introduction of more sophisticated fish distribution and marketing systems. Bulk buying and direct dealing with the fishers and the growth of a large wholesale trade, even in small-scale fisheries, has considerably reduced the role of the small fish traders. Moreover, with the construction of modern landing and marketing complexes, and the introduction of fish auctions in these complexes, it is envisaged that the hitherto important functions performed by small fish traders and dealers will gradually be diminished if not completely phased out. Should such a displacement take place, the women fish traders will be the first to be ousted.

Beside their involvement in fish trading and retailing, women in small-scale fishing communities are also engaged in other small retailing businesses. The women retailers characteristically operate from small huts outside their houses or in local markets in neighbouring villages and towns. Dry food provisions, household goods, fish and vegetables are some of the common items sold by these women retailers. They usually carry out their retailing business with the help of the children and adolescent family members.

#### Aquaculture

More recently, women in small-scale fisheries have become increasingly involved in fish farming in synchronization with the rapid development of aquaculture in the country. The participation of women in aquaculture extends to every aspect of fish farming such as preparing of fish feed, feeding of the fish, cleaning of nets/cages, and the general maintenance and upkeep of the ponds or cages. It is recognized that fish farming is a suitable activity for women since it does not require them to be away from their homes for a long period of time, hence causing them to neglect their household or domestic responsibilities. Furthermore, activities related to fish farming like preparing fish feed, feeding the fish, and minding the ponds/cages are often perceived as extensions of the women's household chores. In this way, the women are able to combine supplementary income earning activities with household activities without neglecting the latter. A study of the floating cage culture project in Sungai Merbok, Kedah (Hotta and Yahaya, 1985), confirms that the women are extensively involved in activities related to fish rearing. The project was successful in attracting the extensive involvement of women since it was based on the family unit concept where labour is provided by family members.

### Non-fisheries activities

Another recent activity involving women's participation is related to tourism. With the rapid growth of the tourism industry in the country and the availability of the various incentives extended by the government, it has been reported that a few enterprising fishing families, especially on the East Coast, have started operating holiday lodgings in the vicinity of their houses for foreign tourists. It is also reported that it is the women who actually undertake the daily management of these guest houses, performing routine household activities like cooking, washing, cleaning, and general housekeeping while their husbands are at sea. As with fish farming/rearing, the women's involvement in running the guest houses or holiday lodgings does not require them to be away from their houses and household responsibilities. Although only a few fishing households are currently taking up such tourism-related, income-generating activities, the number could certainly increase in the future given appropriate incentives and support facilities. In this connection, agencies like Tourist Development Corporation (TDC) and LKIM have initiated schemes specifically aimed at providing such business and employment opportunities in tourism-related industries to the fishing and other coastal communities. In view of this, tourism-related activities seem to be one of the most effective avenues for the potential gainful employment of women in small-scale fisheries.

Besides their participation in relatively new fields like aquaculture and tourism, women in small-scale fishing communities have been traditionally involved in the production of local handicrafts such as batik-making, songket weaving, brass and silver manufacturing, and mat weaving, for generations. These cottage industries, which rely heavily on the conventional skills and craftsmanship of the women, are usually operated in the home, thus enabling them to combine household duties with income-generating activities to supplement the family income. Farming is another significant supplementary income-earning activity undertaken by women in the small-scale fishing communities, working either as seasonal farm workers or unpaid family labour in family-based agricultural production of planting, weeding, and harvesting. A socioeconomic study by ESCAP/FAO (1970) revealed that 27.5% of the women in fisheries with secondary employment were engaged in farming, especially in tobacco growing and padi planting. The study also showed that owning businesses and retailing are other important supplementary income activities for women, providing employment to about 21.6% of the total. This is consistent with the general observation that the women from the East Coast of Peninsular Malaysia are more business-oriented than their counterparts from the West Coast, although this is more distinct in Kelantan than in the other states on the East Coast.

Several reasons can be put forward for the higher economic participation of women in the fishing communities on the East Coast compared to their counterparts on the West Coast. First, the socioeconomic circumstances of the East Coast fishing communities are such that the women are forced to seek additional income to supplement their meagre household incomes. Second, fishing activities on the East Coast are highly seasonal owing to the influence of the northeast monsoon. During the monsoon period, especially between November and January, rough seas and bad weather conditions prevent most fishermen on the East Coast from fishing, thereby compelling them and their household members to seek other alternative and/or supplementary income-earning activities. Finally, the traditional craftsmanship inherited from their forefathers and the availability of local raw materials have enabled the East Coast

women to pursue handicraft activities such as batik-making, mat and basket weaving, and brass and silver making. It is noted that such natural skills and craftsmanship are conspicuously absent in women in fishing communities on the West Coast.

Economic potential of women in small-scale fisheries

If women in the rural sector, including those in the small-scale fisheries, are to be integrated into the development process, their economic potential should be utilized to the maximum. Until recently, government programmes for women in the rural sector were more family-development oriented and geared mainly towards enhancing the domestic roles of women as wives and mothers. The trend of promoting income-generating activities for women emerged only recently and was sparked by the realisation that women contribute significantly towards the socioeconomic welfare of their families and economic development.

Dixon (1978), in her studies on rural women in South Asia, proposed a model of female employment which incorporates elements designed to integrate women into the rural development process. The central concern of Dixon's model is the creation of non-agricultural employment for rural women. For maximum impact, the strategy must incorporate the following considerations: it should be located in small towns and villages; create jobs outside agriculture on a small-scale; involve labour-intensive light industries; draw women out of their homes into a central work place; organise production cooperatives; and offer additional services and incentives (Dixon, 1978). Another relevant consideration is that, before determining which income-generating projects are suitable and feasible, it is important to study the production activities in which the women are currently involved. It has been generally observed that, in most cases, these are subsistence activities, and thus should be upgraded to income-earning employment. In view of the dualistic roles of women, it must be remembered that the new income-generating activities should not draw women out of their homes for such long periods that they cannot perform their domestic tasks as usual. To further enhance their economic roles, women should have at their disposal basic household appliances, such as washing machines, refrigerators, cookers, etc. which could help reduce their domestic chores. Unfortunately, such amenities, the presence of which are usually taken for granted by urban housewives, are generally not available in the majority of fishing households. This means that more effort, time and energy have to be devoted to domestic activities, leaving the women with less time for income-earning activities outside their homes. This is further compounded by the lack of social amenities such as clinics, schools, postal services, communication, transportation, and pre-school play group facilities. Although, this is a basic problem common to rural women in general, it is most apparent among women in small isolated fishing communities.

Without losing sight of the above considerations, four main areas in which women in small-scale fisheries can actively participate and earn incomes have been identified as:

- i. Traditional subsistence activities such as fish processing, preservation, and fermentation which can be upgraded into income generating production.
- ii. Activities in aquaculture (brackishwater, cage, and mussel culture) such as the collection of fish fry, prawn seed etc., stocking of ponds, the feeding, and the rearing of poultry (chicken and duck) by the fishponds.

- iii. Home-based, labour-intensive cottage industries such as batik-making, weaving, silver making, basket making, sewing, local handicrafts (ornaments made from sea-shells, corals etc.), and other agro-based industries such as fruit preservation, copra and coconut-oil extraction.
- iv. Operation of holiday accommodation or guest houses for tourists.

#### Fish processing

By long tradition, the women in small-scale fisheries, particularly on the East Coast, have engaged in a wide range of traditional fish-processing activities such as salting, sun-drying, preservation, and fermentation to produce products like fish-crackers (keropok), fish sauce (budu), shrimp paste (belacan), and shrimp sauce (cencalok), and salted and dried fish, cuttlefish and prawns. It was estimated that nearly 30% of marine fish landed in Peninsular Malaysia are processed into these traditional fishery products which provide a cheap source of animal protein to the rural population. These activities are carried out either at the household level or at numerous small processing units dispersed throughout the fishing villages. The methods employed to process the fish are traditional, requiring minimal capital and technical know-how. However, this traditional processing technology coupled with poor sanitation of the premises and utensils, and the absence of quality control, results in products which are inferior in quality and therefore fetch low prices and have limited markets. In view of this, it has been proposed that training to improve processing methods should be extended to a group of selected female fish processors who would in turn spearhead the dissemination of knowledge and skills to the other women processors (ESCAP/FAO, 1970). The technical support and assistance of relevant government agencies like MARDI, LKIM and the Fisheries Department would be appropriate in making such a training project a reality.

The numerous fish processing activities traditionally undertaken by the women in fishing communities are performed by the individual or the family unit, but rarely as a cooperative. The women would benefit considerably if they were organized into small cooperatives primarily concerned with fish processing and curing. Such a cooperative effort offers several economic and social advantages over individual enterprises or being an employee in a processing factory. Government assistance in the form of low-interest loans, technical expertise and training should emphasise simple cooperative principles, book-keeping, saving schemes, improved processing and preservation methods, and hygienic sanitation. To facilitate marketing, special retail outlets should be established not only in the vicinity of the village but also in neighbouring towns and cities.

#### Handicraft cottage industries

The concept of organizing women's economic activities into small cooperatives can also be extended to other fishery-based cottage industries such as net-making, local handicrafts (ornaments made from sea-shells and corals), and other fishery by-products. These cooperative ventures should not be confined to fishery-based industries but extended to other small-scale agro-industries such as fruit preservation, copra, and coconut oil extraction, etc. The establishment of such home-based, labour-intensive production units which utilise readily available local materials and use intermediate technology, offer vast income-earning opportunities to women who have hitherto been employed in the subsistence and informal sectors. In this connection, it is envisaged that LKIM, with the technical assistance and support

of agencies like MARDI, KEMAS and MARA, can play an important role in developing small-scale, home-based industries which involve women's labour in the fishing villages.

#### Aquaculture

In view of the government's recent thrust for the development of freshwater and brackishwater fish farming as alternative and/or supplementary livelihoods to marine fishing, there is a great potential for the possible involvement of women in this area. Rural women are known to be involved in integrated farming activities such as fish farming, vegetable gardening, poultry, and animal husbandry as secondary economic activities. While men attend to the more strenuous activities of ploughing the land, digging the ponds, and building the bunds and hedges, the women's role is confined to feeding the animals/fish, stocking and fertilising the ponds, preparing the fish-feed, and harvesting.

In coastal aquaculture practices, such as cage and mussel culture, the tasks of preparing fish feed, feeding, cleaning, and general up-keep of the cages and rafts, are carried out mainly by the women while their husbands are out fishing. With the recent thrust for small-scale aquaculture as a supplementary or alternative source of livelihood for artisanal fishers, the prospect of utilising women's economic potential in aquaculture appears bright. This is further reinforced by the recent rapid development of large-scale aquaculture projects (pond, raft, cage, on-bottom culture etc.), which would certainly increase job opportunities for women in this very important economic activity. The main activities commonly associated with the extensive participation of women are stocking of ponds, stock correction and growth checks, maintenance activities (weeding of ponds, clearing of bunds, cleaning nets and cages, protection against predators etc.), collection of fingerlings and fish fry, fertilizing ponds, feeding, harvesting, handling, and transport of fish from ponds, cages, rafts etc. to storage tanks (Yap, 1980).

Since these activities are not very time-consuming and do not draw women too far away from home, their normal household duties will not be affected. There is also a possibility of practising integrated farming such as the rearing of poultry and fish and the growing of cash crops along the bunds. For example, integration of fish and ducks/pigs has been successfully practised by Chinese pond farmers in this country. Therefore, both aquaculture and integrated farming appear to offer great scope for increasing women's economic involvement in the future.

#### Tourism

The possibility of women's participation in income-generating, tourism-related activities in fishing villages is yet another area where their economic potential can be utilised. With more tourists staying on the beach and at off-shore island resorts, guest accommodation and facilities should be improved and added to. Currently, there is a shortage of cheap accommodation (chalets, longhouses, etc.) for tourists on these beach and island resorts. As mentioned earlier, a few fishing households on the East Coast have taken the initiative to operate cheap lodging/guest houses for tourists on a small-scale basis. Such facilities are very popular among foreign tourists with limited budgets who wish to stay in a particular place for an extended period of time. In addition to providing cheap accommodation, such guest houses would enable tourists to experience typical kampung or village life. It would seem that such guest houses are becoming increasingly popular among low-budget, foreign tourists.

Women's participation in tourism-related activities such as operating holiday accommodation is the least dislocating in the sense that it does not require them to be away from their homes. The daily management of the guesthouses, like tidying, cleaning, and cooking, can be carried out as an extension of the women's routine housekeeping chores. Nevertheless, it is generally felt that women's involvement in tourism-related industries should also be expanded to other income-generating activities, such as retailing local handicrafts, operating small restaurants, and organising recreational activities and cultural shows for a fee. It is realized, however, that the women may not have the necessary skills and experience to undertake such activities. In view of this, government agencies like MARA, LKIM, TDC, KARYANEKA etc. can play an important role in initiating and supporting small tourism-related projects for coastal communities in general and the fishing community in particular. The important areas where agencies can provide input are loans and credit (MARA, Bank Pembangunan Malaysia, Credit Guaranteed Corporation etc.), training and extension (Perbadanan Kemajuan Kraftangan, KEMAS, TDC), marketing (KARYANEKA), and technical support facilities and manpower (TDC, LKIM etc.).

The government should spearhead and support income generating projects for women in the small-scale fisheries sector. Unless the government comes forward to subsidize the initial investment costs, such income generating projects will not be economically viable.

#### Policies and programmes

This study draws attention to the potentially significant role of public policies and programmes in enhancing the participation of women in fisheries in other economic activities.

Although central fisheries agencies have embarked upon women-focussed programmes specifically for the small-scale fisheries sector, the extent and depth of these programmes are too limited to have any significant or long-term impact. Serious commitment to incorporate women-focussed programmes as an integral part of their overall development strategies is needed by all agencies concerned.

Depending on local needs, resources, and economic and social patterns, the programmes may concentrate on providing support for fisherwomen in one or more of the following broad areas: a) women-focussed economic programmes, b) social services and community activities, and c) organisational, technical, and financial support.

#### Economic Programmes

Women in fisheries must be given the opportunities and means to increase their economic capacities by:

- i. Setting up small, cottage industries which utilise local raw materials, traditional skills and craftsmanship, require small investment, employ simple, hand-operated technologies, and manufacture products that are easily marketable.
- ii. Setting up central work places near women's homes where organised economic projects like batik-making, weaving, silver working, tailoring, sewing, vegetable gardening, and poultry rearing can be conveniently carried out. Locating the economic activities of women in a central work place has several economic advantages.

- It provides an economy of scale and a division of labour that are impossible to achieve in a dispersed production system and it facilitates efficient marketing and distribution of the products.
  - It enables closer supervision of workers and better control over the quality of products. It can also provide better working conditions.
  - It facilitates the transfer of technology and investment in capital equipment and facilitates dissemination of knowledge and skills.
- iii. Initiating special programmes for women in fisheries to promote cooperative forms of economic organisation such as seafood processing cooperatives, credit and marketing societies, and producers' associations.
- iv. Diversifying the types of non-fisheries activities for women in fisheries depending on the local resources available, traditional work patterns, skills and interests, and the nature of the local economic structure. Small, home-based activities once again tend to be most viable since most women are also required to carry out domestic duties which require their presence at or near their homes.

#### Social services and community facilities

In preparing the women in fisheries for more active economic participation some essential prerequisites are needed to improve their economic leverage, thus enhancing their economic and employment potential. In particular, public policies and programmes should focus on the following:

- i. Raising the level of education and the skills of women by drawing them into rural learning institutions such as elementary school, adult literacy classes, and vocational training.
- ii. Developing and improving basic household amenities such as water and electricity to reduce the work load of currently burdensome and time-consuming household tasks, such as preparing food, collecting water from the well, and gathering wood for fuel.
- iii. Providing facilities such as crèches, kindergartens, and child-care centres where women can leave their young children while they are working.
- iv. Promoting family development and family planning information and services to reduce family size in the context of enhancing the economic role of women.

#### Organisational, technical, and financial support

Success in enhancing women's economic participation also depends on the appropriate organisational, technical and financial support for domestic, social and economic activities. This support would include:

- i. Providing extension services for guiding and supervising a few selected women leaders or "link workers" from fishing villages. These workers would function as the "link" between women in fishing communities and the relevant government agencies in order to improve the communication flow and rapport between them.
- ii. Providing specific training in the basics of fish handling, preservation, and curing.

- iii. Providing low-interest loans and credit facilities to women in businesses such as fish marketing and trading, fish farming, and food retailing.
- iv. Ensuring minimum wage legislation and a social security system for women in paid employment such as in large fish processing factories, handicraft, and batik-making factories.
- v. Encouraging research and development aimed at developing improved technologies in fish processing or other non-fisheries enterprises in which women in fisheries participate.
- vi. Promoting national campaigns to change prevailing social traditions, cultural constraints, and conservative attitudes that are discriminatory against women and limit their accessibility to economic resources and opportunities.

### Conclusion

In the small-scale fisheries sector of Malaysia, the economic participation of women is grossly underestimated, their contribution towards the socioeconomic welfare of their families is often taken for granted and their economic potential under-utilised. Government programmes for women in fisheries are generally more family-oriented, geared towards enhancing the domestic role of the women as homemakers. More recently, the trend has been to promote income earning activities for these women. This has been sparked by the realisation that women do contribute significantly to household income and to the economic well-being of their families.

The issue of promoting economic activities for women, however, goes beyond fisheries development planning. Adequate attention and commitment should also be extended to other fundamental forces influencing social barriers, perceptions, cultural values, and sexual inequalities. Moreover, programmes aimed at enhancing the economic role of women in fisheries cannot be carried out in isolation but have to be integrated into other activities which come under the general rubric of rural development. In the final analysis, success in enhancing women's economic participation in the small-scale fisheries sector depends very much on the political will and commitment of planners and policy-makers. Without this will and commitment, the concern to enhance the economic participation of women in fisheries and to integrate these women into development will remain a widely discussed academic issue.

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# THE ROLE OF WOMEN RESEARCHERS AND TEACHERS IN TAIWAN FISHERIES IN THE LAST 30 YEARS

N.H. Chao and I.C. Liao

Taiwan Fisheries Research Institute, 199 Hou-Ih Road, Keelung, Taiwan

## Introduction

Taiwan, is a mountainous island located about 140 km east of China, lying between Japan and the Philippines on a line running northeast to southwest. Approximately two-thirds of the island lies north of the Tropic of Cancer. Thus, one third of its region, the southern area, lies within the tropics. The total land area is 35,961 km<sup>2</sup>, and the population exceeds 20 million. The climate varies considerably between the northern and southern tips of the island. In the temperate north temperatures may drop below 10°C in the winter, while in the subtropical south temperatures rarely drop below 10°C. This makes the south more suitable for culturing warm water fish. The western coastal areas are mainly shallow, sandy beaches, suitable for fisheries development, while the eastern coastal regions are predominantly rocky, and have not been fully utilized.

Taiwan's fisheries have had a long history and tradition, but within the past two decades they have experienced a relatively fast rate of growth and expansion. This rapid development in the fisheries is attributable to the subtropical climate, good water and soil conditions, ready availability of natural fish and prawn fry, and the diligence and hard work of Taiwanese fish farmers who are always eager to acquire new knowledge and skills from research institutes that are willing to impart knowledge. This attitude of the farmers means that the gap between theory and technology transfer is small, and there is a high degree of cooperation among civil servants, researchers, and farmers.

The roles of women researchers and teachers in Taiwan fisheries were investigated using a carefully designed questionnaire. The 16 question, four page questionnaire was distributed to a number of female colleagues. These questionnaire recipients were invited to provide a copy of the document to other qualified candidates whom they knew, but who had not been included in the original distribution. Alternatively, they were asked to provide information on these other colleagues so that copies of the questionnaire could be forwarded to them. As a result, eventually 121 questionnaires were distributed. Fifty-one completed questionnaires were returned, a 42% response rate. The analysis of the data yielded the following results.

Age

The age range of the respondents was 23 to 56 years, with 70% of the respondents under the age of 40 years, indicating that the labor force is young (Fig. 1). However, only 6% of the respondents are less than 25 years old, which may forecast a shortage of women in this field in the future. Attempts should be made now to recruit younger employees.

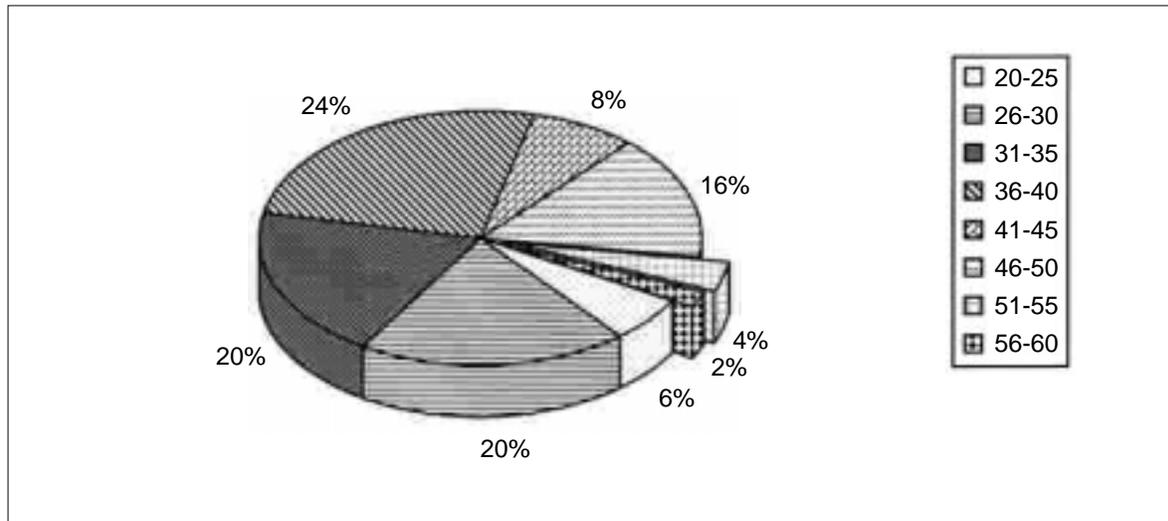


Fig.1. Age distribution.

Educational attainment

Most respondents, although young, were well educated, with 41% having doctoral degrees and 20% master's degrees (Fig. 2); 38% had studied abroad. Despite the fact that their qualifications are as good as those of their male colleagues, 56% of the respondents have responsibility for their household affairs. In Taiwan, there is still a distinct disadvantage in being a female scientist.

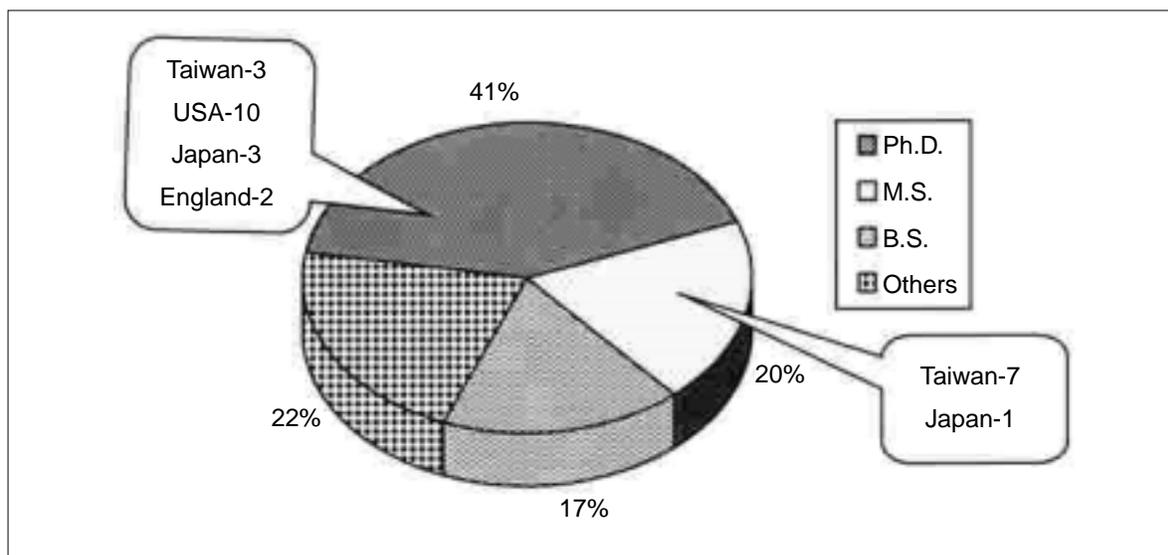


Fig.2. Educational attainment.

Work experience

Over half of the respondents had 10 or less years work experience in the field of fisheries; in fact, 27% had work experience of 5 or less years (Fig. 3). The areas of experience covered a broad range of activities; advanced aquaculture, biotechnology, cryobiology, fish diseases, fisheries economics, genetics, microbiology, nutrition, population dynamics, reproductive physiology, and zoology.

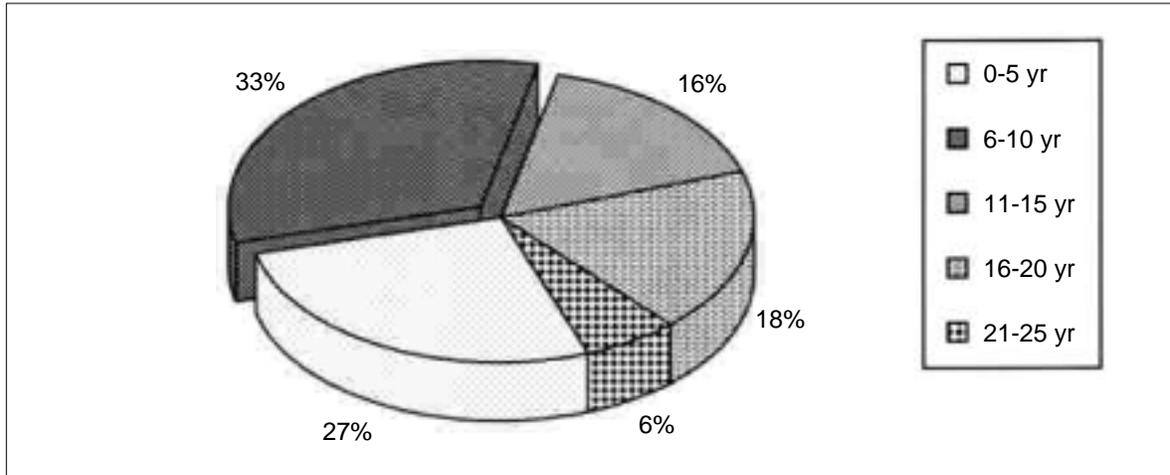


Fig.3. Proportion of respondents having given numbers of years of experience in the fisheries field.

Career planning and motivation

Sixty percent of the respondents established their career plans while working in the field of fisheries, suggesting that experience engendered interest (Fig. 4). On the other hand, 24% made their career plans in college, which might suggest that early practical training in school was inadequate. More respondents made their career decisions while at college than the number making their career decisions in graduate school. Just 4% made their career plans prior to entering college.

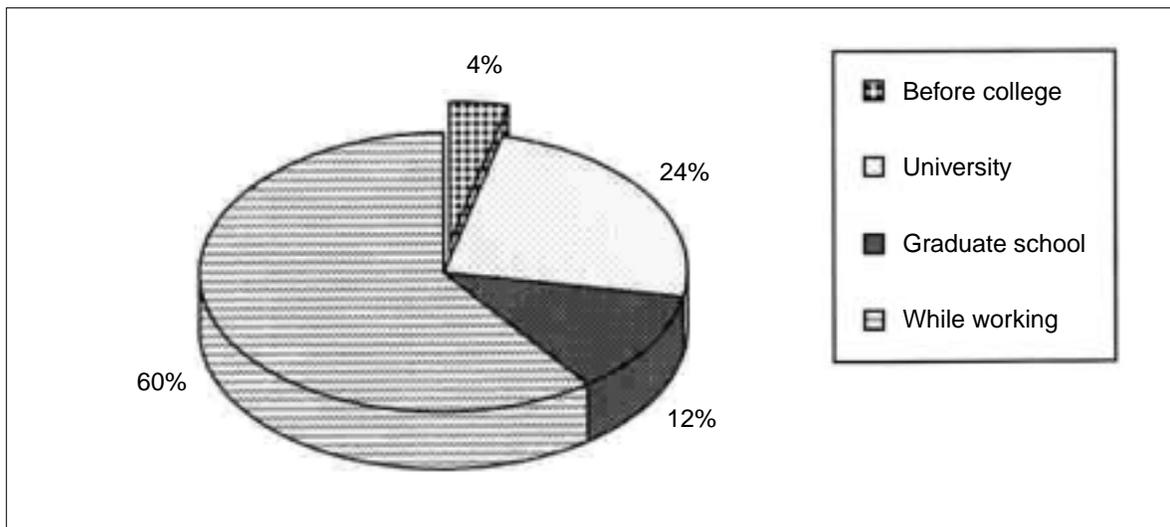


Fig. 4. Timing of career plan decisions.

The motivations for respondents to embark on a career in fisheries were mainly related to their teachers' guidance, their own interests, and their professional education (Fig. 5). However, 17% had no idea about how they became involved in this field. Their senior schoolmates influenced 5% of the respondents.

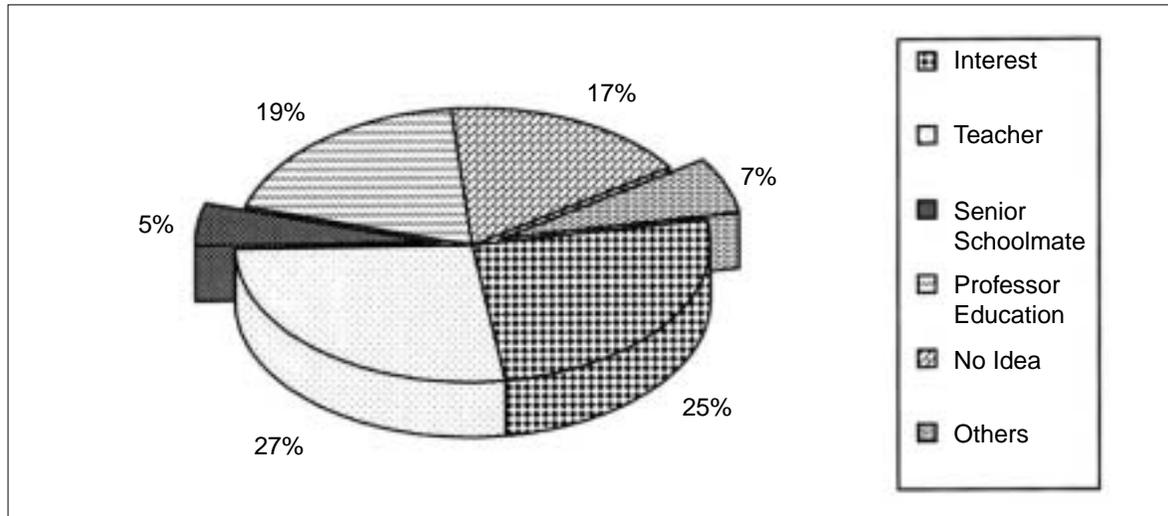


Fig.5. Motivation to embark on a career in fisheries.

Current position

Half of the respondents work as assistants. However, 34% of respondents hold such positions as Dean, Director, Senior Specialist, Researcher, and Professor (Fig. 6). They have published 366 papers in either domestic or international journals, and presented 416 papers at domestic or international symposia. Altogether, they have trained 241 Bachelor of Science, 154 Master of Science, 19 Doctor of Philosophy students and more than 750 other trainees.

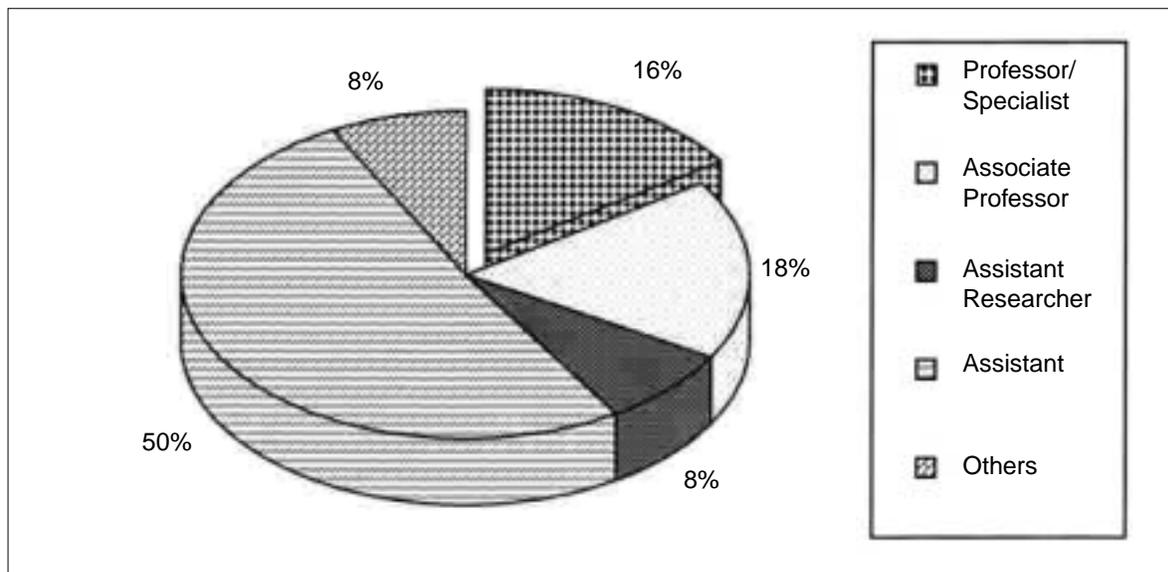


Fig.6. Current position held.

Impacts of internal and external factors on professional career

Internal factors that may have impacted on the respondents' professional careers include, physical strength, personality, gender, and age (Fig. 7). Half did not think physical strength had any influence on their career. A quarter thought physical strength to be a positive factor, while a quarter thought the opposite. Personality could cause positive (50%) or no impacts (50%). On the other hand, half the respondents thought that their gender had had the most negative impact; however, the other half did not feel that gender had had any impact or they gave an invalid response. Two-thirds of the respondents did not think that their age had influenced their career development.

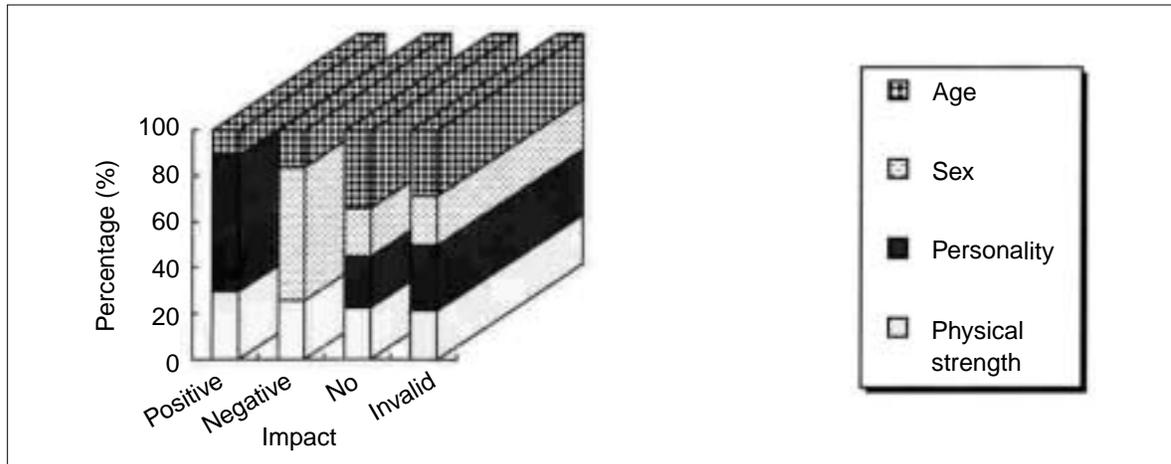


Fig. 7. Impact of internal factors on respondents' professional careers.

External factors considered were, teaching, field activity, laboratory work, time flexibility, marriage, and children (Fig. 8). Respondents generally welcomed teaching and laboratory work, but not field activity, and one third of the respondents experienced a negative impact from field activity. In most cases, time flexibility brought either positive or no effects. Marriage did not seem to affect careers in 58% of respondents. Although 47% did not feel any impact from their children, almost a quarter thought children had had a negative impact on their career.

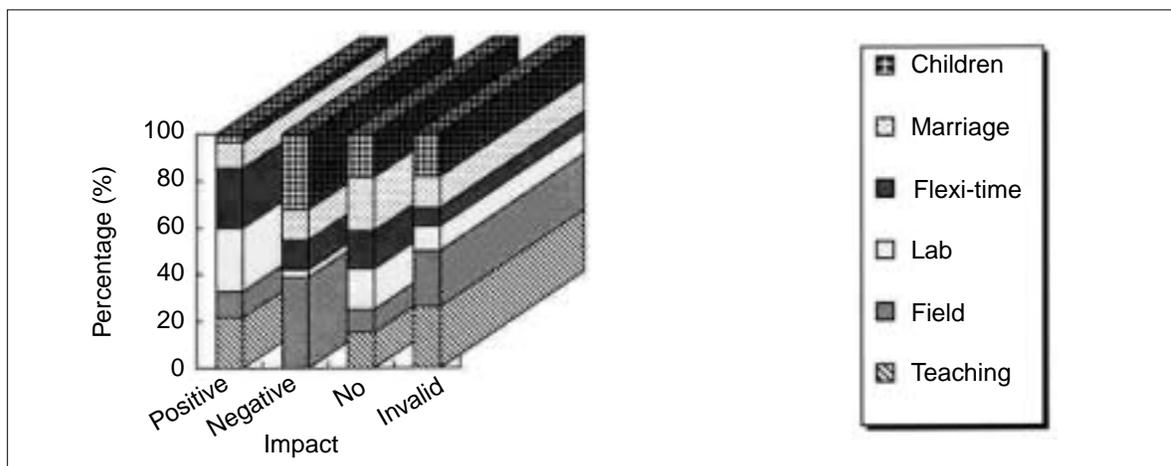


Fig. 8. Impact of external factors on respondents' professional career.

Self-evaluation of competence relative to male colleagues

Despite their level of educational attainment, most respondents evaluated themselves as of moderate to lower competence than their male colleagues in all the evaluation items, academic degree, position, promotion, expertise, research ability, domestic interaction, and international interaction (Fig. 9). A similar set of responses might also be forthcoming for most countries with male-dominated societies.

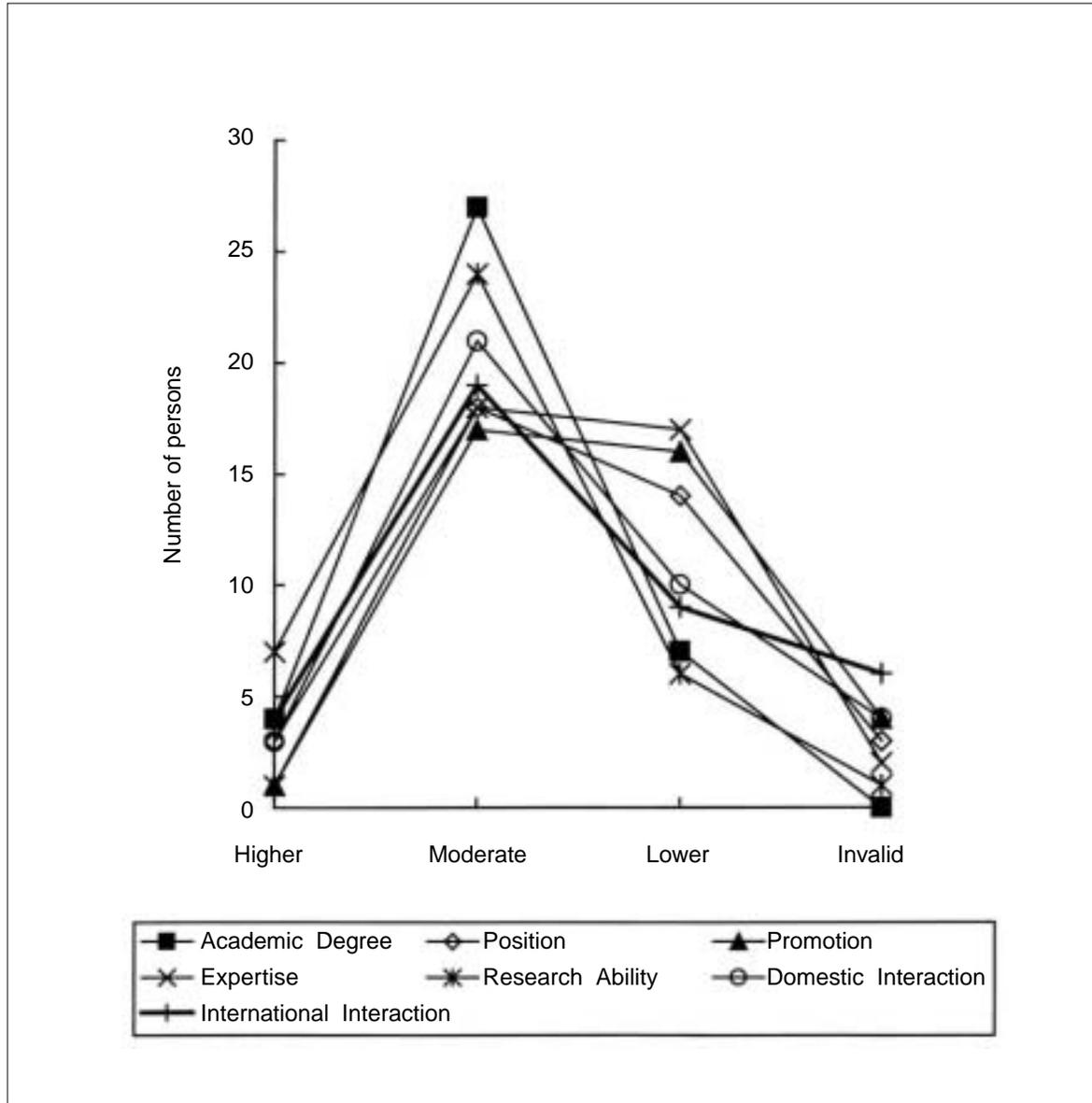


Fig. 9. Self evaluation of competence relative to male colleagues of the same age in their job unit.

One reason for this result maybe the sex ratio in the respondents' organizations. Almost all respondents were working in an environment where males out-numbered females. Male to female ratios of between 1:1 and 4:1 were reported from 70% of respondents (Fig. 10). Ten percent of respondents reported male to female ratios as high as between 15:1 to 19:1. The remaining 20% were evenly distributed between work units where male to female ratios ranged from between 5:1 and 10:1 and between 11:1 to 14:1.

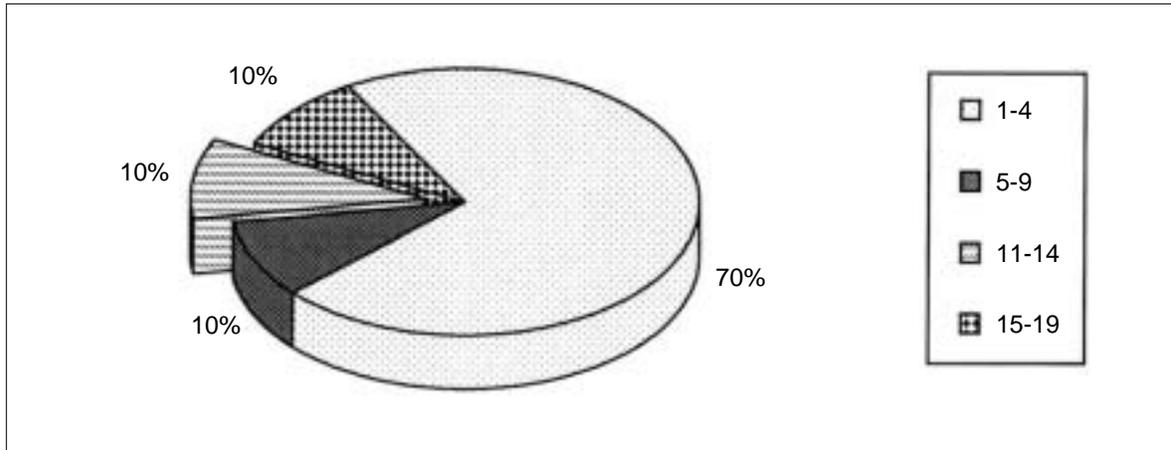


Fig. 10. Sex ratio of colleagues in their working area of fisheries education/research.

Self evaluation of various roles in life

Evaluation scores were divided into 4 classes: A, 76-100; B, 51-75; C, 26-50; and D, 0-25.

Sixty-three percent of respondents rated themselves an A in their role as a scientist, and the rest rated themselves, B (Fig. 11). Similar results were obtained with community involvement. Only 40%, 57% and 46% thought they were good daughters, mothers and wives, respectively. Most respondents thought they were playing appropriate roles in their lives.

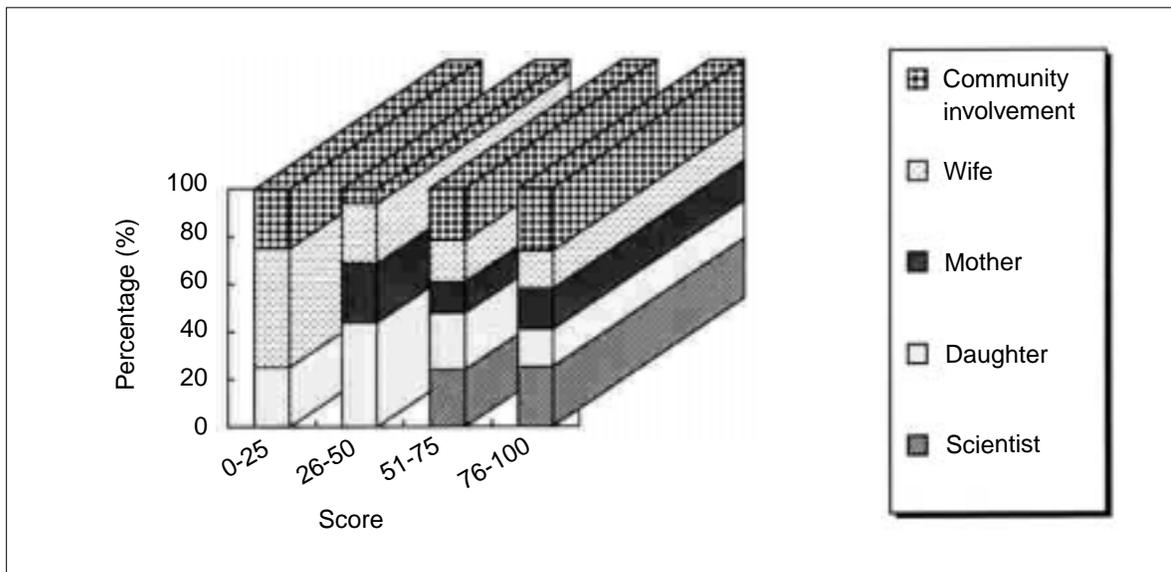


Fig.11. Self evaluation of various roles in life.

Contribution predicted during the next decade

Most people looked forward to making a medium to hopeful (Fig. 12) contribution in teaching (74%), research (91%), extension (64%), and cooperation (73%) during the next decade.

Relatively, few respondents were interested in policy making. It is obvious that Taiwanese women working in the field of fisheries were not very ambitious, but conservative and happy with what they were doing.

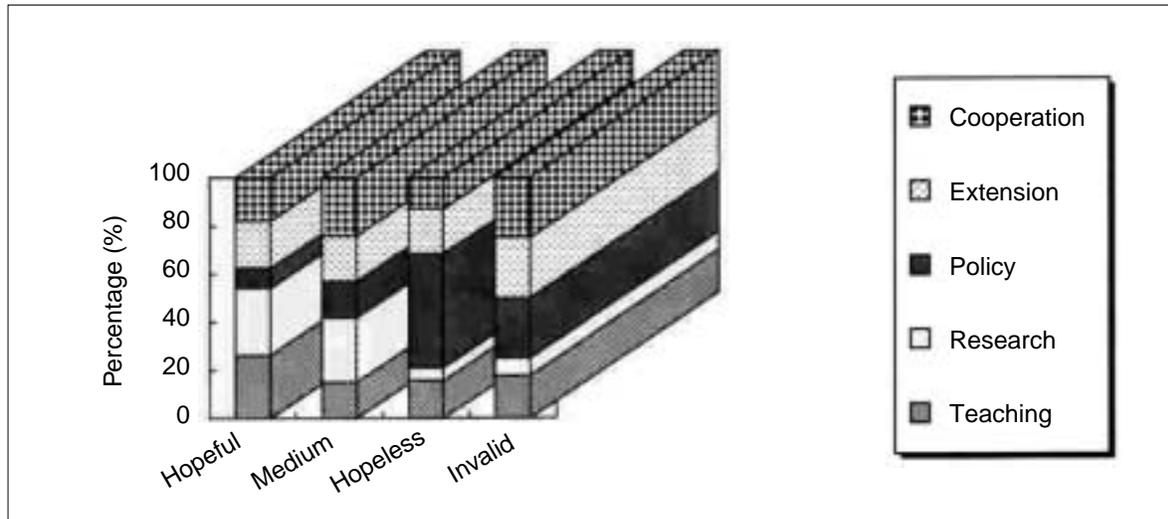


Fig.12. Prediction of their contribution during the next decade.

### Weight of professional activities

#### i. Administration

According to the returned questionnaires, some 70% of respondents were involved in administrative work to some extent (Fig. 13). Of those involved, a majority (62%) spent 10% or less of their time in administration. Fourteen percent of the respondents indicated more than 50% of their time was spent in administrative work.

#### ii. Teaching

About half the respondents were involved in teaching activities. Typical teaching loads were 10% or more of their total work time.

#### iii. Laboratory work

Laboratory research was a significant activity in the life of 82% of the respondents. For these, a quarter spent 80% of their time in the laboratory. More than half spent more than 50% of time in laboratory work.

#### iv. Field activity

Field research, on the other hand, was a less significant activity for 63% of the respondents. Three-quarters of the respondents spent just 10% of their time in fieldwork.

#### v. Extension

A proportion of respondents (41%) undertook extension work, with 81% of this group devoting 10% of their time to extension; the rest spent less than 30% of their time in extension work.

## vi. Writing

Writing was an activity for 55% of respondents, and for 68% of this group, it occupied 10% or less of their working hours. No one devoted more than 30% of her time to writing.

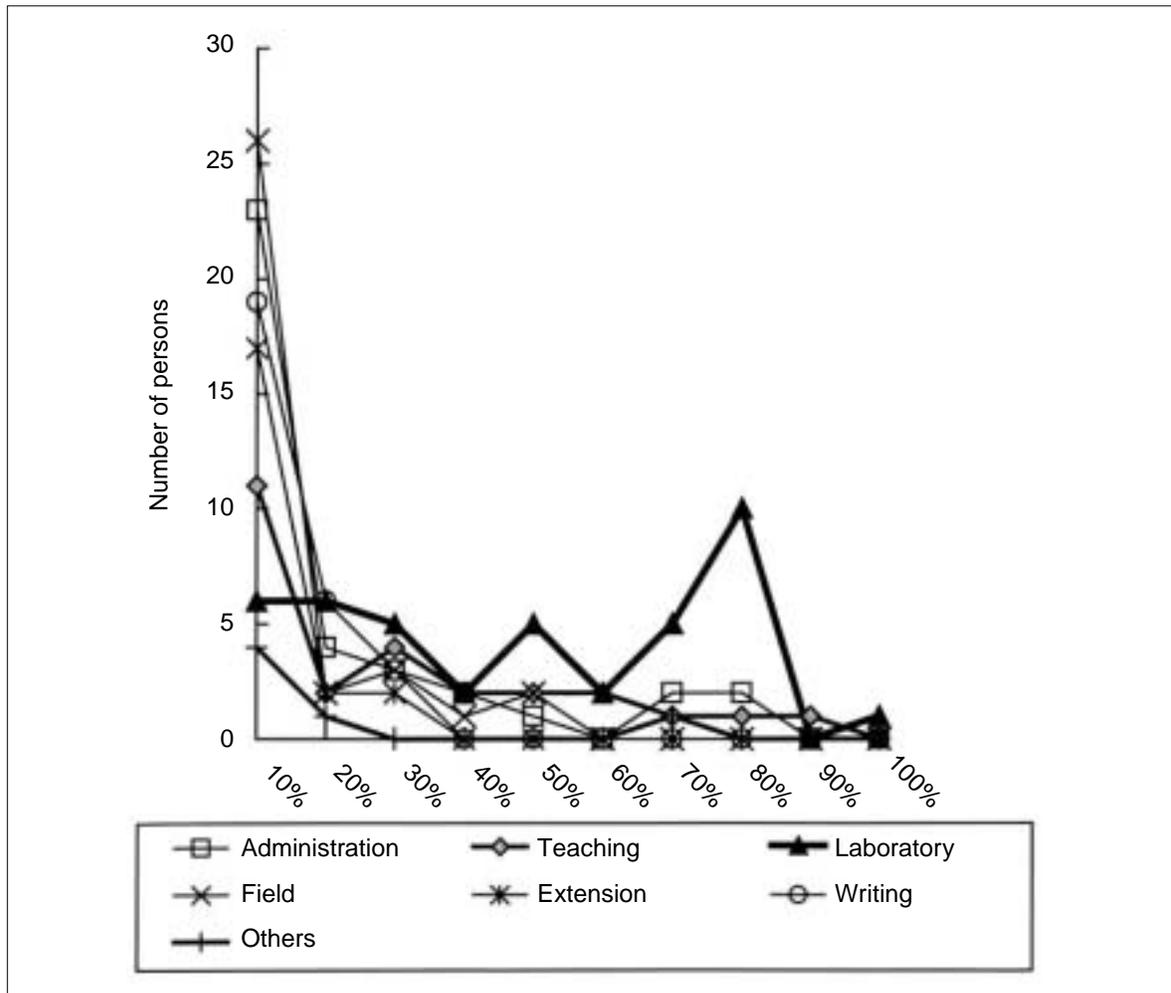


Fig. 13. Proportion of working hours allotted to various professional activities (working hours per week range from 20 to 60).

## Summary

Currently, Taiwan has approximately 121 women engaged in the field of fisheries education and/or research work. Based on the 51 returned questionnaires, the women, who make up one tenth of the Taiwan fisheries science community, constitute a diverse group in terms of various personal and conceptual factors as summarized below:

- i. Their ages range from 23 to 56 years, with the majority falling in the class 36-40 years old.
- ii. Their educational attainments range from Bachelor of Science to Post-Doctoral Fellow. Of those responding, 41% have doctoral degrees and 20% have master's degrees; 38% of them studied abroad, and 56% of them have responsibility for onerous household affairs.

- iii. A majority of them have worked in the same field for 6-10 years and their motivations in choosing fisheries as their life career are their teachers' guidance and their own interests. Most of them made career plans after they had started work in the field.
- iv. The senior positions occupied by the respondents include Dean, Director, Senior Specialist, Researcher, and Professor.
- v. A significant proportion of their professional activities are in laboratory work, followed by teaching, administration, fieldwork, writing, and extension work.
- vi. The respondents major fields of experience covered a broad range of disciplines, ranging from advanced aquaculture, biotechnology, and cryobiology to zoology.
- vii. Regarding the internal factors which impact their professional careers, it is indicated that their personality has a positive impact, their gender has a negative impact. Their age causes the least effect. Among the external factors that impact their professional career, laboratory work and time flexibility have positive impacts, fieldwork and education of children have negative impacts, while marriage does not have much impact either positively or negatively.
- viii. Most of them find no problem competing with male colleagues in terms of research ability, position, promotion, expertise, academic degree, domestic and internal interaction, but they are not able to compete with their male colleagues' administrative ability now and do not anticipate being competitive in the future.
- ix. On the whole, most of them are successful working women. Most of them give themselves an above-average score on their performance as a teacher and/or researcher. They, however, consider themselves less successful as a daughter and wife. They have published in either domestic or international journals a total of 366 papers, and presented a total of 416 papers at domestic or international symposia. All together, they have trained 241 BS, 154 MS, 19 Ph.D. students and more than 750 other trainees.
- x. The respondents feel optimistic about their abilities to make worthwhile contributions to research and teaching in the next decade. However, they are pessimistic about their ability to contribute to policy making, at least in the near future.
- xi. In conclusion, they are confident that they will have better working years ahead and will play a significant role in Taiwan's fisheries research and development. Meanwhile, they express their concerns about the future of the Asian Fisheries Society by providing some prospective suggestions for the theme of the Sixth AFF to be held in the year of 2001.

#### Acknowledgements

The authors would like to thank Drs. Tzyy-Ing Chen and Shiu-Mei Liu for discussion in the design of our questionnaire. The assistance of Dr. Emily Y. Chang and Ms. Shu-Hui Hsieh in the preparation of the manuscript is gratefully acknowledged.

# AN OVERVIEW OF WOMEN IN THE INDIAN FISHERIES SECTOR AND SUGGESTIONS FOR IMPROVEMENT OF THEIR SOCIOECONOMIC STATUS

K. Samantray

College of Fisheries, Orissa University of Agriculture Technology,  
Rangaligunda, Berhampur, Orissa, India.

S.C. Pathak

National Bank for Agriculture (NABARD), Regional Office,  
Lakshmi Bhawan, Dr. J.C. Das Road, Pan Bazar, Guwahati 781001, Assam, India.

## Abstract

In India, women constitute around 50% of the total population and comprise one-third of the labor force. The socioeconomic development of this vast population, therefore, assumes great importance in any developmental strategy. It is estimated that there are 5.4 million people fully engaged in fisheries activities, and in this population, 3.8 million are fishermen and 1.6 million are fisherwomen. However, there is a significant difference in the income earned between males and females with the former receiving the higher benefits even in the lean season. The National Bank for Agriculture (NABARD) has launched a number of programs to improve the socioeconomic status of women in the fisheries sector with a focus on providing credit support through self-help groups (SHGs). Of 14,313 SHGs, 11,072 SHGs have been formed by women, and the repayment rate of the loans taken by these has been very good. Illiteracy is one of the major impediments in the development of women and this suggests different strategies are required to help women in the fisheries sector.

## Introduction

Women in India constitute around 50% of the total population and comprise one-third of the labor force. It is, therefore, important that, when considering the economic development of this segment of the population, due attention is given to their socioeconomic empowerment. India's first Prime Minister, Pandit Jawahar Lal Nehru, realizing the situation of women stated, "In order to awaken the people, it is the woman who has to be awakened. Once she is on the move, the household moves, the village moves, the country moves, and thus, we build the India of tomorrow." When addressing developmental issues, recognition that both men and women are equal partners of any development is necessary, with both having equal opportunities to share the benefits (Anon, 1997).

In India, out of a population of 5.4 million active fishers, 3.8 million are fishermen and 1.6 million are fisherwomen. These fisherwomen are engaged in several fisheries vocations. The major activities, in which women's contribution can be noticed throughout the country are fish processing and marketing. However, their participation and contribution are increasing in the areas of aquaculture, research, development and education. The involvement of women in these activities generates supplemental income to support their families. Even though women are as efficient as men, earnings are not always the same. Different payments to males

and females are prevalent. For example, one study indicated that even in lean seasons, when fishing activity is almost negligible, fishermen get Rs.560±78 per month as compared to fisherwomen who get only Rs.289±98 per month. Fisherwomen do not get their due because of certain handicaps, and they are, therefore, exploited by their pay-masters.

#### Constraints in gender development

In order to improve the position of women in India, it is necessary that the following impediments be addressed:

##### Illiteracy

Efforts to economically empower women have suffered owing to their poor level of literacy. Approximately 60% of the female population of India are illiterate, and hence, developmental efforts have to consider this aspect and particular efforts should be made to overcome this barrier. Identifying illiteracy as a key issue, the Government of India has launched a mass campaign to improve the literacy of children and adults. To ensure rapid progress and greater success in this literacy program, the participation of voluntary organizations would be useful.

##### Ignorance

Many of the programs designed by the government have not been fully utilized by women because of the poor literacy. Ignorance of information on welfare programs, innovations in science and technology, etc. has become a major handicap. Alternate mechanisms have to be developed to reach a large section of this illiterate population in order to maintain productivity.

##### Conservative nature

In many parts of India, women are very conservative and there is a need to develop ways to remove this cultural barrier through long-term approaches. It is necessary that developmental organizations consider this conservative nature of women, and ensure that this barrier is addressed by encouraging women to take part in various activities. Insecurity for women is a common phenomenon in many areas and there is a requirement to educate the community about the need for transformation and to increase women's mobility beyond the home. Here again long-term strategies are essential to ensure such a transformation.

##### Superstitions

Superstitions abound about both men and women, but the latter suffer more from these beliefs in many parts of the country. Welfare organizations interested in improving the social status of women have to take up this impediment seriously. Unless women overcome superstitions, social taboos and adopt improved practices, poverty might remain as a perennial problem.

##### Poverty

Women are disadvantaged by the lack of education and knowledge brought about by poverty. Poverty leads to malnutrition, unhygienic conditions, and sickness in women. In Asian and African countries, ill informed and poverty stricken women have become an easy instrument for population explosion.

### Organizational support

Developmental issues in the fisheries sector of India have remained unorganized, and gender issues remain untouched. Developmental issues are often analyzed from the technical angle without due consideration of social questions. It is necessary that organizations view these social issues more intensely in order to solve the technical and social problems. Gender is one such major social issue which has to be given priority. Though there are several organizations taking care of men's welfare, there are few that look after the well-being of women.

These impediments are not confined only to the women of India, but also occur in several countries of the region, and hence, regionally coordinated efforts might help in speeding up the developmental process.

### Initiatives taken at the national level

In India, efforts to integrate the activities of research, development, and financial organizations on a large scale with a specific attention to gender have been made. The National Bank for Agriculture and Rural Development (NABARD), the apex financial institution catering to the financial needs of agriculture and rural development, has been paying special attention to gender issues in credit and support services since 1992. NABARD has made an analysis of developments in the fisheries sector and have identified several fisheries technologies, which could facilitate women to become entrepreneurs and enhance their incomes. The bank has extended financial support to some of the important fisheries activities run by these female entrepreneurs, including:

Composite fish culture of Indian major crops and exotic crops.

Prawn culture.

Integrated fish culture along with horticulture and animal husbandry.

Backyard hatcheries.

Traditional fish farming in rural areas.

Fish-feed manufacturing as a cottage industry.

Fish harvesting/fishing.

Organic farming.

Fish marketing (wholesale/retail).

Fish curing.

Fish processing and packaging.

Value adding to otherwise uneconomic fish species (pickles/sauce preparation, etc.).

Fish trading/vending.

Transport operations.

Net mending/repairs.

Ornamental fish farming.

Biotechnological projects like spirulina, artemia, azolla culture, etc.

**Tiny and small scale industrial units for fishing equipment.**

**Establishing self-help groups through NGOs.**

Financial support

Financial support to the above activities is provided by NABARD through a rural credit system which provides capital for short-term production/marketing activities, and medium-term and long-term loans for technically feasible and financially viable projects through State Cooperative Banks, State Cooperative Agriculture, and Rural Development Banks, Regional Rural Banks and Commercial Banks. The above financing banks have a network of over 76,000 branches and support the sector extensively. The agriculture and rural sectors, which also include women entrepreneurs, are getting excellent support and this can be judged by the fact that the refinance disbursement for long-term investment credit during the year 1997-98 was Rs.39,220 million and short-term credit was Rs.60,410 million. Depending upon the quantum of credit required, the rate of interest charged by NABARD varies from 6.5% to 12.0% in respect of the regional rural banks and cooperative banks, and from 8.5% to below 3% depending on the ultimate lending rate per annum in the case of Commercial Banks. Besides the credit from the banking industry, subsidies and grants are also available from developmental agencies of the state and central governments, voluntary agencies and charitable trusts. The quantum of grants and subsidies varies from activity-to-activity, state-to-state, technology, and several other criteria. Each case is evaluated separately (Pathak S.C. and Alexander A., 1997). Financing institutions, particularly NABARD have placed special emphasis on gender issues in the country and have taken steps to motivate bankers to support women entrepreneurs. Some of the important steps taken (Anon, 1997) are:

- Since July 1992, NABARD has created a separate "Women's Cell" at its Head Office in Mumbai. In addition, the bank has identified a nodal officer in all its 23 regional offices to give focused attention to women's development programs. Out of 14,313 SHGs, women's SHGs number 11,072. They have been linked to the banking sector and bank loans totalling Rs.2,361 million have been disbursed. The rate of recovery of these bank loans from the women's groups has been excellent.

The bank has:

- Constituted a standing advisory committee on gender issues.
- Developed a scheme for rural women in non-farm development (ARWIND).
- Supported the cooperative banks in the establishment of 100 women's development cells for a period of three years by meeting 50% of the salaries paid to the female officers who are to be posted to the cell, subject to a maximum of Rs.75,000 per cell per annum.
- Extended support to non-governmental organisations (NGOs) and voluntary agencies (VAs) for Rural Entrepreneurship Development programmes.
- Organised periodical gender awareness meetings.
- Linked women's SHGs to the formal banking system to improve the arrangements or financing rural entrepreneurs including women.

- Supported NGOs and VAs, etc., in conducting Rural Entrepreneurship Development programmes and other training programs of benefit to rural women.
- Sanctioned bulk loans to NGOs/VAs for onward lending to micro/household enterprises through the SHG linkage programs.

Steps have also been taken to spread information about these initiatives through various media and a special brochure on "Opportunities for Rural Women under NABARD's Refinance/Promotional Schemes", which has been circulated widely, and provides good information about the activities.

#### Recommendations

Though the above initiatives have been taken at the financial institution level, the issue of women's development is too big to be solved by these few steps. There is still a wide gap between the efforts and the actual needs at the field level. The financial support necessary to address this task is huge and, therefore, international agencies will have to support the national efforts. We feel that the following important steps should be given priority to help bring about the economic empowerment women:

- Provision of basic education for all.
- Liberal financial support to motivate women entrepreneurs.
- Favorable credit policies to promote fisheries activities and the incorporation of gender concerns in to every program.
- Evolution of long term marketing strategies.
- Selective and needs-based training for developing entrepreneurship and improving skills.
- Establishment of Fisheries Polytechnic Institutes to train women for specialized functions.
- Establishment of Self-Help Groups, Voluntary Agencies and Social Welfare Organizations and linking them to bank financing programs.
- Conduct special workshops and seminars for better extension programs and education.
- Frame a policy for leasing smaller bodies of water to fisherwomen so that they can take up aquaculture as a commercial activity.
- Provide a common platform to all the developmental agencies, financial institutions, and research organizations to achieve an integrated approach for promoting women entrepreneurs.

#### Conclusion

No nation can ignore fifty percent of its population and bring in social change and economic prosperity. To ensure rapid economic development, removal of gender imbalances should be established as a priority. This would mobilize the remaining fifty percent of the country's human resources and would result in the smooth movement of the economic wheel. Regular sharing of experiences between different agencies would help in breaking several barriers

**in addressing this complicated social issue. National policies should be resolute in tackling this issue and local bodies should ensure the implementation of these policies at the community level.**

#### Acknowledgements

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# ROLE AND STATUS OF WOMEN EMPLOYED IN SEAFOOD PROCESSING UNITS IN INDIA

V.D. Nishchith

No. 112/1C, 7th Cross, J.P. Nagar, II Phase, Bangalore – 560078, India

## Abstract

Shrimp processing is a labour intensive activity with a large export potential. As a result, seafood-processing plants have provided employment, and the majority of those employed are women. However, the multiple roles of women in this sector have always been underestimated and overlooked. A survey was undertaken to understand the socioeconomic status, migration, income mobility, and expenditure pattern of women employed in fish processing factories and to assess their contribution to the economy of the industry. The investigation also evaluated the economics of production of the processing industries for different scales of operation. The survey indicated that women dominate the industry with a male to female ratio of 3:10. The majority of the women employed were in the age range 21-30 years, educated, and come primarily from Kerala. Fifty percent of the income earned by the women was kept as savings. Women were provided with hostel facilities, travel allowances, bonuses, opportunities to work overtime and annual salary increases of about 15%. It was noticed that the capacity utilisation and the technical efficiency of the surveyed plants were moderate. The study showed that women were overworked and underpaid, and that there existed a conspicuous disparity in favour of men between the wages and benefits paid to men as compared to those paid to women working in the industry.

## Introduction

The modernisation of the fishing sector has resulted in an increase in fish production and consequently, many fish processing industries have emerged. Much of the processed seafood is exported and this export has shown a constant upward growth over the last decade. The seafood exports constituted 4.3% of the total export earnings of India for 1997-98. By exporting 385,818 tonne of processed seafood US\$174.47 million were realised. There are 1,237 seafood exporters operating from 378 seafood-processing plants situated all along the 7,300 km of coastline of the country. The industry provides employment opportunities to over 35,000 workers and women constitute about 75% (Beena, 1990) of this workforce.

Specific data on the extent of women's participation in seafood processing units will enable a proper appreciation of their economic worth to be made and this is essential for the planning and optimal utilisation of this human potential and the provision of the necessary facilities. With this as the background, the present investigation was undertaken to gain insights into many aspects related to the role, status, and contribution of women working in seafood processing units.

## Methodology

### Sampling frame

The study was carried out in seafood-processing plants located on the east coast, and distributed between the states of Orissa, Andhra Pradesh, and Tamil Nadu. Sixteen fish processing units were randomly chosen, two in Orissa, ten in Andhra Pradesh and four in Tamil Nadu. Data were collected using a structured questionnaire. Analysis of the data was carried out with the processing plants grouped according to their production capacities and levels of output. The women were grouped according to their ages as well as their incomes. Except in the case of age, the other variables were grouped high, medium, and low based on the distribution of the sample. The classification was done based on the mean and standard deviation of the complete sample, as follows: values less than or equal to (mean - 0.5 standard deviations) were categorised as low, and values greater than or equal to (mean + 0.5 standard deviations) were classed as high. Values between these two groups were categorised as medium.

### Regression analysis

The relationship between output and the factors contributing to output was studied using regression analysis. A double logarithmic regression equation was fitted to the data, with quantity of output as the dependent variable and with male labour, female labour, fuel, total capacity and chemicals as the explanatory variables. The equation was fitted by the method of ordinary least squares (OLS) and the regression coefficients were tested for their significance using a 't' test.

### Technical efficiency

The technical efficiency of the fish processing units was studied using the Frontier Production Function approach. The company-specific technically efficient outputs were derived using the Frontier Production Function and the technical efficiency was calculated by the ratio of actual output (Y) to the technical efficiency output (Y\*) and given as, Technical Efficiency (TE) =  $Y/Y^*$ .

## Results and discussion

### Capacity utilisation of the seafood processing units

The capacities of the seafood processing units selected for the study were investigated for the installed capacities and actual utilisation. The results indicate that in general the capacity utilisation ranges from 67% to 100%. The low capacity units, which had medium levels of production, had achieved high levels of capacity utilisation. However, there were a few medium and large sized plants achieving low and medium production, respectively (Table 1). With better management, there is the possibility of increasing the capacity utilisation of these plants.

Table 1. Capacity and level of utilization of different fish processing plants

Capacity (tonne)		Low Production <732			Medium Production 732-1118		
		Installed	Actual	Capacity Utilization	Installed	Actual	Capacity Utilization
Low	Plate Freezer	7.75	7	90.32	5	5	100.00
<12.28	Blast Freezer	10	6	60.00	5	5	100.00
Medium	Plate Freezer	12	8	66.67	13.75	11.25	81.82
12.29-19.48	Blast Freezer	8.5	8.5	100.00	6	5.5	91.67
High	Plate Freezer	-	-	-	19	11.9	62.63
>19.49	Blast Freezer			---	6.5	5	76.92

Capacity (tonne)		High Production >1119		
		Installed	Actual	Capacity Utilization
Low	Plate Freezer	-	-	-
<12.28	Blast Freezer	-	-	-
Medium	Plate Freezer	12	10	83.33
12.29-19.48	Blast Freezer	6	5	83.33
High	Plate Freezer	15	12.25	81.67
>19.49	Blast Freezer	8.33	7.58	91.00

#### Male to Female ratio

The male to female ratio was about 1:3.3. That is, for every male employed about 3.3 females were employed and this indicates the predominance of women in the industry. This observation is also reinforced by the findings of Beena (1990) and Saradmoni (1995).

#### Marital status

Of the women interviewed, 35% were below 21 years and unmarried. The female workers over 30 years of age constituted over 12% of the sample, and most were married (74.19%). Of the women in the 21-30 years age group, 26.27% were married, and this age group constituted over 78% of the sample and were the largest segment. This probably indicates that women who are in the age group 21-30 years marry only after they have earned sufficient money and returned home (Table 2). It also suggests that the industry generally employs young, unmarried women, as they have less family responsibilities unlike their married sisters. These findings are further supported by the observations of Saradmoni (1995) in the Indian context and Delano and Lehmann (1993) in Chile. These studies indicated that women who are young and unmarried dominate in the industry.

Table 2. Age profile and marital status of women employed in seafood-processing units

Age	Marital Status					
	Married		Unmarried		Total	
	No.	%	No.	%	No.	%
<21		0	91	100	91	100
21-30	31	26.27	87	73.73	118	100
>30	23	74.19	8	25.81	31	100
Grand Total	54	22.5	186	77.5	240	100

## Cost of Production

Raw material and electricity charges account for the largest proportion (> 94%) of the expenses, followed by the wage bill for female labour (Table 3). This latter expenditure is Rs.3,297.30 per tonne of output in small plants, Rs.2,437.50 per tonne of output in medium plants and Rs.2,587.30 per tonne of output in large-sized plants. When the costs of raw material were excluded, it was observed that the cost of female labour as a proportion of production costs averages 30.81% of the cost across all plants. This clearly suggests that female labour forms a significant component of the cost of production. Thus, judicious use of female labour is essential in order to optimise production and reduce expenses and generate higher returns on investment.

Table 3. Cost and returns of different size processing plants

Data	Average			Average		
	Per plant (Rs. lakh)	Share <12 t	Per tonne (Rs)	Per plant (Rs. lakh)	Share 12-19 t	Per tonne (Rs)
Total capacity						
Raw material	1197.66	94.72	194216.2	2611.6	96.93	272041.70
Male labour	11.17	0.88	1810.81	14.80	0.55	1541.67
Female labour	20.33	1.61	3297.29	23.40	0.87	2437.50
Electricity	24.00	1.90	3891.89	30.20	1.12	3145.83
Fuel	3.67	0.29	594.60	4.40	0.16	458.33
Chemicals	2.83	0.16	337.83	2.36	0.09	245.83
Repairs	5.41	0.43	878.37	7.60	0.28	791.67
Total cost	1264.33	100	205027	2694.36	100	280662.5
Output value	1833.33		297297.3	3880		404166.7
Net profit	569	45.00	92270.27	1185.64	44.01	123504.2
Output (t)		616.67			960.00	

Data	Average		
	Per plant (Rs. lakh)	Share <12 t	Per tonne (Rs)
Total capacity			
Raw material	3054.4	96.96	242412.70
Male labour	16.40	0.52	1301.59
Female labour	32.60	1.03	2587.30
Electricity	34.40	1.09	2730.16
Fuel	4.10	0.13	325.40
Chemicals	2.50	0.08	198.41
Repairs	5.90	0.19	468.25
Total cost	3150.3	100.00	250023.80
Output value	4300.00		341269.80
Net profit	1149.70	36.50	91246.03
Output (t)		1260.00	

Note: 1 lakh = Rs.100,000

### Contribution to family income

It is interesting to note that the contribution from earnings to family income rises from about 29% among young women (<21 years) to 33% among women over 30 years. It was reported that the income of the women was used primarily to meet various household expenses. There were some families which depended solely on the woman's salary for their sustenance. As can be seen from Table 4, younger, unmarried women tend to contribute less to family income, instead retaining most of their earnings as personal savings, while older women make a greater contribution to meet the family's expenses. Poverty, indebtedness, high unemployment, and an increased cost of living have compelled these women to travel far afield, which is contrary to social norms.

### Relationship between age, education profile and earnings

The younger women, those under 21 years of age, were more qualified than the older women but received a lower salary, Rs.1499.21 on average, as compared to the other groups. The women showed a diverse pattern in their educational qualifications and their income was not in accordance with their qualifications. This suggests that experience is a more important criterion in deciding income rather than qualifications in such labour-oriented jobs. It was also clear that the increased income for the different age groups was positively correlated with increased age for the women sampled (Table 4).

Table 4. Relationship between education, earnings, and contribution to family exchequer

Age Group	Earnings	Level of Education				Weighted Average
		Illiterate	Primary	Secondary	PUC	
<21	Personal Earnings	-	1477.67	1506.93	-	1499.21
	Family Earnings	-	5082.08	5199.23	-	5167.64
	% Contribution	-	29.08	28.98	-	29.01
21-30	Personal Earnings	1900.00	1635.96	1632.23	1764.00	1637.32
	Family Earnings	6000.00	5235.19	5150.81	5000.00	5195.34
	% Contribution	31.67	31.25	31.69	35.28	31.52
>30	Personal Earnings	1741.67	1663.38	1709.14	1450.00	1682.60
	Family Earnings	5433.33	4987.50	5107.14	4500.00	5088.33
	% Contribution	32.06	33.35	33.47	32.22	33.07
Overall	Personal Earnings	1764.29	1600.21	1574.46	1607.00	1590.42
	Family Earnings	5514.29	5153.94	5172.01	4750.00	5171.39
	% Contribution	31.99	31.05	30.44	33.83	30.75

### Pattern of expenditure

The pattern of expenditure of the women in the different income groups studied indicates that major portions were allocated for personal use, education of children, and savings (Table 5). A large proportion of the income of these women, irrespective of their earnings level, was kept as savings. Slightly more than half (53.65%) of their earnings on average was kept as savings. According to the respondents, their savings helped their families to educate younger siblings, buy dresses, gold assets, make household repairs, and pay for the medical treatment of ailing parents. The reasons given for the high level of saving varied according to the ages of the women. It was observed that the younger, mostly unmarried women tend to save most of their earnings to buy goods like dresses, gold, and jewellery. This can be explained by the

unique system of streedhanam or dowry payment prevalent in the communities, whereby the groom is given assets such as money, gold, or property at the time of marriage.

Table 5. Pattern of expenditure among women in the different income groups

Income Level (Rs.)	Pattern of expenditure	Amount	Percentage
Low income < 1436	Personal use	537.37	38.53
	Educating children	187.22	12.39
	Insurance/Savings	783.47	51.80
Middle Income 1437-1745	Personal use	517.55	35.65
	Educating children	154.95	10.67
	Insurance/Savings	779.10	53.67
High Income >1746	Personal use	501.58	34.20
	Educating children	162.08	11.05
	Insurance/Savings	803.03	54.75
Overall	Personal use	517.22	35.48
	Educating children	158.52	10.87
	Insurance/Savings	782.16	53.65

#### Factors contributing to production

To estimate the contribution of women in the processing units, a regression equation of output against inputs such as total capacity, male labour, female labour, chemicals and power was fitted, and a double log function was estimated. The results obtained explain the variation in output adequately as evidenced by the high  $R^2$  value of 0.88 (Table 6). The significant variables that affect the dependent variable are total capacity, male labour and the use of power. The use of chemicals and female labour were found to be not significant, while the outlay on the former is insignificant. The average use of female labour per unit is about 89.79 as compared the use of male labour (27.74). The wage rates of women workers are almost half that of the men, which is perhaps one reason why greater than required numbers of women are employed in these units. It is evident that women were underpaid, in comparison with their male counterparts, for the excessive amount of work they do. As there is surplus female labour in the coastal areas, neither the owners of the processing units nor the contractors face a shortage of recruits. This situation has left women with no bargaining power. An interesting observation made in this investigation is that the women are not paid in accordance with the person-days they work but are paid according to the amount of raw material processed

Table 6. Regression coefficients of factors influencing output of fish processing units

	Coefficients	Standard Error	t Statistic	P-value	Mean
Intercept	2.655317	0.736951	3.603112	0.004823	
Chemicals	-0.03973	0.150704	-0.26365	0.797402	2.08
Total Capacity	0.439664	0.116463	3.775136	0.003631	14.07
Male Labour	0.711999	0.204666	3.478837	0.005933	27.74
Female Labour	-0.1172	0.172416	-0.67976	0.512087	89.79
Power	0.326457	0.227362	1.435849	0.181579	30.99
$R^2$	0.88				852.77

each day. Considering the levels of capacity utilisation, there is ample scope to optimise the use of female labour through better capacity utilisation and higher technical efficiency of production.

The technical efficiency of the units was also studied by using the Frontier Production Function approach to understand the efficiency of these processing units (Table 7). The results showed that approximately 69% of the units are working at an efficiency of between 61% and 80%, and approximately 19% were below this level. The average level of efficiency was 78%, and hence, there is scope for improvement in the efficiency of production by around 20%.

Table 7. Technical efficiency of seafood-processing units

Efficiency Level	Frequency	Per cent
<0.6	3	18.75
0.61-0.7	5	31.25
0.71-0.8	6	37.50
0.81-0.9	1	6.25
0.91-1.0	1	6.25
Total	16	100.00

#### Benefits

All the companies provided an annual increase in the salary to the women employed. The raise ranged from 10% to 20%, the average being a 15% increase. The raise was based solely on the individual's performance. Except for two processing plants, all other plants had no direct contact with the labourers, other than through contractors. These contractors act as intermediaries between the factory management and the workers, and all payments to workers are made through them. Hence, contractors have total control over the workers and any employees raising their voices in protest will lose their employment.

The women migrants were provided with hostel facilities situated on the plant premises. The facilities included floor space for dining, sleeping and other activities. Most of the hostels were equipped with televisions and radio sets, and occasionally film shows were provided in some of the hostels. The plants employed cooks and provided subsidised meals at a nominal charge of approximately Rs.400-500 per month. The uncertainty in the supply of a raw material that is highly perishable has influenced factories to provide these facilities and utilise the labour effectively whenever the raw material becomes available.

Alertness, cleanliness, ability to work for long hours, and swiftness in the work are the skills noticed in the Kerala women. These qualities have influenced the management of the factories to prefer the women from Kerala to the local women. In spite of being underpaid for the quantity of work exacted, these women are given a few benefits by their employers. The plants either provide health care through a resident or visiting doctor, who regularly examines the health of these women at weekly or fortnightly intervals or, as in the case of five plants covered in this study, a medical allowance of Rs.100-200, depending on the cause of illness, is provided. Opportunities for overtime work were provided at the rate of Rs.5 per hour. It was also noted that the women were allowed to visit their homes once a year, generally

during the off-peak season. The women were provided with one month's paid holiday as a bonus. All the women were given one day off per week, unpaid. If they choose to work this day off then they are paid accordingly. Generally, most of the women worked through the entire month and did not take their days off.

It is important to note that not all these benefits as outlined above are provided by all the companies as they are not direct employers. The women receive these benefits through the contractors who are linked with the company.

#### Job related problems

It is a common notion that the tasks performed by men are considered difficult and therefore superior, while those performed by women are easy and hence considered less significant. Besides being over-worked, women were underpaid as compared to their male counterparts. The women work for long hours (more than 12 hours at a stretch) and at odd hours. Irrespective of their qualifications and experience, women generally remain as graders until retirement, while men are promoted to supervisory and managerial positions over time. The existence of such gender inequalities in seafood processing units have been reported in several countries by Delano and Lehmann (1993), Anon (1995), Tan (1995) and Saradmoni (1995).

Women, who form the dominant labour pool of this industry, are exploited by the industry and the contractors. The discipline, skill in handling the raw material, willingness to work at odd hours and during festivals, maintenance of hygienic conditions, etc. are indicators of the competence of the women surveyed in all these factories. Not only is more work extracted from these women, but also they are underpaid by as much as 33% to 42% as compared to the men doing the same work (Saradmoni, 1995). The job insecurity and the need to earn a living for the family prevent these women from raising their voice against this exploitation. Even though there exists a certain level of sexual exploitation, detailed information could not be collected on this issue.

#### Job related health hazards

The women employed in the processing plants experienced certain job-related health ailments. The long hours of work, constant exposure to cold water and chlorine resulted in muscle cramps, skin irritation, eczema, and respiratory illnesses. Lengthy isolation from their families caused many of the women to become depressed.

#### Conclusion

The results of this study show that most of the women employed in the fish processing factories of the three states studied come from Kerala. The special skills possessed by the women of Kerala have influenced management to choose women from this state over local females. Most of these women are educated and live on their own in the accommodation provided by the factories. Seventy-five percent of the labour force in these processing factories are women. They make a substantial contribution to the income of the processing plants. However, the payment received by these women is not in proportion to their efforts and these women in fisheries are always at the mercy of the contractors. In most factories, payment to these women was made through the contractors. However, it is important to note here that the processing units were providing some basic benefits such as leave opportunities,

subsidised food, travel allowances, short term loans, medical benefits, etc. The study revealed that while the processing units are contributing substantially to the employment of women the extent to which they are contributing to their empowerment, and hence the emancipation of women, is debatable.

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# WOMEN'S PARTICIPATION IN AQUACULTURE AND FISHERIES FOR POVERTY ALLEVIATION IN BANGLADESH: PROSHIKA'S EXPERIENCE

M.A. Rahman

PROSHIKA, 1/1 Ga, Section 2, Mirpur, Dhaka 1216, Bangladesh

## Abstract

PROSHIKA is one of the largest national NGOs in Bangladesh working with the landless and poor farmers. The organization's strategy for human development is structured around organizing its clients into groups and providing them with training, technical assistance, credit, input supply and marketing support. Nearly half the population of Bangladesh is women. They are considered a disadvantaged group as the majority of them are illiterate and have low social status because of many social and religious taboos. Due to a lack of employment opportunities in this male-dominated society, women have no source of income and often suffer from malnutrition. Because of this, women were given special attention for development through PROSHIKA'S programs. As a result there are more female groups (55) than male groups (45) in the working areas. PROSHIKA aims to improve the position of women in society by empowering them.

Bangladesh is a deltaic country with an unmatched wealth of lentic and lotic resources. Fisheries and aquaculture form an integral part of most rural households. Of the several programs that PROSHIKA operates in striving to achieve its objectives, aquaculture and fisheries have high priority since fish is common in the diet of poor people and is a rich source of nutrition for the malnourished, the convalescing, pregnant women and lactating mothers.

PROSHIKA's aquaculture activities were started about twenty years ago and the organization initiated an active collaboration with ICLARM/BFRI/USAID about eight years ago. The organization's activities now operate throughout the country and involve over 800,000 women in 46 of the 64 districts. PROSHIKA's Fisheries Development Program (FDP) activities cover aquaculture, fish processing, fish grading and net making. This paper discusses the role played by PROSHIKA's fisheries and aquaculture activities in empowering the women of Bangladesh.

## Introduction

PROSHIKA, one of the largest national non-government organizations in Bangladesh, places human development at the centre of its vision. This vision is based upon the understanding that poverty eradication and the promotion of sustainable development are dependent on the development of human capital. The very word "PROSHIKA" is an acronym of three Bangla words (for training, education and action) and this encapsulates the organization's development ethos.

PROSHIKA has introduced a number of employment and income generating activities which aim to improve the socioeconomic conditions of the poor through various approaches. Of the various activities that PROSHIKA promotes, the fisheries development program has been one of the most important income and employment generating programs since its inception. PROSHIKA has been working with the poor people in 11,530 villages, 832 slums, 1,124 unions and 173 thanas in 50 districts (June 1998 data). Of 81,627 primary groups, 47,109 are female groups and 34,518 are male groups. Total membership of these groups is 1,570,759 and of this number 848,587 are females and 722,272 are males. There are 877 fishers groups with a membership of 19,295.

PROSHIKA's goal is to create a Bangladesh society which is economically productive, equitable, socially just, environmentally sound and genuinely democratic. In order to achieve this goal, PROSHIKA has formulated certain strategies which are implemented through the following programs:

- Organization building among the poor
- Development education (human and skill development)
- Employment and income generation activities; fisheries, livestock, apiculture, sericulture, irrigation, etc.
- Environmental protection and regeneration
- Universal Education Program (UEP)
- Health education and infrastructure building program
- Gender Relations Coordination Cell (GRCC)
- Urban Poor Development Program (UPDP)
- Housing and sanitation
- Disaster management program
- Impact Monitoring and Evaluation Cell (IMEC)
- Institute for Development Policy and Advocacy (IDPAA)

#### Fisheries resources

Fish is an essential part of Bangladesh culture. The total area of inland waters is estimated at 4.34 million ha and the area of seasonal water bodies at about 2.83 million ha. There are about 1.36 million ponds in the country and these too provide many opportunities for aquaculture. The contribution of the fisheries sector to gross domestic product, export earning and agricultural income were reported to be 5%, 8% and 17% respectively. Fisheries activities provide employment for about 12 million full-time professional fishers, or 10% of the national workforce. In addition there are about 12 million people who are engaged in fisheries related activities on a part-time basis, with their numbers reaching a peak in the monsoon season, June through October (Talukdar, 1997). Fish supplies about 73% of the animal protein intake and 7% of the total protein supply in Bangladesh (FFYP, 1997).

### Fisheries program of PROSHIKA

The goals of the Fisheries Development Program (FDP) are poverty alleviation and the improvement of people's nutritional status through enhanced production from aquaculture and capture fisheries. The major objectives of the FDP are to provide employment and income generation for poor men and women by assisting them in developing aquaculture and fisheries related activities. This is accomplished through the provision of credit and extension services to increase fish production and develop the fisheries resources. The program has a special focus on women.

### Components of the fisheries development program

The program components encompass four broad, inter-related elements. These are:

- i. Skill training (formal and village based);
- ii. Revolving Loan Fund (RLF) credit support;
- iii. Provision of technical assistance; and
- iv. Research, demonstration, and collaborative projects and advocacy.

PROSHIKA organizes rural women, small/marginal farmers, fisher folk, weavers, petty traders and urban slum dwellers as part of the development effort. Separate primary groups (PG) are formed for men and women. A male group consists of 20-30 members while a female group has a membership of 15-25. Each group forms a group management team consisting of a president, secretary, treasurer and a few committee members. Each member of the group must deposit Tk.5-20 per week in the group savings. The group arranges regular weekly meetings. A group will be eligible for implementation of projects with PROSHIKA credit after 9 months. By joining such a group, a poor person enters a process where s/he can make responsible choices and become a conscious, active and, most importantly, empowered person through the various programs facilitated by the organization.

A participatory management system has been adopted in all stages of operation. The leaders are elected following democratic procedures. Similarly, coordination units at the village (Village Coordination Committee - VCC), union (Union Coordination Committee - UCC) and thana (Thana Coordination Committee - TCC) levels are elected bodies. All members are informed about issues of concern through their representatives at the different levels of coordination.

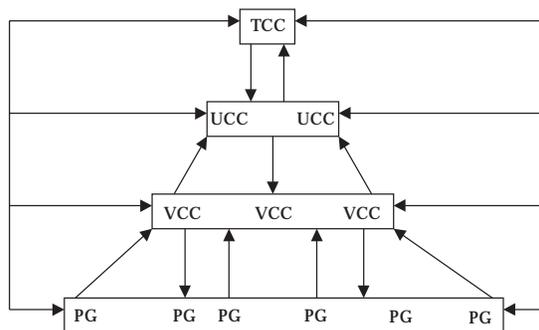


Fig. 1 Networking structure of primary group (PG) and federation

### Training

Training is imparted to the group members to improve their knowledge and skills, and to help them develop various income generating activities. Training is organized at three levels, the central level, grass-roots level (thana level) and the village level. For the first two levels the focus is on training trainers. For the third level the training is specifically for the farmers. The following training courses have been offered to both men and women during the past year:

- Fish culture
- Fish nursery
- Prawn culture
- Integrated fish farming
- Pond re-excavation and preparation
- Hatchery operation and seed production
- Open-water fisheries and management
- Fish processing and marketing, etc.

A total of 584 formal and 1,111 village-based training programs, organized by the fisheries development section, were undertaken through the year ending June 1998. Of the 36,630 members taking part in the training, 23,659 were men (65%) and 12,971 were women (35%).

### Revolving Loan Fund (RLF) credit support

Based on the training, the group members (both men and women) are provided credit on easy terms and conditions from the RLF of PROSHIKA. These funds are to be used to implement fisheries related activities. The fisheries development program has been broadly grouped into two categories, aquaculture and open-water fisheries. Under the aquaculture category, PROSHIKA provides credit to the organized groups of poor women and men for the following income and employment generating activities:

- i. Fish culture
- ii. Fish nursery
- iii. Integrated fish farming
- iv. Prawn culture
- v. Mini carp hatchery

Overall, women operated 47% of the projects and utilized 45% of the total loans provided by PROSHIKA. This indicates that women's groups have been equally active in the area of aquaculture even though their participation in training activities has been poor.

Table 1. Number of aquaculture projects supported through 1997-1998.

Project	Number of projects			Amount (Tk.1,000)		
	Men	Women	Total	Men	Women	Total
Fish culture in ponds	407	251	758	19,798	15,632.8	35,430.8
Fish nursery	8	2	10	310	60	373
Integrated fish farming	23	28	51	1,446	2,208	3,654
Prawn culture	49	53	102	5,842	4,373	10,215
Mini hatchery	2	1	3	95	42	137
Total	489	435	924	27,491	22,315.8	49,806.8

### Fish culture in ponds

A group undertaking a composite fish culture project should have a least one pond. The fish farmers receive 5 days practical skills training in pond selection, pond preparation, choice of fish species to culture, use of feed and organic fertilizer, disease control measures, harvesting strategy, sampling, etc. The carp seed are collected either from the group members' nursery or from the open market, while the prawn fry are supplied from PROSHIKA's own hatchery. The average loan provided for fishpond culture is Tk.40,000 repayable in one year. Repayment of the loan is by two instalments with a monthly service charge on the outstanding balance. Feed was collected from the group's own sources or locally. Daily feed supply, and weekly and fortnightly organic fertilizer applications were recorded by the fish farmer in a record book. For a fish culture project, the average yearly expenditure and income were Tk.30,970 and Tk.68,007 per acre of water body, respectively. Average fish production per acre was 1.44 t (3.55 t/ha) and the net profit amounted to Tk.33,908 per ha. In Bangladesh, the national average fish production is just 0.77 t per ha per year. With a small contribution of labour to the fish culture project a group member can realize a net profit of Tk.1,000-1,400 per month.

To-date, PROSHIKA has disbursed Tk.179.5 million (US\$3.74 million) for the implementation of 4,586 different projects in aquaculture and fisheries related areas. The loan repayment rate is 94%.

Table 2. Economics of carp production in different thanas of Bangladesh.

Name of ADC/thanas	No. of ponds	Water area (acre)		Total expenditure (Tk.1,000)		Total production (tonne)	
		Men	Women	Men	Women	Men	Women
Madaripur	33	6.75	8	212.3	230.775	9.686	11.144
Pakundia	17	12.5	1.55	400	50	17.062	2.294
Borhanuddin	16	13.5	6	500	200	20.182	8.550
Agaijihara	13	10.01	14.6	300	440	13.383	18.878
B. Baria	45	18.25	7.27	528	250	23.634	9.306
Amtoli	13	12.15	33.3	50	1,295	19.379	52.847
Total	137	73.16	70.72	1,990.3	2,465.775	103.326	103.019

Name of ADC/thanas	Total income (Tk.)		Net profit (Tk.)	
	Men	Women	Men	Women
Madaripur	464,928	529,340	252,628	298,565
Pakundia	783,146	109,194	383,146	59,194
Borhanuddin	942,499	397,575	442,499	197,575
Agaijihara	610,934	868,388	310,934	428,388
B. Baria	1,054,000	440,000	526,000	190,000
Amtoli	96,950	2,615,927	468,900	1,320,927
Total	4,824,457	4,960,424	2,384,107	2,494,649

- Total water area - 58025 ha
- Expenditure per ha - Tk.76,496
- Fish production per ha - 3.54 t
- Income per ha - Tk.167,977
- Net profit per ha - Tk.91,481

#### Fish nursery

Group members undertaking fish nursery projects should have at least 2-3 ponds. The average loan provided for fish nursery culture is Tk.30,000 repayable in 9 months. Repayment of the loan is by two instalments with a monthly service charge on the outstanding balance. The nursery operator receives 6 days formal training on nursery pond preparation and management. Fry/spawn are collected from the fish hatchery and reared to the age of 2-3 months. The object of the nursery is to produce fingerlings for stocking ponds. All fingerlings are distributed to the group members and other farmers at market price. A group member (man or woman) can earn a net profit of Tk.1,500-2,000 per month through this project.

#### Integrated fish farming

A group undertaking integrated fish culture should have at least one pond. Integrated fish culture projects involve raising fish in conjunction with poultry/livestock/horticulture/paddy etc. The average loan provided for an integrated fish culture project is Tk.50,000 repayable in one year. Repayment of the loan is by three instalments with a monthly service charge on the outstanding balance. The farmers receive 6 days formal training on integrated fish farming techniques. The feasibility of the project, technical assistance and feed quality are supervised by the organization's fisheries technical staff. In this project, fish production is higher than from a fish culture project. Average fish production per ha is 1.5 t. 525 women are directly involved in the implementation of this project at this time.

#### Prawn culture

A group undertaking a prawn culture project should have at least one pond. The average loan provided for prawn culture is Tk.80,000 repayable in one year. Repayment of the loan is by two instalments with a monthly service charge on the outstanding balance. The farmers receive 4 days formal training on prawn culture and management. Post larvae are supplied from PROSHIKA's own freshwater prawn hatchery. There are 102 projects which have been provided with loans to undertake prawn cultivation. Women participate in approximately 54% of all prawn culture projects. The culture practice adopted consists of either monoculture

of prawns or composite culture of prawns in conjunction with other indigenous and exotic major and minor carps. The group members take ponds on lease from wealthy people or the local government when they do not have their own sites in which to undertake this activity.

#### Open-water fisheries

PROSHIKA has distributed credit to organized poor women and men for income and employment generating activities in the following fisheries related projects:

- i. Fish processing;
- ii. Fishing boat and net construction/repair;
- iii. Leasing haors and beels; and
- iv. Fishing

Women operated 44% of the projects and took 40% of the total loans provided under this scheme.

Table 3. Number of projects implemented by men and women during the year 1997-98 in the open-water fisheries sector.

Name of project	Number of Projects			
	Men	Women	Total	Women's groups as %
Fish processing	25	34	59	57.63
Net making	6	56	62	90.32
Fishing boat & net	111	28	139	21.15
Leasing haors & beels	9	6	15	49.00
Fishing	40	25	65	38.46
Total	191	149	340	43.82

Name of project	Amount (Tk.1,000)			
	Men	Women	Total	Women's groups as %
Fish processing	2,715	3,914.5	6,629.5	59.05
Net making	474	55,17	5,647	91.61
Fishing boat & net	12,021	1,897	13,918	13.63
Leasing haors & beels	945	5271	1,472	55.77
Fishing	2,748	1,346	4,094	32.88
Total	18,903	12,857.5	31,760.5	40.48

#### Fish processing

From September to December the group members purchase fish at a cheaper price and process it. The majority of these fish processing projects focus on fish drying and are run by women. In fish processing projects, women undertake icing, salting and the preparation of various other local products. The fish processors receive 4 days practical skills training in handling fish, grinding, preservation methods, etc. The average loan provided is Tk.100,000 repayable in one year. Repayment of the loan is by two equal instalments with a monthly service charge on the outstanding balance. The objective of this project is to supply dry, salted and preserved fish and other local products to people for the lean season. A group

member can earn a net profit of Tk.1,200-1,500 per month through fish processing. Women are the sole recipients of loans under this scheme.

Table 4. Yearly implementation of fish processing and net making projects by women.

Year	Fish processing			Net making		
	No. women's projects	Total no. projects	%	No. women's projects	Total no. projects	%
1994-95	16	26	61.54	17	17	100
1995-96	26	65	40.00	35	41	85.37
1996-97	37	62	39.68	56	62	90.32
1997-98	34	59	57.63	56	62	90.32
Total	113	212	53.30	164	182	90.11

### Constraints

Some of the constraints experienced in the implementation of fisheries projects at the fish farmer level are:

- Difficulty in obtaining fingerlings/post larvae at the right time for stocking
- Inadequate technical and financial support available to the farmers
- Poor support from the families of the women involved in aquaculture projects
- Lack of clarity in government-NGO relationships on various issues
- Lack of planning for fisheries extension services
- Absence of a clear policy for the utilization of seasonal water bodies (borrow pits, ditches, roadside ditches), etc.
- Poor disease control measures particularly for epizootic ulcerative syndrome in carps and white spot China virus in shrimp
- Lack of knowledge on the part of both staff and farmers about on-farm feed preparation, utilization and other culture cost-reduction strategies

In order to overcome some of the above constraints, PROSHIKA has developed one freshwater prawn hatchery, 14 mini carp hatcheries and 63 fish nursery projects. Group members undertaking nursery and hatchery projects are trained by PROSHIKA and provided with credit support to undertake the activity. PROSHIKA provides training, technical information and credit support to its members to the extent of its capabilities.

### Recommendations

In order to increase production from aquaculture and open-water capture fisheries the following recommendations should be considered:

- More carp and prawn hatcheries should be set up in the country to ensure fingerlings and post larvae are in plentiful supply.

- National mass media (radio, television and newspapers) should provide publicity about the successful implementation of aquaculture projects, especially those that are operated by women.
- Department of Fisheries staff should provide extension services to aquaculture projects at least up to the union level.
- Coordination and linkages between the government, NGOs, BFRI, the university and international organizations should be strengthened.
- Women should be encouraged to apply for loans from the banks or NGOs for aquaculture related projects.

#### Conclusion

Aquaculture and fisheries programs can be effectively used to alleviate poverty in Bangladesh. PROSHIKA has sponsored 1,745 aquaculture and fisheries related projects run exclusively by women for poverty alleviation. Aquaculture and fish processing by landless women are undoubtedly potential avenues to provide income and employment for the poor. The provision of the various necessities to undertake fisheries activities, which would improve the availability of fish and contribute to the eradication of poverty and food security problems, should be given high priority by the organization.

In addition, PROSHIKA, in collaboration with the Department of Fisheries, ICLARM, BFRI, IRRI, IFADEP, CNRS, has been implementing:

- Pond re-excavation projects in 32 thanas;
- Community-based fisheries management projects in 10 thanas;
- Community-based fisheries habitat restoration projects in 3 thanas; and
- Rice-fish research in 3 thanas.

These projects have been financed by the World Food Program, the Ford Foundation, ICLARM, the International Fund for Agriculture and Development and IFADEP. In all these programs, special emphasis has been given to the training and participation of women.

In general, women have been able to contribute significantly to family incomes and food security by undertaking either an aquaculture or open-water fisheries activity. Additional studies are needed to ascertain to what extent these activities have contributed to improving women's positions within their families. Women have benefited a great deal from acquiring additional skills in the area of fisheries.

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# STRATEGIES FOR ADDRESSING GENDER ISSUES THROUGH AQUACULTURE PROGRAMS: APPROACHES BY CARE BANGLADESH

K.S. Debashish, M. Shirin, F. Zaman, M. Ireland,  
G. Chapman and M.C. Nandeeshah  
CARE Bangladesh, GPO Box 226, Dhaka 1000, Bangladesh

## Abstract

The Agriculture and Natural Resources (ANR) sector of CARE is exploring new ways to enhance women's participation and to empower them through aquaculture programs. Farmer field schools, participatory monitoring and evaluation, children's participation initiatives, family approaches and action research are some of the approaches that have been found to be effective in enhancing the role of women in aquaculture related activities. Aquaculture and related activities are helping women increase their mobility and gain better status. Women are acquiring new skills in breeding common carp or culturing fish in cages, ponds, and rice paddies. The ANR sector is also placing emphasis on strengthening staff knowledge of gender issues, with a primary focus on changing the attitudes of the staff. The sector is aiming to increase female staff strength to 35% by June 2000. Affirmative action policies aim to ensure more recruitment of women for senior positions in the sector. Though there are many challenges yet to be overcome, the steps taken so far to promote gender equity have brought rewarding results. There is recognition in the sector of the need to continually explore new ways to address gender issues which are highly complex in nature.

## Introduction

Bangladesh, with a land area of 147,570 km<sup>2</sup>, supports a population of over 124 million people. Approximately 90% of the population is reported to be Muslim with the remainder being Hindus, Christians, Buddhists, etc. (Mitra et al. 1999). The mobility of women is restricted throughout the country though variations can be seen between different regions as well as the different religions. The general situation of women living in Bangladesh is summarized below:

### General situation of women in Bangladesh

- Gender discrimination is widespread in communities and institutions
- Women have less access to resources/economic activities and information
- Social and health security are poor
- Malnutrition is widespread with higher rates among girls and women
- The labour value of women is 50% that of men
- Women's contributions to the family and national economy are not fully recognized and valued

- Religious bindings and cultural norms prevent women from active participation in public meetings and reduce their mobility
- Dowry and sexual harassment cases are on the increase
- Women's contributions to the decision-making process in the family are limited

The Government of Bangladesh has initiated a number of programs to improve the position of women in society. Recently, the Department of Women's Affairs drew up strategy documents for addressing gender issues for the different sectors of the government. Many of the national and international NGOs working in the country have specifically targeted women. They have initiated different types of interventions covering a wide spectrum of welfare needs such as health and family planning provisions, microcredit, training for income generating activities and other initiatives that seek to empower women.

Though agriculture is the major occupation of the population, the country is yet to attain food security. More than half the population is reported to subsist below the food-based poverty line of 2,122 kcal per capita per day, with child and maternal malnutrition being widespread. Much of the food energy is derived from rice. As a result, protein-energy malnutrition is widespread among children under the age of five. Floods and droughts have had negative impacts on food production since 1993. However, during the period 1980-1993 rice production increased at an average 2.66% per annum. As fish are the most common sources of protein for the population, the government has been seeking to increase fish production through various interventions in fisheries and aquaculture systems. Currently aquaculture is reported to contribute about 34.5% of the total fish production of 1,373,000t. Per capita availability of fish is reported to be 27g per day and this is estimated to contribute nearly 60% of the animal protein intake (Islam, 1999). The Government of Bangladesh intends to increase fish consumption levels to 34.43 g per day by the end of the fifth five year plan (1997-2002), and aims to double the present contribution from aquaculture.

CARE International has been working in this region for over 50 years. In recent years the ANR sector of CARE Bangladesh has focused on increasing resources in agriculture in order to provide sustainable solutions to food security issues. The ANR projects have tried to specifically focus on women since:

- Women are often responsible for managing homestead vegetable gardens and livestock;
- The nutritional needs of women and children are often not met in lean seasons and times of hardship;

A special emphasis on increasing the participation of women in agriculture can empower women through increased knowledge and income, which in turn can lead to increased status inside and outside the home.

Among the various options available, aquaculture is recognized as a potential system to assist in meeting the protein requirements and fish consumption needs of the population. If successful, aquaculture can contribute significantly to the livelihood security of rural households and the economic status of the family.

CARE has five projects in Bangladesh with aquaculture as a major component. New Options for Pest Management (NOPEST) and Integrated Rice and Fish (INTERFISH) promote rice-fish as part of a range of interventions centred on improving rice field management. Cage Aquaculture for Greater Economic Security (CAGES) deals specifically with small-scale cage aquaculture. Greater Opportunities for Local Development through Aquaculture (GOLDA) addresses issues related to freshwater prawn and fish cultivation in rice field systems called gher. Locally Intensified Farming Enterprises (LIFE) uses a systems approach to empower farmers to solve various problems related to fish culture and aquatic resource management through farmer-participatory research.

Challenges faced in extension programs

Extension agencies promoting development and improvement of small-scale aquaculture systems in Bangladesh face challenges to overcome traditional approaches that historically ignored gender as an issue to be addressed in successfully promoting aquaculture as an appropriate livelihood strategy.

Although all the systems rely on several of the household members supporting the management of the aquaculture system, the need for a household approach is often overlooked as an explicit strategy. Training sessions often target only one member of the household, either the husband or the wife. In the management of ponds, rice-fish or cage systems roles are separated along gender lines. This means that there is a reliance on the trained participant to pass along all that s/he has learnt to the other family members. However, there is a significant loss or transformation of the information as it passes from one person to another.

In addition, the majority of extension workers, both in CARE and the other NGOs that CARE works with, are men. This has implications for the training. For example, during training sessions, the men often dominate the discussion. In this situation women's views or needs can be dismissed or ignored, as the staff are also men. Therefore, there is a real danger that the training needs of the women involved will not be met as there is less appreciation of, and empathy for their specific requirements. Hence it has been recognized that the extension workers should carefully design training and follow-up to take account of not only the information needs of the women, but also their learning styles. The women's lack of familiarity with formal learning environments and their lower level of literacy can result in their particular learning needs and requirements being overlooked.

From experience gained in addressing gender issues through aquaculture projects, ANR recognises the importance of tackling gender issues in its programs. Based on this experience, the organization is tackling gender issues through a three-tiered approach by:

- Having specific goals for the participation of women stated in projects' logical frameworks;
- Using extension approaches and promoting interventions that facilitate increased benefits for women in agriculture and aquaculture systems; and
- Promoting changes and staff development activities that result in a more gender-sensitive organization.

The factors that support the ability of women to become and continue to be involved in aquaculture include, geographic location, local traditions and outlook, the historical mobility of women, family support and interest, community/peer group support, the age of the women, and the effectiveness of the NGO support.

In a study carried out by NOPEST, it was noted that the differences in the number of women involved in project interventions was linked to the level of conservativeness (Zaman, 1998). Clear differences in the perceptions of the men in both the conservative and non-conservative areas of the different working districts have been identified (Table 1). Staff working in the field indicate that female groups are more difficult to form in conservative areas. Even though women want to work, in-laws and husbands are not always supportive of women's ideas. There is a need to focus on raising community awareness and to provide longer-term support to the female groups in conservative areas to ensure their ability to enter into aquaculture activities.

Table 1. Perceptions about women working in conservative and less conservative areas.

Men's and women's perceptions in conservative areas
Comilla-Choddogram, Debidwar, Mymensingh-Trishal, Fulbaria, Sherpur-Shaudar
Men's perception
<ul style="list-style-type: none"> <li>• Women should not work outside the homestead for social and religious reasons</li> <li>• It is superstitiously believed that having women working in the fields would result in a poor harvest</li> <li>• Women have no time to work outside the home</li> <li>• Women are unable to do all kinds of work</li> <li>• Women should stay within the homestead as that is the way it has always been</li> </ul>
Women's perception
<ul style="list-style-type: none"> <li>• Women sometimes want to work outside the home but there are no opportunities</li> <li>• Women cannot get permission from their husbands to work outside</li> <li>• Women are unable to work outside</li> <li>• Women do not have time to work outside</li> <li>• Women do not want to work outside</li> </ul>
Men's and women's perceptions in less conservative areas
Comilla-Barura, Mymensingh-Muktagacha, sherpur-Nakla, Sarisarbari
Men's perceptions
<ul style="list-style-type: none"> <li>• Women learn from working outside</li> <li>• It is all right for women to work outside the home</li> <li>• Men value women's work and skills</li> <li>• Both men and women are needed to manage a household</li> <li>• Men appreciate women's work</li> </ul>
Women's perceptions
<ul style="list-style-type: none"> <li>• Women want to work outside the home</li> <li>• Husbands are supportive</li> <li>• Husbands appreciate women's work</li> <li>• Women can work near the home with the men</li> <li>• Women want to improve family welfare</li> </ul>

Cage culture is a non-traditional activity overlapping the boundaries of the capture and culture fisheries. Traditional bindings and gender roles affect those who conduct cage management activities in a household. As most cages are located close to the homestead areas for security, they are within the acceptable boundaries for the movement of women (Ireland, 1997). Cage construction and the sewing of nets are generally male dominated activities. So also is the purchasing of seed for stocking as it can take participants some distance from their village when sourcing seed. After fingerlings are stocked, the women and children often take care of the cage, feeding the fish as well as providing security for the cage. Fish selling is usually undertaken by the men. It is interesting to note that the proportion of the fish retained by the women for family consumption is higher than that released for sale (Kemp and Gregory, 1996).

Involvement in non-traditional activities: extent of participation

CARE activities in aquaculture and agriculture are built on traditional systems and seek to promote improvements. Involvement in rice field aquaculture is a new activity for all the women targeted. Rice cultivation is normally a male-dominated activity in Bangladesh and according to common cultural norms, women are not allowed to work in rice production. In the projects associated with improving rice field production, rice cultivation and IPM are generally carried out by men, while women are actively engaged in dike cropping and rice-fish. Fish and prawns are grown in rice fields in both amon (rain-fed) and boro (irrigated) paddy. Table size fish are produced in the amon season using different species of both Indian and Chinese carps. During the boro season, common carp fingerling production is generally undertaken.

Depending on the conservativeness of the community and the geographical feasibility, 10-25% of the female participants in NOPEST and INTERFISH projects are involved in rice-fish and/or fish seed production. This is a similar proportion to that of the male participants. Women are often helped in raising dikes and preparing the fields for stocking with fish by the children and men in their family. Women release fish seed in the rice fields and allow them to grow on the natural food available in the fields. However, production is generally less than 300 kg per ha. As there are few costs other than those associated with stocking, the income derived from fish cultivation is attractive to the farmers. On average, families have been found to earn around Tk.1,000, while those who expend more effort have been found to make up to Tk.5,000 from the activity.

Common carp seed production is usually undertaken within the premises of the house. Fish are induced to breed in the ponds or ditches by placing water hyacinth as an inducing agent. Mature fish lay eggs on the roots of the hyacinth and these roots, with eggs attached, are collected and kept for hatching in cement tubs, cloth hapas or ditches. The breeding and hatching of eggs requires care, and women have been found to be more efficient than men in undertaking this activity.

Increasing benefits for women through new extension strategies

The CARE ANC project uses a range of extension approaches and processes that seek to empower participants. These approaches are often implemented in combination with each other. The precise mix used depends upon the individual project philosophy, the skills of the staff and the needs of the target group.

### Farmer field schools

Several of the ANR projects use the Farmer Field School (FFS) approach. This works on the principal of enhancing the decision-making capacity of the farmers by helping them to understand the ecological system in which they are working. The decision-making capacity of farmers is increased through process-centred programs. This involves creation of a FFS for each group of 25-30 males and 10-12 females. With these farmers, learning sessions are planned and developed. This process ensures farmers become more responsible for their own learning. The impact of the learning, the sustainability of the learning process and the activities in this type of approach have been found to be good. Staff play the role of catalysts of the learning process rather than as givers of knowledge. They also learn to value and give priority to the farmers' needs as well as recognising the abilities of the participating farmers. The FFS provides the opportunity for the group to discuss and understand gender issues. Projects have devised gender and social awareness activities to initiate discussion by using role-playing techniques or through the use of pictures. This has resulted in an improved environment that is supportive of the involvement of women in aquaculture.

Another strategy that supports the FFS is the Farmer Leader Approach (INTERFISH-NOPEST, 1999). The identification and development of progressive and active women and men from among the FFS participants further supports the development of each FFS and helps to sustain activity by the farmers beyond the project phase.

### Participatory monitoring, evaluation and planning

Through Participatory Monitoring, Evaluation and Planning (PMEP) farmers develop the process of analysing their progress and thus are able to make realistic plans to improve current production strategies. Most importantly, since the analysis is made by the farmers themselves and the results are immediately available, there is a good sense of ownership that then ensures the active participation of all farmers. The technique also serves as an excellent extension mechanism as there is open and frank discussion on various issues. The use of tactile tools helps even the illiterate farmers to actively take part in the PMEP process. As the farmers set realistic goals for themselves based on the resources available, the commitment to accomplish these is very high. PMEP has been more effective with women's groups where there are higher rates of illiteracy. The spread of rice-fish activity increased in the NOPEST project areas with the introduction of PMEP.

### Children's participation initiative

Apart from targeting the current generation of farmers, NOPEST seeks to encourage the next generation to be involved in rice-fish through the Children's Participation Initiative (CPI). In this initiative, children are taught about rice field ecology. Children have been able to influence their family's attitudes towards pesticide usage, rice production practices and aquaculture. Children seem to enjoy the sessions. This has been reflected in the increased attendance on the days sessions are held in local schools and in the adoption of new farming practices at home (Daly, 1999). More importantly, CPI creates awareness among families and particularly women, who have little or no access to information outside their homes. Furthermore, CPI encourages communication and the sharing of ideas between family members so that they are better able to manage their farms and households (Zaman, 1999).

### Family approach

Given the barriers to the involvement of women that are seen in some areas of the country, using a "family approach" is another initiative that can support the involvement of more women in project activities. With this approach, both husband and wife from the same family are enrolled as members of the male and female FFS, instead of having only either the husband or the wife. This approach has been found to largely benefit women as they will have fewer hurdles to overcome in initiating new activities, and the FFS will discuss how husband and wife will support each other to reach their own goals. The higher percentage of female farmers taking up fish culture in NOPEST project areas was partly attributed to the family approach adopted by the people (Zaman, 1998).

The family approach was successfully used in a GOLDA project too, where both husband and wife were enrolled as members of the learning sessions (Akhter, 1999). The participation of women in learning sessions has contributed to the increase in family income. In Hindu families, women are very active in farming activities. However, women's participation in farming is still low in conservative Muslim families. As a result of the women's participation in the project activities, family income has increased by 20% over that generated by traditional practices, largely through changing management practices and increasing dike crops to enhance income (MacKay and Muir, 1999).

### Benefits: income, food, knowledge and status

A study undertaken by INTERFISH found that women were very happy with the new skills they had acquired. Female participants perceived an improvement in their status within the family. Income earned from the sale of fish seed or fish was used to meet family needs. One of the primary uses for the extra money earned is children's education. In some areas, it has been found that now women have a greater influence regarding decisions about the children's education as they are now able to contribute in cash towards school fees and education accessories.

A large proportion of cultured fish is often used to meet family consumption needs. Women are found to prefer fish culture activities to other interventions promoted by the project. Many women feel that having a rice-fish plot, cage or pond makes it easier to fulfil social obligations when entertaining guests, especially sons-in-law or the in-laws of their daughters.

A study of Farmer Leaders has revealed that the approach has had a significant effect on the farmers, especially the women (INTERFISH - NOPEST, 1999). They are seen as local resource persons as the community values the extra training they have received. Many feel their social status and the status of their family has changed dramatically, therefore increasing self-esteem. They receive recognition, and their efforts are appreciated by their neighbours and family members.

In LIFE, the participation of women in the learning sessions and research has been found to be higher than that of men (LIFE, 1999). Adaptive research carried out by the women on common carp breeding and the nursing of hatchlings was acknowledged by the Fisheries Department as a potential strategy for solving the fish seed shortages in rural areas. With the knowledge gained from the learning sessions on stocking density of fish in composite culture,

the women have influenced the families to reduce the stocking density of fish and to sell out the excess fish stocked. Some of the women effectively used the lessons learned for pond management to improve fish production. Most importantly, the participation of women in thana and district level science seminars, where they have made presentations of research findings with clarity and confidence, has once again reinforced the belief that given the opportunity and encouragement, women can excel like men in all the project activities.

Staff development: creating a more enabling environment

The approaches described above cannot happen unless the organization supporting them has appropriate attitudes and systems that support the development of people. For CARE Bangladesh, investing in all staff and especially women, is seen as a core strategy for improving the way the organization operates. Currently CARE ANR aquaculture related projects have around 28% female staff (Table 2). Efforts are being made to increase the number of female staff at both the management and the field implementation levels. The goal of the sector is to increase the proportion of women staff to at least 50% by June 2000.

Table 2. Gender composition of staff in ANR projects with aquaculture components.

Project	Male	Female	% of women
INTERFISH	135	53	28
NOPEST	93	44	32
CAGES	23	4	14
GOLDA	88	69	43
LIFE	52	14	21
Total	391	184	28

Initially, efforts were made to establish gender equity within the organization and enhance the gender awareness of the staff. In the second step, through gender-sensitised staff, efforts were made to influence change in society. The following steps have been/are being adopted to improve the position of women within the organization:

- Ensure improved working conditions for female staff by creating a working environment that is free from discrimination and harassment, enabling women to meet their special gender needs;
- Achieve a more equal gender balance by increasing the number of female staff, especially in senior positions;
- Enable colleagues to assist each other to challenge gender roles and to overcome gender barriers by providing training and counselling services for all staff;
- Provide advice and assistance for gender sensitive project planning and implementation as well as support for monitoring this process; and
- Bring forward new ideas about gender equality from within and without CARE.

Although the above efforts have been made to improve the working situation for women, there has been a low retention rate for female staff across the organization, especially in senior positions. A preliminary study conducted by the ANR sector revealed the following (Shirin, personal comment)

Key positions are mostly occupied by men

- Female staff feel ignored and left out by their male supervisors;
- Support sections do not provide the same quality of service to female managers as they do to male ones;

Affirmative action that supports the development of women is disliked by men;

- Male colleagues dominate the work place;
- Male peers and supervisors often see female staff as a threat;
- Women are unable to cope with unfounded rumours and misinterpretation of their actions;
- Recognition for good performance is unsatisfactory; and
- Good job opportunities exist outside CARE which provide better benefits.

Although the above findings do not apply to all women working for CARE, they do represent significant trends. The sector is using these findings to support the development of strategies to provide an enabling environment for women and to attract more women to the senior positions. A recent initiative is to reserve some senior positions in this sector for women only. It has been observed that when such positions are advertised the number of women applicants increased, as did the quality of the applicants. Some of the women have commented that when the position is reserved for women, they feel more confident in applying.

Conclusion

The experiences gained so far in different CARE Bangladesh projects indicate that processes associated with aquaculture development projects can be effectively used to improve the position of women in the family. The additional skills and knowledge gained by women help them to play a stronger role in the family decision making process.

In Bangladesh, not all people have the ability to buy fish for family consumption nor do they own a pond where they can culture fish. Therefore, having the opportunity to grow fish in a rice plot or a cage is appreciated by rural women. It is something they enjoy doing. Involving women in fish culture activities can make a difference to family nutrition, especially for children, as it provides a secure and regular source of fish supply for the family.

However, when creating gender awareness among family members, it is important to give women a comfortable environment in which to start a new activity. Changing the attitudes of people takes a long time, and hence projects should last for at least two years with each group. CARE has found that it needs to adopt affirmative action policies that seek to increase the number of women in the organization. This is seen as vital if the projects are to continue to focus on the empowerment of the women targeted in the aquaculture components.

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# ROLE OF TRIBAL WOMEN IN RESERVOIR FISHERIES, BANGLADESH

K.K. Ahmed and S. Rahman

School of Environment, Resources and Development (SERD) Asian Institute of Technology,  
P.O. Box 4, Klong Luang, Pathumthani 12120, Thailand

M.A.K. Chowdhury

Department of Zoology, University of Guelph, Ontario, Canada

## Abstract

Kaptai reservoir, with an area of 58,300 ha is one of the largest freshwater bodies in Bangladesh, and it generates an annual fish production of about 5,000 tonne. Although the exploitation of fish has been occurring since the formation of the lake, harvesting is totally artisanal. There are about 5,000 people directly or indirectly involved in fishing and fishery related activities at the reservoir, and the role of the tribal women has been significant in the reservoir fisheries. The tribal women are involved in a variety of facets of the reservoir fisheries, such as carrying fish, sorting, icing, packaging and loading on to the transport vehicles. With the abundant production of pelagic fish (Clupeids) in recent years, the reservoir has provided income and employment opportunities to women, particularly in the areas of drying and retail marketing of the fish. This has enabled women to contribute to household income.

The results of the present study show that about 22% of the population involved in retail marketing and 13% of the population involved in fish drying are women. The study also revealed that about 83% of the respondents are tribal women, while the remaining 17% are migrants. All the women surveyed were married, their average age was 31 years. About 33% of the women had a primary level education, and the rest were illiterate. On average, the women handle about 15.2 kg of fish daily with a profit margin estimated at Tk.43 per retailer per day (US\$1 = Taka 48.4, 1998). The tribal women were able to be actively involved as they had the constant support of their husbands.

## Introduction

Rural women in Asia play a significant role in the agricultural sector, particularly in post-harvest activities (Unnevehr and Stanford, 1985; Begum, 1985). Recent studies in Bangladesh have revealed an increasing involvement of women in field crop production in addition to their traditional role in post-harvest activities (Rahman and Routray, 1998). The fisheries sector, second only to agriculture in the overall economy of Bangladesh, also involves women's participation at various levels with varying degrees of intensity. However, literature on the role and contribution of women to the fisheries sector in Bangladesh is scanty. For example, in recent years, shrimp farming has expanded rapidly, particularly in coastal areas. The expansion of this industry has provided employment opportunities for women in various activities.

The Kaptai Lake occupies an area of approximately 58,300 ha and is one of the largest reservoirs in Southeast Asia. Though created primarily for hydroelectric power generation, it contributes substantially to the national economy through freshwater fish production, navigation, irrigation and flood control. Fishers at the reservoir are composed of migrants, local tribal and non-tribal residents. About 5,000 people are involved directly or indirectly in fishing or fishery related activities in the reservoir. This figure includes a substantial number of women. The present study aims to provide insights into the role played by the tribal women in the activities related to this reservoir's fishery.

#### Methodology

The study aimed to identify women's role in fishing, marketing and post-harvesting activities (including drying, sorting, icing, transporting, etc.) of the reservoir fisheries. The study was conducted by administering a structured questionnaire at two stages. In the first stage, 493 fishers in four major fishing grounds on the Kaptai reservoir were interviewed. A small number of women (4) were found to be involved in fishing and information was gathered from these women. However, in brush shelter fishing, among 100 fishers (10% were women then 100 fishers) were interviewed. In the second stage, a total of 100 fish retailers in all five major markets were interviewed. Twenty-two of these were women. All 40 fishers involved in fish drying in the existing two fish drying sheds were interviewed; 5 of these were women. Ten women involved in fish packaging, icing, sorting, loading and unloading activities were also interviewed. The results of these interviews yielded a sample of women who were engaged in reservoir fisheries activities of size 51.

#### Results and discussion

##### Women's roles in fishing

Fishing gear used at Kaptai reservoir include

- i. fish nets (gill, seine, lift, push, and cast)
- ii. hook and line (cluster hooks, long line, hand line and reel hooks)
- iii. traps
- iv. wounding gear

Women were mainly involved in push net activities. Four tribal women out of 20 push net fishers were identified. The main reason for women's involvement with gear of this type is its ease of operation and low investment costs. The net is operated near the shoreline and does not usually require any craft for its operation. Most of the tribal residents' land was inundated when the lake was created (Sandercock, 1996) and in recent years they have become involved in fishing to supplement their limited income from other activities.

##### Women's roles in brush shelter fishing

Since the early 1990s, brush shelters, the traditional method of fishing used in rivers by women in fisheries, were introduced as fish aggregating devices. It is a simple method of trapping fish in an area of 0.02-0.12 ha by forming an enclosure with bamboo or wooden frames, with the branches of trees set below the frames, which are then placed near the shores of the reservoir. Water hyacinth is placed on the surface of the water within the frames to

keep the area cool and so attract fish. Wheat bran, rice bran, mustard oil cake, fermented rice, locally available spices and other fish feeds are used to attract the fish 2-3 days before harvesting. Women are extensively involved in these preparations and in feeding the fish in the brush shelters. About 10% of the brush shelter owners are women. The indirect involvement in this method of fishing is also high as the female members of the fishers' households are exclusively responsible for feed preparation as well as the feeding.

#### Women's roles in fish trading

Fish trading at Kaptai reservoir is diversified. Three types of fish trader are identified based on the type and price of the fish handled by them. The large traders trade exclusively in big and highly priced major carps and catfish. The medium traders deal in small sized carps and catfish as well as feather backs and snakeheads. The small traders deal exclusively with low priced clupeids and small prawns.

About 22% of the women were involved in fish trading. However, when the traders were classified into their different categories, women's involvement was found to be nil among the large and medium traders. The women's presence was seen exclusively among the small retail sellers, and was as high as 49% (22 women out of 45 small retailers). One of the major reasons for the increased involvement of women in the selling of clupeids and small fish results from the change in the catch composition at the Kaptai reservoir in recent years. Previously, major carps (*Labeo rohita*, *L. calbasu*, *Cirrhina mrigala* and *Catla catla*) were the dominant species in this reservoir, making up about 50% of the total landings. However, since the 1990s there has been an explosive production of clupeids and small prawns. These clupeids currently constitute more than 50% of the total catch, leading to an increase in the involvement of women in the trading of these small fishes.

Another reason for the women's involvement in clupeids and small prawns only is the relatively lower investment required for their purchase and transportation. Additionally, the royalty payment to the government for these small fishes is not mandatory since these fishes are mainly for local consumption. On the average, these women handle 15.2 kg of fish daily with an estimated selling margin of Tk.43.4 per retailer per day.

#### Women's roles in fish drying

Fish drying at Kaptai reservoir has increased at an alarmingly high rate in recent years for a number of reasons. Chief among these is the amount of fish which is dried in the area which has been caught illegally during the May-July closed season imposed by the government. About 21% of the fresh fish caught are dried in the two drying sheds located at Kattoli and Subalang. The direct involvement of women, as owners, in fish drying activities is estimated at 13% (5 women out of a total of 40 fishers). The indirect involvement of women in drying could be much higher as female members of the fishers' households provide substantial assistance. Women are also hired for the pre-drying processing of fish in these drying units, though their numbers could not be estimated.

#### Women's roles in post-harvest activities

Apart from fish trading and drying activities, women are also hired for the loading and unloading of fish at the pontoon, icing, sorting, grading and packaging of the catch. Depending

on the amount of fish landed and the necessity for hired labour, women are engaged to carry out many of the activities mentioned above. The typical daily wage rates for males and females in the Kaptai reservoir area are Tk.60 and Tk.40, respectively.

#### Socioeconomic profile of women involved in fishery activities

About 83% of all the women involved in the fishery activities at the Kaptai reservoir are tribal, while the remainder are local residents (non-tribal migrants from elsewhere). All the women involved in fish retailing, fish drying and brush shelter operations were married and middle aged (31 years old). Minors and unmarried women were hired only for the fish loading and unloading operations at the pontoon and icing, sorting, and grading activities. The highest level of education achieved by these women in fisheries was primary school (33% of the surveyed population), while the remainder were illiterate.

#### Conclusion

Rural women in Bangladesh are restricted in their activities from childhood by tradition. The majority of women's activities are confined to the homestead or to nearby ponds. Increasing marginalization, landlessness and impoverishment have compelled the women to move beyond the home and work on road construction sites, breaking bricks, etc. These are considered low-level jobs (Rahman, 1997). The involvement of women in fisheries activities, activities which are perceived as men's domain, undoubtedly signifies the increasing mobility of women as they move out from their homesteads in to the open market.

An important point to note in the context of women's involvement in the Kaptai reservoir fisheries is that a majority of these women are tribal. In tribal societies the social stigma attached to women engaging in activities outside the home is minimal and this has enhanced the participation of tribal women in the fishery activities. To increase the participation of rural women in fisheries activities, a major effort is required to remove this social stigma and break the cultural constraints that prevent women's mobility and involvement.

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## NEXT STEPS

M.C. Nandeesh  
CARE Bangladesh, GPO 226  
66 Road 7A, Dhanmondi, Dhaka 1209, Bangladesh

A number of presentations made during the Symposium once again highlighted the enormous contribution of women in different countries in various fisheries activities, ranging from fishing to marketing. In most cases, women carry out these tasks in addition to other household responsibilities. If we can recognize this dual contribution of women and consider their role, while developing gender balanced developmental activities, it might create a better environment for women. This requires a change in attitude, which is not easy. Self-evaluation is one of the best means to ensure suitable change. The suggestion of Cristi Marie Nozawa for the Society to undertake gender awareness/sensitivity analysis of its members is an excellent idea. Other presentations also clearly pointed out that gender awareness is required more for men, and hence we look forward to seeing a more active participation by men in gender initiatives of the Society.

We thank Senator Helena Benitez for her inspiring keynote address and participation, and valuable contributions to the discussions. I wish to specifically mention the contribution of Dr. Meryl J. Williams, who took responsibility for organizing the event and mobilizing the required funds. Without her dedicated efforts this event would not have been a reality. I wish to thank her for all her help and I look forward to her continued contribution for this initiative, which is very close to her heart. Following discussions with the President of the Society I am pleased to inform you that the Society will be intensifying its activities in gender awareness and sensitivity, and intends to organize a global event on women in fisheries in 2001. We need all your cooperation and support to make that global event a success. To make the event most productive we request that you initiate research and undertake development activities in your areas. Several governments have funding specifically for women related research and development activities. Therefore, we urge you to explore local funding to carry out these activities. The Asian Fisheries Society can be approached to assist in writing up proposals. We also request that you explore the possibility of forming national networks; the lessons learned from MRC in forming such networks in the Indo-China countries would be very valuable. These national networks could serve as platforms for discussion and provide the stimulus for research and development efforts. Dr. Matics from MRC would be able to provide her invaluable experience gained through establishing such networks in the Indo-China region.

PADEK has been generous in sponsoring two photographic competitions with a view to increasing gender awareness among the Asian fisheries community. Since the event has been very successful and effective, we intend to continue this activity in the forthcoming forum as well. I take this opportunity to thank all the chairpersons and rapporteurs of the various sessions, and also Dr. K.J. Rana of FAO for accepting the responsibility to initiate discussion in the plenary session. I also wish to thank Dr. M. Shariff, President of the Society, and Ms. Elsie Tech, Executive Officer of the Society, for helping us in very many ways to organise this event.

# CONTRIBUTIONS



# THE PLIGHT OF OLDER WOMEN IN A FISHING VILLAGE: THE WOMEN FISH TRADERS OF BUGTONG BATO, AKLAN, CENTRAL PHILIPPINES

L. dela Pena  
University of British Columbia, Vancouver, Canada

C.L. Marte  
Aquaculture Department, Southeast Asian Fisheries Development Center Tigbauan,  
Iloilo, Philippines

## Abstract

The changing nature of the fisheries in Bugtong Bato, a small fishing community in Central Philippines has also changed the role of women, particularly of older women, in the community. Until the 1980s, fishing used mainly traditional gears and methods and was highly seasonal. The livelihood activities of men were highly diversified, and fishermen undertook seasonal outmigration to the sugarcane plantations in Negros. Younger women and women of child-bearing age attended to domestic chores, helped their husbands prepare for the day's fishing activities, sought employment as domestic helpers in the capital town or Manila, or engaged in seasonal jobs such as rice harvesting or sinamay fiber knotting. Older women mainly attended to domestic chores. With the introduction of new fishing gears and methods, seasonal outmigration has virtually stopped. The men who participated in group fishing financed by local financiers earn better incomes from these new fishing techniques. However, as fishing now requires longer periods at sea, older fishermen are unable to join their younger counterparts, and rely only on traditional fishing methods for their livelihood. Due to physical limitations and poor health, older fishermen are unable to earn enough to support their families, and their wives seek supplementary means of livelihood. The introduction of new fishing gears and methods has increased considerably the volume of fish landed and spurred the development of a new economic activity in this community - that of fish trading. Most fish traders are older women whose husbands are unable to fish or whose income from fishing cannot meet their daily needs. As such, older women in this community have assumed the role of primary providers for their families.

## Introduction

Spurred by the feminist movement and the inclusion of women in development programs, there has been a proliferation of studies focusing on the role of women in rural and fishing communities (Chant and McIlwaine, 1995). Most of these studies dealt with the varied but secondary role of women in fishing communities. Recent studies on women in small-scale fisheries highlight their increasing economic role (Yater, 1982; Illo and Polo, 1990;). Pomeroy (1987) notes that fishermen today are more aggressive and mobile in their pursuit of fish because of declining fish stocks, and predicts that gender roles are likely to change in the direction of greater female involvement both in production and domestic chores. Similarly, Israel-Sobritchea (1994) believes that women's lives have changed because of social and economic changes, resource depletion, and decline in household incomes. Drawing from her

field research in Bohol, Central Philippines, she relates that as men's income from fishing becomes insufficient to meet family needs, women's participation in gainful employment to augment family incomes becomes significant. This paper examines the nature and role of older women as primary family providers in a fishing community. Based on interviews and observations, this paper presents an overview of the socioeconomic conditions in Bugtong Bato, Ibajay, Aklan Province, the changing nature of the fisheries and fishing in this community, and how this has changed women's functions from a domestic and supportive role during their early married lives to becoming major providers of family income as they age. Two narratives of representative women fish vendors are included to highlight the plight of these older women as they assume their new roles.

#### The Bugtong Bato fisheries

Bugtong Bato is one of the 35 barangays of the municipality of Ibajay. It is located 35 km from Kalibo, the capital of Aklan Province. As of 1998, it had 185 households and a population of 995. Like other coastal villages, income for the majority of households comes from fishing (Table 1). Eighty per cent of the men engage in fishing, and 70% of women who are gainfully employed are fish vendors. Bugtong Bato has a young population (Table 2); more than 40% are less than 17-years-old. Boys 13-16 start to engage in fishing, either to assist their fathers or to finance their schooling. Since most parents cannot afford to send their children to college, most males in the 17-25 age group engage in full-time fishing, while females work mostly as factory workers or household helpers in Kalibo and Manila.

Table 1. Occupational distribution in Bugtong Bato, Ibajay, Aklan, Philippines as of July 1998.

Occupation	Male	Female	Total
Fisher	171		171
Farmer	20		20
Carpenter	10		10
Tricycle driver	7		7
Fish vendor		28	28
Storeowner		7	7
Dressmaker		3	3
Teacher		2	2
Blacksmith	1		1
Laborer (Manila)	10		10
Retired fisher	20		20

Source: Socioeconomics Section, SEAFDEC AQD, November 1998.

Table 2. Age structure of Bugtong Bato population.

Age	Male	Female	Total
0 – 12	177	174	351
13 – 16	41	46	87
17 – 25	75	71	146
26 – 64	176	163	339
65 – above	43	29	72
Total	512	483	995

Fishing in Bugtong Bato is seasonal. The first half of the year is considered the best season for fishing because of the calm seas during the southwest monsoon. The northeasterly monsoon from September to the beginning of January brings strong winds and rough seas, making fishing almost impossible. During this time, men and women try to find work outside the village. Some men find employment as contract workers in Kalibo; others try their luck in Manila; while a few women including married ones work as domestic helpers in Manila or Kalibo where they stay for six months or more.

The community considers the land and near shore waters as private property. The municipal government leased the near shore waters to two cooperatives, the Kilusang Kabuhayan at Kaunlaran (KKK) and the Pagtilibiyung sang Mangintok nga Mangingisda sang Ibajay (PAMMI), giving them the use-rights of the area. Each cooperative operates one or two otoshi-amis set less than one kilometer from the shore. Members of these cooperatives participate in the daily operations and are given their share of the catch. The cooperatives allow gleaners and fishers free access to the near shore area. Although the ten-hectare mangrove area is not legally titled, residents believe in de-facto use-rights, and 21 families claim ownership to portions of this land.

Fishing in Bugtong Bato is not as developed as in other fishing communities in the Visayas in terms of technology, the complexity of the composition of the crew, and level of capital investment. Income diversity is a common characteristic of peasant subsistence economies and is a basic feature of Bugtong Bato up to the present. The level of economic diversity however was much higher in the past. An 87-year-old male informant recounted how he used to peddle steamed fish cooked with vinegar in nearby farming villages to complement several sources of income, such as collecting tuba (coconut rum) and cast net fishing. Aside from peddling an average of 14 kg of fish, he also bought sinamay fiber from the town of Banga, Aklan, which he distributed to several women in Bugtong Bato who would knot these into one-meter strands. He then sold these strands to businessmen in another town.

The men of Bugtong Bato used to be part of the labor force for sugar plantations in Negros until the early 1980s. They were contracted to work as cane cutters, drivers, timekeepers, and haulers during the sugarcane harvest season from August until March of the following year. Those who stayed in the village derived a good part of their income from harvesting rice in nearby villages. Most, however, preferred to work in Negros, despite the miserable conditions, since they were able to earn and save more from working seven months in Negros compared to the income they would earn doing various jobs in Bugtong Bato.

Although new fishing techniques were introduced in the 1980s, the fishers of Bugtong Bato engage mainly in "low intensity" fishing. Traditional fishing gears such as beach seine, hook and line, fish corral and cast net are still the main gears used by most fishers. There is often a close economic tie between fishers and farmers in nearby farming villages. For instance, a fisher informant recounted that a regular buyer from a nearby farming village buys his daily catch every morning. In return, this buyer employs him to work in his farm every harvest season and pays him with rice.

The Bugtong Bato fishery however is slowly evolving into a more efficient medium-scale fishery with the introduction of these new fishing techniques and gears. Gears such as the *balsa*, a type of fish aggregating device installed in near-shore or off-shore waters and used with hook and line, *sapyaw* or encircling gill net, and modified purse seine were introduced in 1986, while the *pangsulig*, a type of gill net fishing used with the aid of a compressor to catch fusiliers and surgeonfish, and the net for *tambilawan* or flying fish were introduced in 1998. However, only a few fishers were able to invest in these new fishing gears. Those who can't afford to invest in these new gears join the crew of the larger fishing vessels, while others derive most of their income from their share in the *otoshi-ami* catch.

Recent developments in the local fisheries of Bugtong Bato have changed the distribution and marketing channels of the fish catch. Men travelling on foot to vend their catch traditionally did fish trading. There was a direct relation between fishers and buyers. However, with the newer fishing methods introduced by fishers from other parts of the Visayas, Bugtong Bato fishers spend longer hours waiting for fish caught from the *otoshi-ami*, or stay for longer periods while fishing off-shore. The running cost of fishing using these gears is also beyond the capacity of the average fisher to finance, thus creating a niche for financiers and traders. With the bigger volume of fish caught, and the necessity for others to finance the fishing operation, a complex network of fish distribution and trading is now established. Significantly, the women of Bugtong Bato have become more actively involved in fish trading.

There are three women financiers who are also the primary or "big" fish traders in Bugtong Bato. They finance the boat crew with supplies such as gasoline, crude oil, and expenses for boat repair and provide the daily food for the crew member's families. Other than the crew's individual share of a kilo or less of fish after each trip, the entire catch of the boat belongs to the financier. The catch is recorded and shared every market day. It is common for the primary buyers to sell part of the catch to secondary traders, mostly women. Women call this *ginatagaan kami sang palangabuhian* or "to provide us with livelihood" acknowledging the generosity of the primary buyers.

#### Women fish traders

In many fishing communities in the Visayas, women are engaged in fishing-related work. Women help their husbands to prepare and carry the motorboats and canoes before and after each fishing trip. Cleaning and fish drying, gleaning for mollusks and crustaceans are common activities for women, as well as mending torn nets and preparing lunch baskets (Israel-Sobritchea, 1994), seaweed gathering and drying (Hurtado, personal communication), cleaning, shucking, packing and marketing of oysters and mussels (Siar et al., 1995), and drying sea cucumber (Zayas, 1994). These activities however are not common for the women of Bugtong Bato. A few older women do mend nets for other fishers and they usually get a 10% share of the harvest. Most of the Bugtong Bato fishers are now engaged in group fishing and all their needs are attended to by a financier so that their wives do not need to take charge of the usual pre-departure tasks. With developments in the local fisheries, an economically significant role has emerged for the older women of this village - that of fish trading.

The women fish traders of Bugtong Bato are either married (23) or widowed (5). About 68% are over 50-years-old (Table 3). Their households are large, with many supporting an extended

household. The women fish traders are either peddlers or market vendors. Of the 63 regular fish vendors in the Ibajay town market, 47 (75%) are women, 20 of whom come from Bugtong Bato. A male member of the household, usually a bachelor son, occasionally helps in fish trading. Partnerships between women peddlers are common. Although there has been no report of harassment or robbery, partners offer companionship and security especially if they sell fish in remote places. Peddlers go as far as the mountain villages, nearly 30 km north of Bugtong Bato. Those who sell fish far from the village hire a motor cab to transport their fish while those who peddle their shares in the nearby communities within a radius of 7 km walk. In the morning, the women fish traders wait for the motorboats to arrive from a night of fishing or after the otoshi-ami nets are lifted. With their bamboo or plastic baskets, they wait until all fish are weighed and all primary traders have taken their shares. All secondary buyers, however, are assured of fish to sell. Once given fish, market vendors immediately board motored cabs to town, and the peddlers walk their regular route. The women traders have to secure and sell at least 5 kg of fish daily to support their daily household needs. They also buy the crew's share of fish, although this is intended for the crew members' families.

Table 3. Age structure of women fish traders.

Age	Number
31 - 40	6
41 - 50	3
51 - 60	11
61 - 70	8
Total	28

Source: Socioeconomics Section, SEAFDEC AQD, November 1998

Few of the women traders are under 40-years-old, indicating that younger women have husbands who are able to support them. The high rate of pregnancy and time needed to care for young children are likely reasons why the younger women do not engage in fish trading or other economic activities. Reasons for trading given by the women include:

- An aging or dead husband;
- An ailing husband;
- The large number of members in their household; and
- The husband's low income from fishing.

Some of the women fish traders think that their husbands are just too lazy to work and depend on their wives' income from fish trading. Others believe that their husbands should not be working as hard or are unable to work as hard as they used to. Many older women fish traders believe that it is time for them to help their ailing husbands. They have accepted that fishing entails hard work and sacrifice, and that years of going out to sea have taken a toll on their husbands' health.

Interviews with two representative women traders highlight the significant economic role of these older women as primary family providers in this small fishing community.

Luning, a fish peddler

Luning is a 66-year-old frail woman who peddles fish in the village and nearby communities. By walking at a fast pace, she can beat four other peddlers with whom she shares the same route. She walks an average of 16 km a day, walking the same route two to three times a day depending on the supply of fish.

Luning supports a household of seven and has been peddling fish since 1975. Her husband was then engaged in hook-and-line fishing but the fish catch was not enough to support their growing family. She only stopped peddling during the last three months of pregnancies and while nursing her newborn.

Luning's 64-year-old husband, is constantly troubled by rheumatism, although he tries to earn income by crewing in one of the otoshi-amis. He crews for 15 days every month and earns P.25 daily (\$1= P.41). Otoshi-ami fishing involves hauling fish trapped in the otoshi-ami net, which takes thirty minutes to one hour per trip, and is done twice a day. Most of the time, Luning's husband stays at home and takes charge of the domestic chores when Luning is out peddling. The little income her husband gets on the rare occasions when he goes out to fish is considered a bonus.

Luning earns at least P.100 daily if there is fish to sell. She can carry and sell at most 7 kg of fish when the catch is good and at least 5 kg during slack times. Occasionally, her teenage son helps her to carry 10 kg of fish. Peddling is done usually three times each day at 6:00 to 7:00 am, 11:00 to 1:00 pm and 3:00 to 4:00 pm. This schedule allows her to attend to her other domestic chores. Despite her frailness she prefers to walk her 16 km route to save the additional cost of transportation. Although she sometimes thinks of going back to Manila to work as a household help, a job she used to do for six years during her younger days, she accepts that income from peddling is good especially as it means she can be with her family.

Luning prefers to peddle rather than sell fish in the market because peddling provides enough income and leaves her time to attend to domestic chores. Luning nets P.20 for every kilogram of yellow fin tuna she sells. She can also exchange fish for items such as rice and earn an additional P.5 by exchanging one-half kilo of fish, which she usually sells at P.40 for one ganta of rice costing P.45. She also brings with her other items like candies, bread, pork, and beef which the farmers request from her. In return, she buys from them bananas, vegetables and root crops that she sells to her neighbors.

Nita, a market vendor

A native of Negros Province, Nita, a 54-year-old market vendor moved to Bugtong Buto with her husband and four children 15 years ago. She was a sacada or field worker when she met her husband, a native of Bugtong Bato when he was a contract worker in one of the sugar plantations in Negros. Although a daughter now works as a midwife in a local clinic, Nita is supporting a family of seven, a married son and his family, and two younger children who are in high school. Nita's husband operates a small fish corral but the catch from the corral is not consistent, and often not enough to provide for their daily needs. Nita entered fish trading ten years ago to augment her husband's income. Unlike most peddlers, Nita had a little capital to start her business since her husband inherited a hectare of rice land. Nita gets

her supply of fish from the otoshi-ami and five other fishing boats as well as whatever fish her husband harvests from his corral. When the catch is not good in Bugtong Bato, she buys from other traders from other towns.

Nita can be found in the town market from six in the morning until five in the afternoon while her husband takes care of the domestic chores. As a market vendor, her operational costs are higher than other fish peddlers like Luning. She pays an annual license fee of P.800, a daily entrance fee of P.10, and P.5 for table space. Added to these costs are P.20 for transportation and P.20 for ice. At most, Nita can earn about P.250 on a good day and P.50 if her sales are sluggish. During the peak fishing season, she can sell as much as 50 kg of fish but as little as 5 kg during the slack season when there is not enough fish to divide among the traders. Her husband's income from his catch is saved for emergencies such as hospitalization or for their children's miscellaneous expenses. Nita hints that because of her husband's inability to provide for the family, she has to continue her work and does not envision retiring in the near future.

Fishing in Bugtong Bato has gradually evolved from "low-intensity" fishing utilizing traditional fishing gears to "medium-scale" fishing with the introduction of motorboats, new methods of fishing like the use of balsa, sapyaw, fishing with the use of compressor, and the operation of otoshi-ami in near-shore waters. Introduction of these new gears and techniques has opened new fishing grounds in the Sibuyan Sea and facilitated the intensification of fishing in the area. This has resulted in better incomes for the fishers and has practically stopped seasonal outmigration to nearby Negros Island. New economic opportunities have opened up for the women in this community. More women are engaged in fish trading due to the increased catches from the new gear, better roads, and transportation facilities. Women were further encouraged by the availability of financial assistance through the Self-employment Assistance-Kaunlaran (SEA-K) from the Department of Social Welfare and Development's national program on Comprehensive Integrated Delivery of Social Services (CIDDS). Women fish traders like Luning have availed of loans ranging from P.1,000 to P.3,000 from this project. This program started in Aklan province in 1996 and is similar to the grameen bank programs in East Asian countries. The loans are intended for investments in fish trading and sari-sari or convenience stores. Women are the target beneficiaries; all except one of the 38 creditors of the program are women.

Fish marketing and processing are part-time income generating activities of women in fishing communities in the Philippines (Israel, 1991) and other Southeast Asian countries (BOBP/FAO, 1980). Women engage in these and other activities mainly to supplement the incomes of their fisher husbands (Israel, 1991). In Bugtong Bato, however, fish trading has become a major income generating activity particularly for the middle-aged and older women. This may also be the case in other fishing communities although there is no documentation of the age structure of women fish traders in the available literature. Fish trading offers a relatively stable income for families whose previous dependence on fishing as a livelihood has been curtailed due to the inability of the primary provider, the fisher husband, to engage in this physically demanding work. Family support now falls on the shoulders of these older women even beyond the age when their counterparts in urban communities have retired from economically productive work. Development programs usually focus on younger age groups and potentially

productive household members. The significant contribution of older women beyond their prime is rarely considered. Since women in the older age groups may not be burdened by the reproductive and other domestic responsibilities that can limit women's capability to carry out livelihood activities including fish vending on a larger scale (Israel, 1991), development programs should be designed to offer livelihood opportunities to these women and to improve their skills at whatever jobs they are engaged in.

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## ABSTRACT FROM "MY WIFE DOES NOT WORK"

A. Gomes<sup>1</sup>

Founder & Executive Director, Banchte Shekha, Bangladesh

**A woman enters uncertainly into conjugal life with a man. She brings with her the hope of happiness. In her married life, she toils for long hours with dedication and patience in the hope of gaining his love. Everyone in her husband's family is all too willing to accept her services, but all are too miserly to return her any when she needs it. It is as if she were a slave who has been bought by her husband's family - her entire life is meant to serve others. She tolerates all the tortures including beatings, in the interest of family peace and happiness. Her only protest is her weeping. When she is wrongly accused of idleness, and beaten to death by her husband, he gets away with the lightest of sentences.**

**Things go this way for almost all women in the rural areas of Bangladesh. They are unaware of their rights, neither do they protest against the inhuman treatment meted out to them. In order to raise a protest against this inhuman treatment, it is necessary to make women realize they have rights and position in society. They must remain united and fight against the injustices meted out to them. In the family, the woman has endless duties in the household, and yet the male members rarely recognize her contribution.**

**The society must pay due regard to the work of a woman, recognize its importance and honour her as a human being. Improving the skills of women, their efficiency, consciousness, and awareness will empower them and ensure their rights. The age-old superstitions, social systems and norms that enchain women, should be discarded. In this respect, our society fails to keep pace with other civilized societies of the world. Women must come forward, breaking all these barriers and establish their equal rights in society. No development in the proper sense is possible if women are ignored and deprived of their legal and human rights. In view of this, Banchte Shekha is trying its best to develop the awareness, skill, and empowerment of women through proper technology transfer such as involving women in fish cultivation.**

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(1) Angela Gomes is the Founder of Banchte Shekha, a Bangladesh nongovernment women's organization. In 1999, she was awarded the Ramon Magsaysay Award for community leadership. These awards are considered the Asian equivalent of the Nobel prizes. The famous poster, 'My Wife Does Not Work', by Ms. Gomes was featured among graphic displays at the Asian Fisheries Society 1998 International Symposium on Women in Fisheries.

আমার বউ  
MY WIFE



কাজ করে না  
DOES NOT WORK

আবুল কালাম আজাদ  
এক্সিকিউটিভ প্রোগ্রামার  
বাংলাদেশ পেশা  
আবুদাবি, বাংলাদেশ

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Angela Gomes  
BANCHTE SHEKHA  
Jessore, Bangladesh

পুল্লু ভুল্লু  
বিশ্বা বসন্ত  
(আবুদাবি - টি এম এম টি)  
সিঙ্গাইল, বাংলাদেশ

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Cover design for My Wife Does Not Work.

# PRACTICAL MEASURES FOR THE ENHANCEMENT OF WOMEN FISHERS' STATUS AND THE IMPROVEMENT OF COMMUNITY PARTICIPATION AND BENEFITS

E. Hamley

Director, Hamley Consultancies (Management & Fisheries) International, London, UK

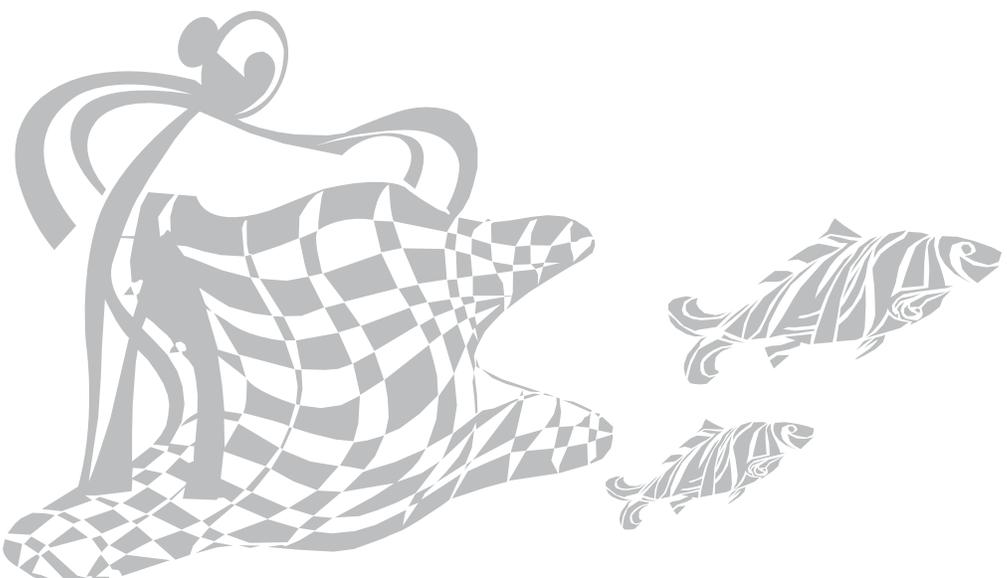
Ernest Hamley (United Kingdom) Fisheries and Co-operatives Development Adviser and former Senior Fisheries Management Consultant, Colombo Plan UNDP-ILO Projects in Southeast Asia, congratulated the Forum on the variety and quality of presentations in the 'Women in Fisheries' special session and the debate arising therefrom. He stressed that contributors and their organisations could derive considerable benefits in most sectors of their respective fisheries if the important underlying themes of many of the papers were fully appreciated and implemented positively. Responding to the summariser's observations and requests for inputs, the following comments were offered for practical consideration and, where possible, early adoption:

- 1.0 Where difficulties arise in definitive terminology, which included words such as "fishermen", it should be noted that it was often intended merely as a collective term, rather than intentionally of gender origin. However, it is essential to change perceptions in order to get the right 'ethos'. Fortunately in the English language many suitable non-sexist words and phrases are available as alternatives to adequately describe most of the functional roles. Such a list may include fishers, catchers, producers, operators, etc. Similarly, incidentally, "vessels" may be applied to a wide variety of craft or boats in fishing - their "skipper" and/or crew could equally be of either sex. All these words are general and generic to describe men and women in the industry at these levels.
- 2.0 Proportionality: It has been noted from several presentations that in many places in Southeast Asia women, on average, spent around 45% of their time in various "fishery activities". Similarly, in most capture fisheries, for reasons of weather, conditions, seasonal or quota limits etc., only up to about 180 days annually are available to the men for actual netting or otherwise producing fish of all species.
  - 2.1 It was therefore suggested that in proportional broad terms men and women might both be perceived as devoting almost one-half of their overall working time in the industry in one capacity or another. In other words, it may be considered that women in reality can claim to be equal to men as contributors already, in that sense. However, if "effective production" (whether catching, rearing or processing) has to solely raise a family's total sustenance income for virtually a year in only half a calendar year (183 days), management, planning and price yields for produce in the market should take account of that factor.
- 3.0 The speaker gave examples from project experience in Indonesia (Java specifically) which found that each catcher had about 4.1 persons in family dependency on their production. More generally it was not widely enough appreciated that between 5 and 7 persons derive job dependency from the person who produces fish or fish products. They come from many ancillary industries and include suppliers, processors, distributors, port workers and market workers at several stages, and all need to be taken into account in assessing dependency importance.

- 4.0 Unexploited potential. There is scope for improved research to make use of considerable under-exploited resources still available to provide better incomes, for women in the fisheries localities in particular. In one Central Java village (Kecamatan) a complete sub-industry was found far from port operations, providing income for local people in the supply of basket containers for processed fish, storage and transport. Much female labour of all ages was used in craft skills. It was felt that many opportunities of this nature could be opened up elsewhere.
- 5.0 Tourism. With growing tourism in the region, attention was drawn to this often totally unrecognised source of potential income in which women could play an important part, not only in acting as guides and providing accommodation and facilities, food, etc., but also making and selling artefacts and souvenirs from local by-products, e.g. shells, etc. Tourist visitors of all nationalities are drawn to fishing villages, indeed they enjoy being allowed to view all aspects of production and processing of by-products - e.g. handicrafts. Some elderly folk in the community can contribute by participation and feel "wanted" too. Some fishing places have already started doing this effectively; in the speaker's view considerable scope exists for government and local authorities to assist and promote local fishing enterprises, especially co-operatives, in exploiting some enormous potential in this field.

In concluding remarks the speaker conveyed thanks to all the forum organizers and participants and brought them special greetings from sister fisheries bodies in the United Kingdom, particularly the Institute of Fisheries Management, with which he was currently associated.

# APPENDIX



## NEWS RELEASE: WOMEN DO FISH

M.J. Williams

International Center For Living Aquatic Resources Management (ICLARM)

M.C. Nandeesh

CARE, Bangladesh, 1209, House 65, Road 7/A, Dhanmondi, Dhaka

Women and children make highly significant but undervalued contributions to fisheries, aquaculture, fish processing, retailing and fisheries sector services according to the experts who gathered on 13 November in Chiang Mai, Thailand at the First International Symposium on Women in Asian Fisheries. Appropriately, the Symposium was conducted in Thailand during the Fifth Asian Fisheries Forum. Thailand is the biggest exporter of seafood in the world today and women play a big role in the Thai fisheries sector, including holding 33% of professional positions in the central Directorate of Fisheries, according to the Director General of Fisheries, Mr. Dhammarong Prakoboon, who spoke at the Opening Ceremonies.

Men and women from diverse specialist backgrounds gathered for the Symposium. They included rural bank managers, nongovernmental organization staff, university chancellors, research managers, international and regional bureaucrats, fish production inspection experts, biologists, social scientists and fisheries information specialists. The keynote address was delivered by Senator Helena Benitez, who is renowned internationally and in her home country, the Philippines, for her contributions to women's rights, rural development and environmental conservation. The Symposium was chaired by Dr. Meryl J. Williams of the International Center for Living Aquatic Resources Management and co-chaired by Dr. M.C. Nandeesh of CARE-Bangladesh. Presenters came from Bangladesh, Cambodia, India, Italy, Indonesia, Malaysia, the Philippines, Taiwan and Thailand.

Knowledge of the contributions of women in the fisheries sector is only slowly evolving and still lags behind that of other rural sectors in Asian countries. The experts concluded that one way to help rectify this situation would be for the governments in Asia to cover gender questions on fisheries and aquaculture in their regular agricultural censuses. Participants were urged to go back to their ministries of agriculture and alert them to this vehicle for data collection. Despite the lack of comprehensive data, the Symposium learnt from several programs and studies in India, Bangladesh and the Philippines that agricultural banks and non-government organizations are already helping hundreds of thousands of women entrepreneurs and fish producers through technical assistance, loans and credit, and fostering self help groups.

The Symposium recognized that Asian women in fisheries usually carry multiple roles in their lives and careers, thus making time allocation a critical issue to address when developing assistance programs. Men's and women's sense of confidence and self-worth are intrinsically linked to and embedded in their culture. Therefore, social support systems need to be organized to help bring about changes that may be resisted at first. Gender relations should not be seen as competitive but rather as complementary and mutually reinforcing. Support systems should also help to raise the aspiration levels of women. More generally, formal

service and delivery agencies are realizing that they can only do their jobs these days if they are gender sensitive and participatory with their clients, such as involving fish farmers in designing curricula for farmers' field schools. In most cases this means a major internal effort in organizational transformation. The Symposium learned how some nongovernmental organizations have already embarked on these internal cultural changes.

Women in the sector are marginalized in planning and policy making and, unless this is changed, they will continue to suffer inequalities and discrimination. Even some Asian women fisheries scientists and academics rated their chances of making a significant policy contribution as 'hopeless'. Several speakers stressed that community-based coastal resource management was one activity related to fisheries that would only be successful if both men and women were active in it. Although such management was becoming more inclusive of stakeholder groups generally, women were still rarely involved.

Women frequently participate in the fisheries sector under conditions of great inequality, bordering on blatant exploitation, even though they do gain economically from their participation in the labour force. Young and unmarried women are often preferred because they were cheaper to employ and have fewer family responsibilities. Studies showed that women labourers in some offshore fisheries in the Philippines and in fish processing plants in India were paid below minimum wages, received little legal protection, and could even be exposed to sexual harassment on the job. Such labour and personal discriminations were often well hidden because women could not speak out and their basic human rights were not adequately protected.

Speakers at the Symposium revealed the results of studies that showed women were productive and efficient when they had access to the right technologies and opportunities. Studies in Malaysia and other countries showed, however, that more than 80% of rural women's activities were carried out in or close to home. New technologies and modernization in the sector tended to marginalize these backyard activities. The new developments included introduction of large scale, centralized fish processing aimed at high quality export markets and the mechanization of fishing vessels. However, small-scale aquaculture, low-capital fish processing, value-added fish products, rice-fish farming, and rearing of fingerlings from fry, were examples of fisheries activities which were well suited to cottage industries. In addition, complementary activities such as tourist lodging, handicrafts, and seasonal farming were showing promise for diversifying, stabilizing, and raising fishing family incomes.

Attention to women's issues in fisheries lags behind that in other sectors and since this Symposium was the first for the Asian Fisheries Society, various comments on it were raised. For example, other attendees at the Fifth Asian Fisheries Forum suggested to some of the experts that there was too much talk and not enough action! To demonstrate their intentions, the experts pointed out that already some agencies with which they were involved, including banks, non-government agencies, and some government departments, had made major strides in helping women's contributions in the sector. The participants will broadcast their findings through the proceedings of the Symposium that will be published in collaboration with ICLARM. The results will also be distributed to sectoral magazines, read by policy makers and the message spread through personal actions and networks such as the Women in Fisheries

Networks in the Indo-China countries. In addition, the participants have written to urge the Asian Fisheries Society to maintain the momentum built up at the Symposium by taking the following actions

- i. Continue the 'women in fisheries' photographic competition at the Sixth Asian Fisheries Forum in Taiwan in 2001. The competition started in 1995 at the Fourth Asian Fisheries Forum in Beijing. The 1998 competition drew 54 entries, many of outstanding quality, and some of these will be used widely in regional and international magazines such as Naga, Aquaculture Asia, INFOFISH, and Catch and Culture (Mekong River Commission).
- ii. Sponsor another women in fisheries section at the Sixth Asian Fisheries Forum and ensure that this does not clash with related sessions such as rural aquaculture. Early planning could make this special session into a global forum on women in fisheries, showing the world that Asia not only leads the world in fish production, but also in addressing some of the major social, economic and political issues in the sector.
- iii. Select both men and women keynote speakers for each forum, major conference and workshops.
- iv. Ensure gender equity in selecting chairs for the forum.
- v. Undertake a self-analysis of its gender sensitivity and encourage the branches to do the same right down to the grass roots.
- vi. Strive for gender equity in the Council, while upholding the principle of merit and the balance of nationalities.
- vii. Investigate forming a Gender in Fisheries section of the society, along the lines of the Fish Health Section and the Asian Fisheries Social Science Network.

More general recommendations from the Symposium were that:

- i. Training and extension programs in fisheries should specifically target women in areas where they contribute to fisheries activities.
- ii. Microcredit programs to benefit women, along the lines of the successful programs in Bangladesh and India, should be tried in other countries too.
- iii. Networks should be formed at the national level with the active participation of all the sectors. Actions initiated by the Mekong River Commission to form networks in each of the four riparian countries of the Indo-China region at the national level should serve as examples for others in the region. The Asian Fisheries Society could help the national branches/organizations to take the lead in the formation of national networks.