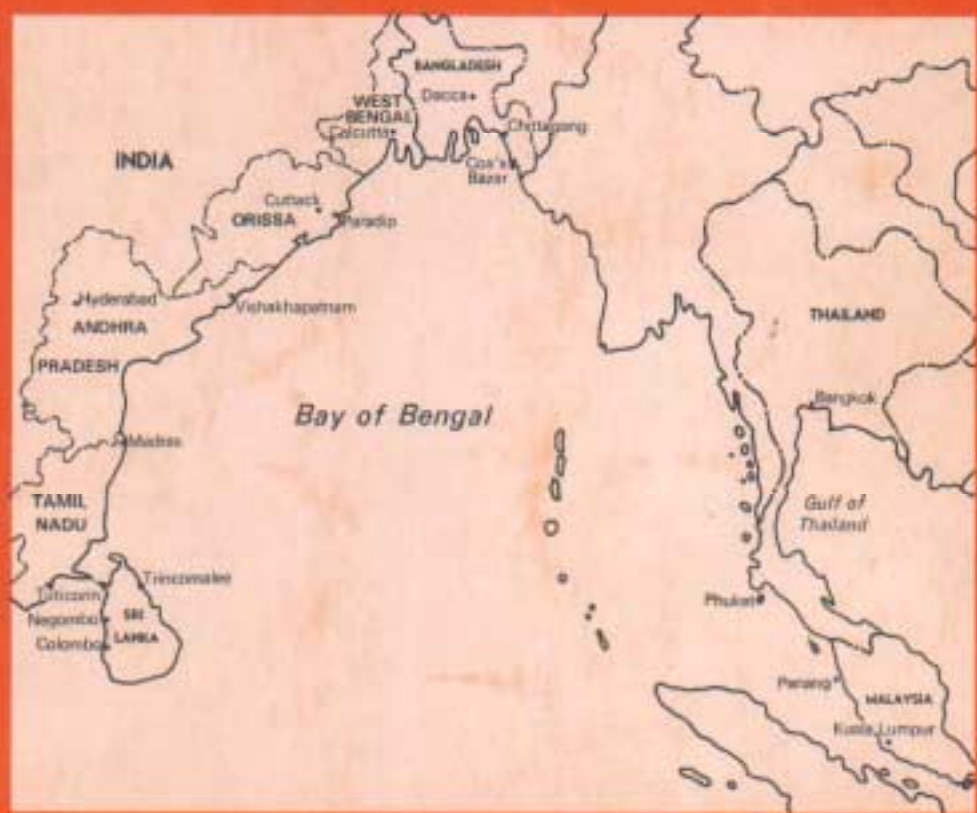


BOBP/REP/4

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Role of Women in Small-Scale Fisheries of the Bay of Bengal



ROLE OF WOMEN
IN SMALL-SCALE FISHERIES OF
THE BAY OF BENGAL

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PREFACE

This document describes the status of women in small-scale fisheries in the Bay of Bengal region and their potential role, technical and economic, in the development of small-scale fisheries. The countries considered are Bangladesh, India, Malaysia, Sri Lanka and Thailand — members of the Bay of Bengal Programme (BOBP).

The document has been prepared by the extension advisory service of BOBP. Material has been drawn partly from a meeting on the training of women extension workers in the Bay of Bengal region, held in Madras, India, from 23 to 27 April, 1979.

The meeting was held to assess the role of women in small-scale fisheries development and to clarify thinking on the need for extension and training. Follow-up activities—which might include development support for fishery activities involving women—were envisaged.

However, it was believed that a first step in any project for women's welfare in fisheries would be to obtain and consolidate available data on their role, responsibilities and problems. So status papers were presented at the meeting by participating countries in response to BOBP's request. The papers were discussed at the meeting. This document elucidates and elaborates on the data and conclusions thus obtained.

The Bay of Bengal Programme is funded by the Swedish International Development Authority (SIDA) and executed by the Food and Agriculture Organization of the United Nations (FAO). Its main aims are to boost fish supplies and improve the conditions of small-scale fishing communities in the Bay of Bengal region.

SUMMARY

The need to integrate women into rural development activity has recently received more and more attention in countries bordering the Bay of Bengal. National machinery has been developed for the purpose in a few countries. But actual policy implementation has been dogged by deep-rooted social and cultural attitudes, by illiteracy, by lack of opportunities for study and jobs. Result: rural women continue to be a disadvantaged group as compared to men. Their economic worth has gone unrecognized. Measures to better their lot are far too few.

At the meeting on the training of women extension workers, participants felt that past neglect of women in the matter of jobs, education and access to rural services should be righted.

As for fishing activities, women are known to play a substantial role in a wide range of fishery activities in the Bay of Bengal region. Yet specific data is lacking. There are hardly any technical support schemes to benefit women in small-scale fisheries. Women fisheries officers are few in number and none of them performs functions specifically related to women in fishing communities.

Women from the fishing communities are at present involved in fish handling, processing, marketing and net-making. Obtaining precise data on this involvement is essential to properly tap women's techno-economic potential in small-scale fisheries development. Among the many measures that will benefit women are : improvement in fish handling practices and equipment; training in better preservation methods and in improving the hygienic quality of products; improvements to the traditional technology of fish processing; training in the setting up of co-operatives; building of a sound infrastructure; provision of financial assistance; improved organization of raw material supplies; development of appropriate intermediate technology for net making.

There is potential for better participation by women in every aspect of aquaculture. , Family incomes can be increased by this activity; it has the great advantage of not requiring prolonged absence from household work; it can be combined with other occupations like poultry farming, duck and pig rearing.

Women from fishing communities, in common with women from other sectors of the rural economy, are confronted by the need to increase income without neglecting household activities. The problem is aggravated by a poor social infrastructure — a dearth of facilities in communications, housing, hospitals, schools, postal services, community halls, water and electricity supply. To compound the problem further, extension effort in fishing villages is low: most existing programmes for fisheries are part of an overall rural programme for the whole country. Projects concerning health, nutrition and education need to be specifically designed and programmed for fishing communities. A pilot project that tests three alternative extension approaches may assist countries to design suitable extension programmes for fishing communities.

Project ideas for extension as also for development activities concerning women in fisheries were outlined by participants. They concerned three main types of activities: surveys of women in fishing communities; methods to make extension services directed at women more effective; and techno-economic improvements in small-scale fisheries. Some of these ideas will be developed for implementation by the Bay of Bengal Programme or by other agencies.

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1. INTRODUCTION

Surveys carried out during the preparatory phase of the Bay of Bengal Programme noted that women play an important, sometimes a dominant, role in many activities. These relate mainly to marketing and processing, but also include activities in the production sector — aquaculture and net-making. It was clear that any project dealing with the development of small-scale fisheries ought to involve women.

Consequently the BOBP, with the active encouragement of SIDA, formulated a project idea for a women's activity in the area of extension advisory services. This was a training programme for women extension workers. But the need for a broader study as part of the activity was recognized -a study that would define the role of women in fishing communities, lay down the priorities for extension training and assess the job perspectives for women in small-scale fisheries development. Follow-up activities that might include development support for fishery activities involving women were also envisaged.

Preparatory work on the activity started soon after the BOBP became operational in January 1979. It was clear from the start that the role of women had not been given any consideration by fisheries administrations in the participating countries; and that work done by other agencies — on women in fishing communities as part of programmes for rural women, for instance — was marginal. There was a great dearth even of basic data and information.

It was therefore decided that a meeting in the nature of a consultation, rather than a training programme, was necessary at which technical liaison officers for the activity from the participating countries, besides consultants and BOBP staff, could review the situation, clarify issues and priorities and indicate guidelines.

A request for preliminary background information was sent to participating countries in January 1979. At the same time, the nomination of technical liaison officers who would obtain and furnish the specified information, liaise with Programme staff and consultants, attend the meeting and take part in follow-up action was also requested. In the following months, Programme staff discussed the activity with fisheries administrations of the participating countries, and with some of the technical liaison officers.

The meeting was held at the Connemara Hotel in Madras during 23-27 April 1979. A list of the participants is given in Appendix 1.

At the opening session of the meeting on 23 April, the BOBP's Development Adviser welcomed the participants to Madras. He explained the background to the meeting and said that its objectives were to indicate guidelines and formulate concrete proposals for the implementation of activities which might, as appropriate, be undertaken either by the Bay of Bengal Programme or by other agencies.

Such guidelines and proposals were expected to relate primarily to extension among the women in fishing communities, but there was sufficient flexibility to permit the identification of other development possibilities. While proposals would naturally relate to the needs and priorities of the participating countries, it was necessary that they should be compatible with the overall objectives of the Bay of Bengal Programme-of raising the quality of life of the small-scale fishermen and their families and increasing production.

A keynote address (Appendix II) by an FAO Women's Programme Officer and a discussion of the issues raised therein, followed the welcome address.

The salient features of the remainder of the agenda were:

- country-wise presentations of information on the status of women in small-scale fisheries;
- discussion of the techno-economic role of women in small-scale marine fisheries and in aquaculture/mariculture;
- discussion of the socio-economic conditions of fishing families in small-scale fishing communities;
- formulation of project ideas by the technical liaison officers;
- formulation of regional project ideas in selected areas of activity by groups of participants;
- discussion and analysis of project ideas and evaluation of the meeting.

Before the morning session of 24 April, a brief visit to Kasimedukuppam, a fish landing centre in Royapuram, Madras where a fishery harbour is under construction, was undertaken by the participants. In the course of this visit, fish handling equipment and methods, net making, the role of women in wholesale and retail fish marketing and the living conditions of fishing families were observed.

2. REGIONAL OVERVIEW-STATUS OF WOMEN IN RURAL DEVELOPMENT IN THE BAY OF BENGAL REGION

Governments have of late devoted more attention than before to programmes for women. The result has been the emergence of women's ministries, bureaus or units with the responsibility of initiating and co-ordinating projects for women. To illustrate : During 1978, Bangladesh established a Ministry for Women's Affairs and Sri Lanka developed a Women's Bureau within the Ministry of Plan Implementation. Thailand has a National Council of Women with 62 affiliated women's associations throughout the country. The Malaysia National Council on the Integration of Women in Development (NACIWID) was officially opened in 1976 in the office of the Prime Minister, and consists of governmental and non-governmental organizations. It also serves as a coordinating and advisory body on the participation of women in development. Within the Indian department of rural development, there is a unit dealing with women's programmes.

Even though national machinery has been developed for the integration of women, critical gaps continue to exist and there are few success stories in accelerating women's effective participation in all developmental phases. This is particularly so with women in agriculture and fisheries. Illiteracy and a lack of educational opportunities are continuing problems. Participants attending the meeting stressed difficulties they encountered on account of the rate of female illiteracy. For instance, the national illiteracy rate in Bangladesh is 88% and even higher for women in the rural areas. The ratio of female to male enrolment in Bangladesh is approximately 1 : 3 in primary education, 1 : 4 in secondary education and 1 : 26 in higher education. In all the Bay of Bengal countries the drop-out rate for girls is higher at all levels, In Sri Lanka, the national literacy rate for women is approximately 75%, yet at least 50% of the 343,000 women workers on the plantations are illiterate.

In most of the countries bordering the Bay of Bengal, a woman's status is usually defined in relation to her father or her husband. Social traditions and cultural values limit the possibilities for freedom of movement and equal access to employment and educational opportunities.

National development schemes and international technical assistance in many cases do not include benefits for rural women and fail to consider women's multiple roles within the family and the agricultural sectors. Even when agriculture is modernized, or more appropriate technologies are introduced, the overall impact on rural women is often negative. Example : women may lose income-earning opportunities if net-making is mechanised. Where technical and social progress is concerned, women have tended to be at the fringes of assistance — whether it concerns cooperative and community development, community services offered by extension officers, or credit and marketing facilities.

The keynote address at the meeting referred to the "legal and cultural barriers which prevent women from equal membership in cooperatives and access to credit and banking facilities." The speaker said that "incentives must be given for rural women to develop fishing cooperative schemes with their full legal participation, with equal economic returns and participation at the policy and management levels." The participants at the meeting had varying views on the need for special services for rural women, on the question of equality in membership of organizations (e.g. cooperatives), on access to employment and educational opportunities. Some felt that services and educational efforts should be directed in common at both men and women;

Most of the female participants however felt that a bias in favour of rural women was necessary to compensate for previous neglect.

In a paper on women-oriented projects in Bangladesh (Appendix 3) Ms. M. Islam, a UNICEF consultant, summarizes the situation as follows :

“Although the vast majority of the rural population is underprivileged and poor, the women are the poorest. In traditional Asian culture, women are largely ignored; their contribution to the family’s economy is taken for granted; their status as mother assured only after the birth of a son.”

It is estimated that Asian women work an average of 15 to 16 hours a day, with half the time spent on agricultural tasks. In all of the countries, however, conventional concepts of an “economically active population” and a “wage earner” definition do not include women’s work within the household or family responsibilities. Women’s contributions are not counted in the GNP, and women’s work is not usually recognized as being productive. For instance, although according to the 1974 Bangladesh census, 90% of Bangladesh is rural, and 90% of the women live in rural areas, only 3.6% of the women are engaged in agricultural activities.¹

Women’s contributions remain an untapped and unrecognized resource in most countries. The keynote speaker referred to FAO studies carried out on a worldwide basis which show that in all developing and in some developed countries rural women constitute a socially and economically marginal group when compared with the male population.

Even when employment is possible within the rural areas, women are forced to accept lower paying jobs, with few prospects of improving their living standards due to lack of education. In Malaysia, women account for nearly 31.8% of the labour force (1975 figure), yet approximately 41% of these women have no formal education. In Thailand, it is estimated that half of the female labour force is in agriculture — planting and harvesting of paddy, growing of vegetables, tending of animals, sericulture and rubber tapping. A general dearth of medical and family planning facilities in the rural areas, and nutritional deficiencies in all the countries, remains a critical problem — particularly for women. In a three-country survey on “Data Gathering and Development of Population Data/Family Planning Services in Asian Fishing Communities — Thailand, Philippines and Indonesia,” it appears that both fertility and infant mortality in fishing villages are markedly higher than national averages.² A survey in Phang Nga province, Thailand, indicated that the vast majority of mothers delivered children at home; less than 10% were attended to by a medically trained professional person.

The planning of relevant activities for rural women is further handicapped by lack of statistical data and information at the local level. In the fisheries sector, it is necessary to ascertain the felt needs and priorities of rural women, to re-orient national policies, and to allot adequate funds for positive changes benefiting rural women, in view of their contribution to fisheries development.

¹ Government of Bangladesh, Bangladesh Bureau of Statistics, Statistical Year Book of Bangladesh, Table X — Economic Activities of Population in Different Sectors by Sex. 1974.

² Report of the Second Inter-Country Workshop on Population Data/Family Planning Services in Asian Fishing Communities (RAS/77/PIO).

3. ROLE AND STATUS OF WOMEN IN SMALL-SCALE FISHERIES

In preparation for the meeting, a questionnaire was sent to each country, specifying the information needed to establish a data base for the discussions during the meeting (Appendix IV).

On the basis of the information furnished in response to this questionnaire, each country participant presented a review of the status and role of women in the small-scale fisheries of the respective country or state. Additional items of information that emerged during the subsequent discussions are included in the following summary.

Bangladesh

In Bangladesh, the participation of women in the small-scale fishery is very substantial. Although detailed statistics are not available, it is estimated that about 30% of women in the rural coastal areas are directly or indirectly engaged in small-scale fishery activities; in fishing families all female members are engaged in such activities on a part-time or a full-time basis. These activities extend to all aspects and sectors of the industry.

In Barisal and Rajshahi districts, women are involved in fish capture. Marketing of fish, especially the marketing of food fish to the lower income groups in coastal areas, is predominantly in the hands of women. Women also work as fish hawkers or run fish stalls in permanent marketplaces or weekly bazaars. Drying and curing of both freshwater and marine fish is to a large extent done by women. Most of the workers employed in shrimp processing plants in Chittagong and Khulna districts are women.

Net-making, which is the main income-generating occupation in a number of families, is another important activity.

An activity of more recent origin, undertaken to a large extent by women in rural areas, is the farming of fresh-water fish.

A number of schemes for women operate at present in rural and coastal areas. They are supported by national and international organizations. Fisheries schemes concern mainly training for the implementation of fresh-water fish culture projects. Examples : The UNICEF and Directorate of Fisheries Junior Culturists Programme; Canadian University Service Overseas (CUSO) schemes for fish culture in Chittagong, Laksham and Manikganj, and for net-making in Ramgati ; the CARITAS Bangladesh programme for fish culture; Proshiksha training programme; Women's Rehabilitation and Welfare Foundation cooperative and vocational training projects, etc.

The Government's policy is to employ more women in public institutions and organizations. However, although 10% of the jobs in government agencies are set aside for women, this quota hardly gets filled at present.

Within the Directorate of Fisheries, 11 posts are held by women officers. Except for three fishery officers who work at the thana (sub-district) level, these officers are posted at headquarters and are engaged in administration and in the programming and planning of fisheries projects. Their terms of reference do not include any specific functions or activities related to women in the fishery industry.

Despite recent efforts to integrate women into economic and social development, women in rural areas are to a very great extent still subject to a restrictive division of labour by sex that finds its expression in the "purdah" system ; to social taboos that hamper their social and economic development and uplift; and to a value system that does not acknowledge and appreciate their contribution to national development and progress.

Consequently, women have only limited access to social services and economic and technical assistance. Their employment opportunities and career perspectives in sectors and at levels traditionally reserved for men are severely curtailed.

India: Tamil Nadu

In the Indian state of Tamil Nadu, fish drying/curing and fish marketing are the two main areas in which women are involved in both the marine and inland fisheries sectors.

While women are engaged in drying and curing fish all along the coast, it is in the marine districts of Ramnad, Tirunelveli, Kanyakumari and Thanjavur that they play a predominant part in the sun-drying of fish on the beaches and in the curing of fish in fish-curing yards.

Marketing of fish, including the auctioning and purchase at fish landing centres, and retail marketing of fresh and dried fish in roadside stalls and in village and town markets, is the domain of women especially in the northern districts of Madras, Chingleput and South Arcot.

Hand-braiding and mending of nets is a third important area of women's involvement in ancillary industries, especially in Kanyakumari and Tirunelveli districts.

To a lesser extent, women are involved in shrimp processing in Tuticorin, Cuddalore and Madras.

In the field of brackish water aquaculture, women are engaged in prawn seed collection from estuaries and backwaters.

Apart from 13 net-making units in Kanyakumari district employing 1,300 young women, there are no schemes or programmes for women in small-scale fisheries. (The Kanyakumari units are run by a Christian agency, the Kottar Social Service Society.) Cooperative organization of women has been declining in recent years, as membership in cooperative societies has been restricted to people actively engaged in fish capture, i.e. fishermen.

The scope for engaging the staff of such departments as health and social welfare in improving the technical and economic role of the women in fishing communities is limited -since the specific technical support services needed by women can be provided only by technical officers. Village development officers in charge of groups of villages in the various blocks are already working towards the uplift of fisherwomen and their families through programmes for family planning, adult education, etc.

At present none of the fisheries department staff are engaged directly in women's activities. It is believed that departmental activities at the village level should benefit women and men equally.

Within the fisheries department, a few posts are held by women. Two women at higher levels, holding the post of Assistant Director, deal with administration and research. There are five female research assistants and three female laboratory assistants. Two women fisheries inspectors are engaged in general extension work. None of these women officers perform functions specifically related to women in fishing communities,

The scope for further involvement of women in such activities as drying and curing of fish and handbraiding of fishing nets is limited; in the latter case, it has become difficult for women to compete with machine-made nets in commercial plants.

The lack of educational facilities for women in small-scale fishing communities is the main handicap to greater participation by them.

India : Andhra Pradesh

In the Indian state of Andhra Pradesh, the main commercial activities of women in the fishing villages are fish drying, curing and fish marketing. Handbraiding of fishing nets is also an important activity in many fishing villages. In recent years, with the establishment of shrimp processing plants in Visakhapatnam and East Godavari districts, women are obtaining jobs in the shrimp processing industry in increasing numbers.

Women do not participate in marine fish capture. In a few places along the coast, women are seasonally engaged in collecting molluscs and shells.

A number of women cooperative societies have been established in Srikakulam district and the establishment of cooperatives in Visakhapatnam district is contemplated. The purpose of these cooperative societies is to organize women for handbraiding of fishing nets, supply of twine, etc. These societies are given financial support by the Cooperative Central Bank, Srikakulam.

Commercial banks too support women who are engaged in fish marketing with bank loans. The repayment of loans given to women by the banks has been exceptionally good.

At present there are no officers either in the fisheries department or any other department with functions relating specifically to women. There is, however, a women's welfare officer from the social welfare department for each of the eight marine districts. She supervises the work of the women and child welfare officers in the various blocks of a district. The latter work through female village development officers who are in charge of a group of villages instructing women in such subjects as family planning, hygiene and nutrition.

Three women officers were appointed during 1978 to posts of inspectors of fisheries. Their work does not cover women exclusively.

It is felt that in the rural coastal areas, there is scope for the further development of women in such fields as brackish water and fresh water aquaculture, the latter possibly combined with duck rearing.

India : Orissa

In the Indian state of Orissa, fish drying/curing, fish marketing, net-making and shrimp processing are the most important activities in which women from small-scale fishing communities are engaged.

There are at present no programmes for widening or intensifying participation by women in fisheries activities.

There is no government official or agency exclusively concerned with women from small-scale fishing communities. But there are officials at district, block, and village levels (district women welfare officer, women and child welfare officers, etc.) who are concerned with the progress of women in rural areas.

Twenty five fisheries inspectors were recently recruited and trained. They are to be posted as technical officers to rural/marine blocks to do extension work without, however, any particular focus on the women in such areas.

Three posts of managers and 24 posts of supervisors are held by women in the private sector shrimp processing industry. It is felt that there is scope for further employment of women in this sector.

As in some other states, the chief constraints to greater involvement of women in the fishing industry at various levels is lack of education and training.

India: West Bengal

In the Indian state of West Bengal, the participation of women in small-scale fisheries is very limited.

As the number of days spent by them on actual fishing in a year is relatively low, men tend to engage themselves in ancillary activities such as net-making and net-mending, which in the other Indian east coast states are the domain of women.

In the fishing villages, fish drying and curing are done by men, or by women who do not belong **to** the fishing community.

In coastal aquaculture, women are involved in prawn seed collection to a very limited extent.

There are no special schemes to improve the social and economic conditions of women in small-scale fishing communities. Nor are there any posts that specifically relate to women.

It is felt that the main obstacles to greater involvement of women in rural coastal areas in fisheries development are the very low rate of literacy and the total lack of training facilities.

It is anticipated that with the intensification of fishing through mechanisation, there will be better prospects for women in the various technical sectors of small-scale fisheries.

Activities such as net-making and fish processing on a cottage industry scale are potential sources of employment and income.

Malaysia

In Malaysia, women are involved only in shore-based small-scale fishery activities.

The most important sector is the processing of fishery products in both small fish-processing establishments and industrial fish/prawn processing plants.

In the small fish processing establishments which are usually run on a family or household scale, a wide range of products is made, consisting of fish crackers, fermented fish, fish balls, fermented shrimp paste, shrimp sauce, dried jelly fish, dried anchovies and salted fish.

In the industrial fish/prawn processing plants, women are employed as cheap labour in the processing line for sorting and packing prawns and dressing fish for canning, while the management of plants and the supervision and operation of machinery are still very much a male **preserve**.

There are no fisheries schemes at present directed at increasing the involvement of women. Few programmes or organizations deal specifically with improving the role of women in fishing

communities. But there are several extension programmes that include training courses in improved fish processing and fresh water fish culture directed at women. KEMAS (Rural Community Development Authority) conducts courses in home economics for rural communities which also reach the women in fishing communities.

The number of registered fresh fish and processed fish dealers who are women is small, but the **numbers** do not reflect the actual magnitude of women's participation in **marketing**. **It is known** that women play an active role in dealerships registered in the names of men and that in some areas they monopolize the business.

The number of women officers in the fisheries administration of Malaysia is very limited. There are, at present, four women officers concerned with research and extension.

Superstitions that associate women with poor fish catches; limited financial resources; and the absence of technical support services for women -these are factors that hamstring women in fisheries.

In addition, women's participation in the fishing industry is hit by the fact that there already is over-employment in fishing, as a result of which the government is planning to resettle fishermen in land schemes and train them for employment in other sectors.

Sri Lanka

In Sri Lanka, although much information is available on the fisheries sector, specific data in regard to the women in small-scale fishing communities is lacking. Yet, women certainly play an active and important role in the small-scale fishery industry.

On the southern coast, their main role is as manager of the purse. Among migrant fishing families women play an important part in fish sorting, cutting and processing and in dragging the boats ashore: In the northern and north-western coastal regions and on the east coast, women are engaged in similar activities. In the fishing communities of Negombo, Chilaw, and Kalpitiya on the west coast an estimated 25% of the women are engaged in activities related to fishing, while the percentage for Mannar (north-west), Trincomalee and Batticaloa (east) is estimated at about 75%.

In one fishing village in the Puttalam area, women engage in fishing with beach-seines, while in the same region a few women own beach-seines and boats. Others take part in wholesale and retail fish marketing.

Women in various sectors of the small-scale fishing industry have not till now been considered a target group for fishery development activities. Consequently, there are no schemes or projects specifically aimed at increasing their participation in small-scale fisheries development. A separate Fishermen's Welfare Division, concerned with such matters as the supply of electricity, drinking water and medical facilities to the fishing population, has, however, been recently established within the Ministry of Fisheries. This division could extend its functions to improve the status of women. Further, the activities of established women's organizations, such as the Lanka Mahila Samiti and Rural Women's Societies, could be extended to fishing villages.

Among voluntary organizations involved in community development work in rural coastal areas is the Fisheries Community Development Movement. Although not specifically concerned with women, this organization has established a savings scheme for women in a fishing village to finance the construction of houses, and has also helped set up pre-school centres in two migrant fishing villages. Within the Ministry of Fisheries, 10 executive posts are held by women-

None of these posts, however, relates specifically to improving the social and economic role of women in fishing communities.

The value systems and traditions prevailing among the fisherfolk of the rural coastal areas do not discriminate against greater involvement of women in the fishery industry. Women in small-scale fishing communities however, are subject to a restrictive division of labour by sex, in the sense that all domestic work is done solely by them. An intensive community development programme that reduces the women's workload and increases their income-earning capacity is felt to be an imperative need. Such a programme could be coordinated through the recently established Women's Bureau in collaboration with the Ministry of Fisheries.

Thailand

In Thailand, as in the other Bay of Bengal countries, specific studies on the condition of women in small-scale fishing communities have not been conducted.

It is estimated that, in the majority of small fishing villages, women are generally involved in fishery activities at a subsistence rather than at a commercial level.

In the larger fishing villages and towns however, women are actively engaged in fishery activities at a commercial level. The most important activities are fish processing and fresh water fish farming.

Several women function as managers of fish-agents. Industrial fish/shrimp processing plants are an important source of employment. Approximately 90% of the total labour force in these plants is composed of women.

There are no specific programmes at present for improving the social and economic condition of women in fishing communities; nor does any institution specifically perform such a function. It is however, the declared policy of the Department of Fisheries to improve the social and economic situation of fishermen and their families; to utilise the existing manpower, including women, in the small-scale fishery sector; to increase the supply of fish; to reduce unemployment in fishing communities; and to improve the efficiency and quality of fish processing and aquaculture at the village level.

Development activities for the progress of women in small-scale fishing communities should be included within the terms of reference of several units of the Fisheries Department, namely, the extension division, the socio-economic and planning sections and the technical units, as well as the Fish Marketing Organization.

Other organizations that could further the cause of women in small-scale fishing communities are the National Council of Women in Thailand, the Department of Community Development and the National Social Welfare Council.

The low level of education, the conventional taboo on women boarding fishing boats, the burden of managing the household -these hinder greater participation by women in the small-scale fishery industry.

4. POTENTIAL TECHNO-ECONOMIC ROLE OF WOMEN IN SMALL-SCALE FISHERIES

By tradition, men in the fishing communities of the Bay of Bengal region engage mainly in fish capture while the women engage in a wide range of shore-based activities such as fish handling, processing, distribution, marketing and net-making.

The magnitude of participation in the various activities undertaken by women varies from country to country. The distribution of economic benefits and opportunities in the fishery industry as between men and women also varies from one country to another; but in general, women are at a disadvantage in comparison to men -women tend to be given low paid and unskilled jobs. For instance, in Malaysia, women are employed in the processing line of processing plants because they constitute unskilled labour that can be hired cheaply, while men are employed in better-paid and skilled jobs such as the management and operation of machines. Women will be able to compete on better terms if given adequate training.

Development support should be geared to local practices, traditions, and conditions. Many of the problems concerning fish handling, for instance, are due to lack of proper hygiene and facilities such as adequate supplies of ice or satisfactory boxes/baskets. There is also a serious lack of infrastructure facilities that handicaps the handling and marketing of fish. Sufficient attention has not been paid to overcoming these constraints. Nor has the prospect of a continuing demand for cured and dried fish for a long time to come been taken note of by improving fish processing technology.

Similarly, in all the countries women have active and variegated roles in fish marketing -as agents, auctioneers, retail stall holders, itinerant hawkers, etc.-working singly or as a family unit or in rare cases as a cooperative. In many cases, these women would benefit greatly if given training in book-keeping and simple accounts, savings, better preservation methods and in improvement of the hygienic quality of products.

For this purpose, it is feasible to reorient existing training courses to include training for women. It is also necessary to follow-up the training by providing financial assistance- by means of bank loans, such as those provided for women in Andhra Pradesh -and by introducing savings schemes.

Net-making and mending is an area in which women are already heavily involved in some countries — e.g. in Bangladesh, and in some Indian states. There is scope for greater participation by women in this activity: it can be undertaken on a cottage industry scale. Supplies of twine and marketing arrangements for finished products need to be organized more efficiently. The formation of cooperatives will increase the benefits derived by women from this activity. Some governments have already taken steps to support net-making as a cottage industry and to protect the interests of the female labour force engaged in net-making by placing limits on the establishment of net factories.

Participants at the meeting displayed a keen interest in women's role in aquaculture activities and in the training required for pond management — stocking, feeding, fertilization, harvesting, handling, transport and marketing of the end product. In connection with aquaculture, an area with potential for further development is the combination of fish/prawn farming with rearing of ducks, poultry and pigs. Development of this area of activity will, in addition to improving the

economic viability of fish farming operations, also have a nutritional impact and lead to better utilisation of land and labour.

The role of women can be extended to every aspect of fish farming, not excluding pond construction. One of the chief advantages of aquaculture from the women's point of view is that fish farming activities which are virtually extensions of household activities do not require long absence from the home. Greater involvement of women would have a major impact on the future of aquaculture development. Greater participation by women in aquaculture and in marine fishery activities will, by increasing incomes, benefit the entire fishing family and the fishing community.

An in-depth study is needed of successful aquaculture programmes implemented in other countries or regions. Positive experiences within the Bay of Bengal region should be multiplied by means of a well planned extension programme implemented at the village level through a cadre of trained extension workers.

Additional income-generating activities that can be conveniently undertaken by women need to be identified. Possible activities could be the manufacture, on a cottage industry scale, of fishery by-products such as lime and glue or handicrafts such as sea-shell ornaments. Product development and training in crafts and in product marketing would be needed to promote such activities.

The main constraints in the various countries to wider participation of women in fishery activities are the low level of literacy, inadequate training in requisite skills, the inferior socio-economic level of fishing communities in comparison to other sectors of the population, under-employment of fishermen and inadequate appreciation of the actual status of fishing communities at the policy-making and planning levels.

Greater attention needs to be paid to these constraints in planning activities to improve the socio-economic conditions of fishing communities. Assistance to women engaged in various fishery activities should be given high priority.

No attempt has so far been made to quantify the economic contribution of women to their families, to fishing communities and to the national economy. But the variety and magnitude of their economic activities is such that a survey would show up their significance.

The dearth of specific data on women's involvement in small-scale fisheries is one of the root causes for their neglect. The resulting waste of human resources retards technological and economic progress and affects the quality of life of fishing families. Specific data on the extent of women's participation in small-scale fisheries which will enable a proper appreciation of their economic worth, is necessary for any rational planning to fully tap their techno-economic potential.

5. THE SOCIO-ECONOMIC CONDITIONS OF WOMEN IN SMALL-SCALE FISHING COMMUNITIES

The key issues raised during the discussion on this topic:

- the problems faced by women in discharging both domestic and economic responsibilities;
- the existing social amenities available to them ;
- the measures presently being taken to improve their socio-economic well-being; and
- how the extension service can improve the conditions of women ; and how the existing service can promote new ideas.

The discussion clearly showed that rural women -whether from fisheries or any other sector — face generally the same kind of problems. Most problems concern the need to boost family income without neglecting household duties.

Though this is a problem common to all women, its intensity varies from country to country because of differences in social and economic conditions; it also varies between groups of women.

In the fishery sector, this problem has been magnified by the serious lack of social facilities. Communication between fishing villages and urban centres is acknowledged to be poor. Housing facilities badly need proper planning and structuring. The problem is compounded by the scarcity of good housing sites which also suit the convenience of fishermen. Basic facilities such as hospitals, schools, postal services, community halls, water and electric supply, are generally either not available or are of a substandard character. The result is overcrowding, poor nutrition and health, high rates of illiteracy, unemployment and underemployment, boredom, juvenile delinquency and increased poverty.

The lack of pre-school play group facilities, which could at least partially relieve a mother of the problems of caring for the children and of providing them with some preliminary instruction/ education, leaving her more time for work, was raised as a serious point to be considered.

The women's particular responsibility for providing care and attention to an entire family affected by poor health and nutrition means that a great deal of effort, time and energy have to be devoted to the home, leaving very little time for income-generating pursuits.

Another point that came out clearly during the course of the discussions was that most existing programmes that aim at improving health, education, nutrition, sanitation, housing and infrastructure in fishing areas are implemented as part of the overall policy of social development in a country, since fishing communities face the same problems as other sectors. Thus, welfare extension officers at the field level deal with a variety of sectors, taking what could be described as a blanket approach to extension services.

Although there was general agreement that these were common problems, it was noted that their gravity varies for different sectors. The problems appear to be particularly acute in fishing villages — where remedial effort is low too.

The need for development efforts specifically designed and programmed for fishing villages is perhaps best illustrated by the example of a high-rise housing scheme implemented for fisher-

men in Tamil Nadu. Fishermen were reluctant to move into the houses because they were unsuitable -there were no facilities or space for fish-curing, drying, net making and boat repairs. Some countries, such as Malaysia, have set up housing and resettlement schemes specially designed for fishermen. In India, roads, drinking water facilities, modern fish curing yards, ice plants and community halls have been provided in some fishing villages.

While there is evidence of measures to provide infrastructural facilities in the Bay of Bengal region according to the needs of the fishing villages, there seems to be no evidence of fishing community-oriented programmes in respect of health, nutrition and education. There are very few social security schemes for wives of fishermen, and the examples one comes across are exceptions. It is clear that the families of fishermen generally have nothing to fall back upon should any mishap occur.

There are no specific programmes for the specialised needs of women engaged in fishery activities — such as training in home economics to avoid nutritional waste through better methods of cooking, preservation and utilisation of fish. This is a kind of training that would also help improve prevailing fish handling and processing practices.

Fishing communities have their own beliefs, customs and taboos. A special understanding of these may be necessary before extensionists- whether in the field of education, welfare or health — can break down barriers and win the confidence and respect of the communities.

In view of the intensity of these problems, variations in the approach to these problems and the need to economise on cost, it may be necessary to rely on the existing extension services after imparting appropriate in-service training. This will equip them to cater to some of the more specialised needs of women engaged in fishery activities. Use could be made of:

- Existing fishery extensionists, who would, in addition to their more technical fishery extension work, carry out extension work in nutrition, education, home economics, etc.
- Existing extensionists in other fields, who would be given some orientation on the special needs of fishing communities and would be exposed to the technical aspects of fisheries, so that they could orient their programmes and work accordingly.

Besides these two options, it may also be possible to make use of women extension workers selected from the grassroots level — i.e. from the fishing villages-and to provide them with rudimentary training in fisheries subjects, in other subjects such as sanitation, nutrition, health, etc., and in extension methods. For this approach to work, however, only women with leadership, drive and dedication should be recruited. These are difficult criteria to meet and frequently there is no satisfactory method of evaluation and selection.

It is perhaps necessary to run a pilot project using these three types of extensionists with a view to determining the best approach. A training programme could be introduced within an existing training institution for the purpose of such a pilot project.

Two types of subjects would be included in the curriculum of the training programme :

-fisheries-related subjects and fisheries extension methods;

- subjects not directly related to fisheries — such as nutrition, health, sanitation, child care, home care.

The existing fishery extension workers should be given training mainly in the second type of subjects; the existing extensionists in other fields would be trained in the first type; the third category of grassroots level women extension workers would undergo the full training programme of both types of subjects.

Once the best approach is determined, the respective countries would design their own training programmes accordingly. These programmes could modify extension training programmes to suit the requirements of fishing communities. For example, in view of the high rate of illiteracy prevailing in these communities, the extension methods taught should not rely on written material but should make greater use of demonstrations, film strips, pictures and drawings, informal discussions, group meetings, etc.

6. PROJECT IDEAS

At the April 1979 meeting on the training of women extension workers, several project ideas for extension activities and for women's development in small-scale fisheries were suggested by participants.

The project ideas fell under three broad categories:

- surveys to obtain more information on women in fishing communities.
- ways and means of making extension services directed at women more effective.
- improvements in various techno-economic aspects of small-scale fisheries concerning women's participation.

This demarcation is not always clear-cut, and some project ideas are referred to under more than one category in the following review.

All participants at the meeting emphasised the need for surveys to collect information that is presently lacking. Apart from specific proposals for surveys, a survey component is built into several other project ideas as well.

Surveys covering the entire area of fisheries were proposed by Bangladesh and Sri Lanka. The Bangladesh proposal was initially for the conduct of a general survey of women directly involved in the fisheries sector, on the basis of which a further specialised survey would be carried out. Sri Lanka proposed a survey of women engaged in all types of fisheries activities.

Several project ideas were directed at meeting the need for extensionists and training.

A regional pilot project was proposed to determine the best approach to family-oriented extension work among fishing communities. The project would test three alternative approaches for an effective extension service :

- providing some training in hygiene, sanitation, nutrition, etc. to existing fishery extension workers ;
- providing existing community welfare extension officers with some training in the specific needs of fishing communities.
- providing of training in fishery subjects as well as in subjects such as hygiene, sanitation, nutrition, etc. to a group of women leaders involved in fishery activities at the village level.

The trained officers/women leaders would then be entrusted with extension work in different states or villages. After evaluation, the best training approach would be selected for planning future training programmes (RAS/6).

Three other regional project ideas related partly to extension and training. These were for study tours for the purpose of learning from countries with good extension services in aquaculture and marine fisheries, preferably those that have included women in their programmes. The participants would examine the types of training methods used at the grassroots level for possible application in the Bay of Bengal region. The study tours would involve the following target groups :

- representatives of fisheries administrations in charge of planning and implementation of development or extension work;
- field level extension workers;
- representatives of women involved in fishery activities at the grassroots level.

Project ideas for training, which included in-service training of women extension workers and workshops for women leaders in fishing villages were put forward by Bangladesh, Tamil Nadu and West Bengal.

Bangladesh proposed the training of trainers drawn from the fishery extension services as well as selected women leaders in techno-economic as well as socio-economic subjects; training for existing women officers from the Fisheries Department in fisheries extension work; work camps for selected women leaders in fishing communities for exchange of ideas and identification of suitable activity areas; and the formation of a mobile team for training women extension workers. Tamil Nadu proposed a pilot project in which educated girls, preferably university graduates, would be selected from fishing villages to serve as extension workers. They would be given training in socio-economic subjects, and sent out to fishing villages in two selected districts. They would motivate women in these villages to improve their living standards and take up additional income-earning activities. West Bengal proposed a training programme in which 150 women leaders drawn from fishing villages would be trained for extension work over a 5-year period, training being given in both socio-economic and techno-economic subjects through mobile training centres. A preliminary survey to assess the potential for involvement of women in fishery activities would be a built-in component of the programme.

The production and exchange of extension and training materials was regarded as another means of improving extension services, since materials available at present are often either too sophisticated or not adequately relevant to be used in the training of illiterate villagers.

Malaysia, Sri Lanka and Thailand proposed a regional project for upgrading existing extension materials and for the production of visual aids of regional relevance such as film strips, for use by extension workers in the villages. A similar project idea put forward by West Bengal was to produce a variety of extension materials in view of the fact that such materials are virtually non-existent at present. Bangladesh also proposed the development of extension materials of a type that could be used to reach illiterate women who had not been previously exposed to any kind of learning. This includes the evaluation of existing materials used by the information units of the agriculture, health and fisheries administrations, and production of new and improved materials through government and voluntary agencies and commercial organizations (BGD/4).

Project ideas relating to techno-economic improvements covered a wide range of activities in the areas of production, handling, processing, marketing, management, organization, credit and ancillary cottage industries.

Net-making was favoured by a number of participants as an activity with potential for employment generation and increase of family incomes. Andhra Pradesh, Orissa, Tamil Nadu and West Bengal proposed a regional project for net-making at the intermediate technology level —

in which the four Indian states and Sri Lanka could collaborate in the development and fabrication of a simple treading machine and the formulation of a project to make the machine available to women in fishing communities (RAS/3). The introduction of a treading machine for net-making also formed a component in project ideas outlined by Sri Lanka, Andhra Pradesh and Tamil Nadu. The Sri Lanka proposal is to train young women in the use of treading machines, once developed, through mobile training units; and to provide credit for the purchase of machines and twine through a bank credit scheme. Andhra Pradesh made a similar proposal, which also included the organization of women in cooperatives and the provision of bank finance to the cooperatives (IND/AP/5). Tamil Nadu proposed the introduction of a training course for women in the care, maintenance, and mending of nets and the construction of fishing gear in existing fisheries training centres. After the course the trainees would be encouraged to form cooperatives and given assistance to purchase twine and simple treading machines.

In addition to these project ideas for net-making, Bangladesh proposed a project for making bamboo fish traps on a systematically organized cottage industry scale.

Recognition of the need to effect improvements in fish handling and processing is reflected in a number of project ideas.

Tamil Nadu proposed the setting up of model handling and demonstration units operated by women extension workers. These units would motivate women engaged in handling of fish to improve hygienic standards, thereby enabling them to obtain a better price for better quality fish. The proposal also envisaged the development and supply of three-wheel pushcarts to women fish hawkers. Andhra Pradesh proposed better facilities in retail fish markets to provide better quality fish to consumers. Another proposal was for effecting simple improvements to current methods of drying and salting fish, including the provision of communal processing and storage facilities close to fish landing places and away from dwellings. The provision of these facilities would be supported by an extension programme directed at improving processing methods and hygienic standards. Bangladesh proposed the organizing of women fish processors to develop the traditional practice of drying and salting hilsa fish. The proposal included the formation of women's groups, the organization of cooperatives, training in management, and provision of technical support services. Malaysia proposed to cater to the hitherto neglected women fish processors by training a group of selected women fish processors from the villages in improved methods of processing, who would in turn spearhead the dissemination of these improvements to other women processors. A survey on the involvement of women in the processing of fish and other marine products is built into the project.

A number of project ideas on aquaculture were outlined by the participants. These were in respect of both brackishwater and freshwater fish farming. In addition, two regional project ideas for study tours, referred to above, also concerned agriculture.

In the sphere of brackishwater fish farming, Thailand proposed training and demonstration in appropriate methods of cage/pen/pond culture and in post-harvest techniques to women in the fishing villages of Phang Nga Bay in conjunction with the aquaculture activity already undertaken in this area under the RAS/040/SWE programme (THA/1). Andhra Pradesh proposed undertaking a scheme to provide the requisite infrastructure such as sluices, channels, access roads, etc., to utilise fallow areas along the coast for brackishwater fish farming, to be followed up by the involvement of women in this activity. Tamil Nadu proposed the training of women in the collection and supply of prawn seed to fish farmers.

The proposals for freshwater fish farming were put forward by Bangladesh, Andhra Pradesh, Tamil Nadu, West Bengal and Malaysia. Bangladesh proposed the establishment of a continuing

training programme in various aspects of fish farming and promotion of the establishment of mini-ponds by women within their house compounds. Andhra Pradesh proposed the training of women in the extraction of fish pituitary glands. Tamil Nadu proposed a programme to train women to combine their present activity of duck and poultry rearin'g with fish farming, while West Bengal proposed the involvement of women in several activities related to fish farming. Malaysia proposed a training programme for groups of women fish farmers and exploration of the possibility of converting disused mining pools for the culture of freshwater fish.

Other project ideas outlined included a proposal by Andhra Pradesh and Orissa to set up extension training centres at the state level; a proposal by India for a centre at the regional level for the training of extension personnel in fish handling, processing, marketing and extension techniques; and a proposal by Sri Lanka to set up pre-school centres in fishing villages.

In the final session of the meeting, the project ideas were reviewed for the purpose of determining the activities which would qualify for the implementation by the Bay of Bengal Programme.

The following criteria based on the objectives and terms of reference of the project were applied to each proposed activity for this purpose :

- a small-scale fisheries activity;
- an activity concerned with marine fisheries or coastal aquaculture;
- an activity of regional interest;
- an activity with potential for utilizing local capability with a minimum of external input,
- an activity capable of being combined with other planned or on-going activities of the regional project.

A large number of project sites satisfy these criteria. Some are inappropriate for a regional programme because of the magnitude of costs or incompatibility with national priorities indicated by the member-countries. The remainder fall outside the project's terms of reference- e.g. project ideas relating to freshwater fish culture.

It is envisaged that some of the project ideas in the category will be followed up for implementation under the Bay of Bengal Programme, wherever possible in combination with planned or ongoing activities. Some project ideas in the second category may, after further development, be recommended for consideration by other agencies.

Appendix 1

Meeting on the Training of Women Extension Workers Madras, India 23 - 27 April 1979

LIST OF PARTICIPANTS

Bangladesh

Ms. Ferdous Parveen
Deputy Fisheries Biologist
Directorate of Fisheries
Bangladesh

India

Dr. T. A. Mammen
Joint Commissioner (Fisheries)
Ministry of Agriculture
New Delhi

Mr. M. Venkateswara Rao
Joint Director of Fisheries
Directorate of Fisheries
Hyderabad, Andhra Pradesh

Mr. A. B. Roy
Deputy Director of Fisheries (Marine)
Directorate of Fisheries
Cuttack, Orissa

Ms. Freda Chandrasekharan
Assistant Director of Fisheries (Hydrology)
Directorate of Fisheries
Madras

Mr. A. K. Sen
Deputy Director of Fisheries
(Marketing, Survey & Statistics)
Calcutta, West Bengal

Malaysia

Ms. Zuridah Merican
Fisheries Officer
Fisheries Division
Department of Agriculture
Ministry of Agriculture
Malaysia

Sri Lanka

Ms. A. J. Liyanage
Assistant Director
Ministry of Plan Implementation
Colombo, Sri Lanka

Thailand

Ms. Somporn Ithipongs

Chief, Information and Publications Sector
Division of Fisheries
Administration and Extension
Department of Fisheries
Bangkok

SIDA

Ms. Svea Omstedt

Deputy Head of Policy Planning
and Evaluation Division, SIDA
Consultant to the Fishery Board of Sweden
Stockholm

UNICEF

Ms. M. Islam

Consultant
Women Development Programme
UNICEF, Dacca, Bangladesh

FAO

Ms. Inger Bjorklund

Nutritionist, Consultant
Department of Fisheries
FAO, Rome

Ms. Natalie Hahn

Women's Programme Officer
FAO, Rome

Ms. Chan Ling Yap

Fishery Industry Officer
Fishery Industries Division
Department of Fisheries
FAO, Rome

Secretariat (RAS/040/SWE)

Mr. L. O. Engvall

Project Manager
Madras

Mr. V. L. C. Pietersz

Development Adviser
Madras

Mr. W. D. Hartmann

Sociologist, Consultant
Madras

Ms. M. Pieris

Administrative Assistant

Ms. G. de Silva

Secretary

Appendix 2

INVOLVEMENT OF WOMEN IN FISHERY ACTIVITIES

This paper was circulated at the meeting on the Training of Women Extension Workers held in Madras, India from 23 to 27 April 1979. It was prepared by the Human Resources, Institutions and Agrarian Reform Division (Home Economics and Social Programme Service) of the Food and Agriculture Organization of the United Nations, Rome.

1. Introduction

The organisation of a meeting on Training of Women Extension Workers within the FAO/SIDA Project for the Development of Small Scale Fisheries in the Bay of Bengal is a new initiative in FAO's programmes for rural women. This is the first FAO regional effort to consider women's involvement within fisheries development and to propose national and regional activities in providing benefits to women in small scale fisheries. Appreciation is expressed especially to the Swedish International Development Authority (SIDA) for their support of this project and their recommendation that there be "an increased participation by women in all workshop/training activities".¹

The purpose of this paper is to outline FAO's mandates related to women in agricultural and rural development, to identify constraints in women's effective involvement in development efforts and to suggest areas for potential action related to women in fisheries.

II. The UN Decade for Women (1975- 1985) and FAOs Approach for the Integration of Women in Rural Development

The timing of this meeting is most appropriate considering that we are approaching the mid point of the UN Decade for Women (1975-1985) which was established at the 1975 UN Conference for International Women's Year (Mexico City). Delegates attending that conference decided that Regional and World Plans of Action for Women and Development require at least a decade to implement and that ample time is necessary for national action and new directives benefiting women in all sectors. Presently, governments and the United Nations specialised agencies are assessing progress in implementing Plans of Action and also preparing for the 1979 Regional Preparatory Meetings and the 1980 World Conference for the UN Decade for Women (Copenhagen).

Resolutions and recommendations for increased attention to women in agricultural and rural development were adopted at 1975 and 1977 sessions of the FAO Council and Conference. All FAO Departments and Divisions were requested to review country programmes and projects in nutrition, agriculture, fisheries and forestry, to ensure that rural women are provided with the benefits of education, training, extension, cooperative activities, credit/marketing and other productive and social services for women's full participation in agricultural and rural develop-

¹ Report of the third meeting of the Advisory Committee — Development of Small Scale Fisheries in the Bay of Bengal TF-RAS/40 (SWE), Chittagong, Bangladesh 7-10 November 1978 Page 7.

ment. These resolutions have been further endorsed by member nations attending preparatory sessions of the 1979 World Conference on Agrarian Reform and Rural Development with importance given on the need to incorporate a component for rural women in all aspects of rural development programmes.

FAO's concern for women focuses primarily on rural women, and particularly the disadvantaged groups in the agricultural sectors of the least developed (LDC), most seriously affected (MSA), and food priority countries (FPC).

FAO studies, recently carried out on a worldwide basis, show that, to varying degrees in all developing and some developed countries, rural women constitute a socially and economically marginal group compared to the male population. A world profile of women by Mr. R. A. Patel using selected economic and social indicators reveals that women, one half of the world's population: (a) constitute one-third of the official labour force (b) account for nearly two-thirds of the hours worked and (c) according to some estimates receive only one-tenth of the world's income and possess one hundredth of the world's property.² Even where the equality of men and women has been specified in legislation, too often the marginalisation of rural women continues, especially among the rural poor. FAO programmes are based on the need to reverse this process, for the majority of rural women are agricultural producers and or processors with major family responsibilities and oftentimes living on a subsistence basis.

FAO is making efforts to bring women into the mainstream of development and to diminish the economic and social disadvantages of rural women. Some major constraints to women's integration in rural development programmes include :

1. The lack of consideration for the multiple responsibilities of rural women in production, in the household and in the community
2. Prevailing social traditions and cultural values regarding women
3. The effects of imported and oftentimes too sophisticated technology
4. The lack of direct access by women to resources, including development organisation and services.

FAO promotes programmes which provide women the opportunity for a more equitable participation in the production and consumption processes as well as sharing any profits. For rural women, this means having access to resources such as storage and marketing facilities and direct profits from fishery and forestry related fields. This can be done by facilitating training opportunities so women can acquire appropriate knowledge, skills, and attitudes. Given the advantages, rural women can greatly enhance both the production and the efficient use of food and ultimately the welfare of the rural population. Furthermore, they must increasingly be encouraged in decisions regarding the allocation of resources in areas of development most affecting them.

III. Women and Fisheries

The potential of women's involvement in fisheries has generally been overlooked and neglected within overall national and international fishery development programmes. This was confirmed with replies received from FAO Project Managers and FAO Representatives in countries

² K. A. Patel, "Another Development for Women" in *Another Development*. Approaches and Strategies, M. Nerfin, Ed. The Dag Hammarskjold Foundation, Uppsala, 1977, Page 66.

of all regions to the FAO Guidelines on the Integration of Women in Agricultural and Rural Development Projects, in response to the letter of the FAO Director General (June 1977). Of the 31 fisheries projects reported in 19 countries, none were specifically designed for women or had a component for women's involvement. Six of the projects reported were of a technical nature (e.g. establishment of a boatyard, increasing motorized fishing floats and the provision of construction materials) and determining benefits for women within these projects would be difficult since women are not directly involved. However, eleven of the projects were reported as "having a potential for participation of women". These replies indicated the vast potential for increased benefits to rural women and families within fishery projects. The following sections suggest ideas in developing training programmes and project ideas on women and fisheries.

1. Requirements for Data Collection Regarding Women in Fishing Activities

The necessity of identifying needs of local communities was given importance at the 1975 Expert Consultation on Small-Scale Fisheries Development with a recommendation for "more involvement of fishermen and fishing communities in projects from inception onwards, . . . a better understanding of the culture, customs, habits, etc., of the people and of the power structure within the communities (religious, political, economic). . . . allowing much more time for the duration of the projects to ensure that they take root and that the local people take over responsibilities for them and continue the development process".³

Even when basic requirements of communities are assessed, the requirements of women are generally overlooked. In the planning of projects, women's multiple roles within the family are usually not considered nor is their potential in raising the economic level of the family. There is a critical need to undertake surveys which measure women's present participation and potential involvement within small-scale fishery related activities. Information is required directly from the wives of fishermen and rural women on their requirements and priorities for improved living standards.

2. Training Initiatives

(a) At the local level: In order to initiate training on fishery related activities, there is a need to involve rural women directly and to work closely with local female entrepreneurs. This view was supported in an inter-country project on the Promotion and Training of Rural Women in Income Raising Group Activities in Nine Asian Countries (Project of the FAO and Economic and Social Commission for Asia and the Pacific, February 1978 - April 1979). The case study methodology of the project was based on the conviction that women who are engaged in successful income-raising activities are the best examples to other women leaders who wish to undertake similar ventures. The purpose of the project therefore was to arrange for rural women who were leaders in successful income-raising projects in their own villages to motivate and train other village women to carry out similar income-raising activities with follow up commitments from Government and other agencies to support such projects. Among the 39 case studies, it was found that a high level of formal education was not essential for a successful leader and there were common characteristics of such village leaders including (i) a spirit of self sacrifice in terms of time, effort and setting an example for other members to follow (ii) innovativeness and willingness to campaign for the acceptance of new ideas by other women in the village (iii) firm determination to tackle problems and to overcome them whenever the group faced a

³ Report of the Expert Consultation on Small Scale Fisheries Development, Rome, 8-12 September 1975 page 10.

difficult situation (iv) understanding of members' problems and a sympathetic attitude in helping to solve them and (v) the fact that the leaders had settled down in the village and intended to stay there.

(b) Rural Development Staff and Fisheries Education: In many instances, there is a neglect of fishing families by rural development officers as well as a lack of sufficiently well trained field staff. Inadequate training on fishery related skills, inadequate information on needs of fishing families, and difficulties of reaching the fishing communities all contribute to this neglect. A review needs to be made on available training at the intermediate and local level and the presence of field workers offering assistance to fishing families. The following enquiries might be considered:

- (i) Does the training offered at fisheries training centres include topics on simple fish processing/preservation for development at the household level, as well as aquaculture and marketing activities ?
- (ii) How many of the graduates of fishing training centres are employed to work with fishing families (both men and women) and offer services beyond technical expertise?
- (iii) How many women have been trained or are currently being trained at fishery training centres ?
- (iv) How many women receive fellowships for national or overseas training in fishery related fields?
- (v) Do schools of agriculture and home economics offer fishery related courses?
- (vi) What are the possibilities for refresher/in-service training of rural development officers in fishery related fields?
- (vii) What are the possibilities for study tours within the region and an exchange of information on women and fisheries?
- (viii) What are the possibilities of offering training courses on fishery related activities directly to locally organised women's groups/associations/cooperatives, where they exist?

3. Selected Topics for Training

(a) Post Harvest losses and Need for Appropriate Technology: The Bay of Bengal Project and the development of small-scale fisheries for food-fish production are vital considering the vast post-harvest losses in fisheries. According to the FAO Fisheries Department, the total estimated waste of fish annually is 10-13 million tons. Discards at sea total 4-6 million tons or \$1 billion annually; this mainly occurs in the shrimp industries where so-called "trash" fish are 20 times as much as the catch retained on board. Losses for other reasons, including e.g. insect infestation and other forms of spoilage and wastage, accounts for another 5-6 million tons or \$5 billion per annum.

The FAO Fisheries Department is approaching the problem with an effort to reduce post harvest losses by introducing appropriate technology and 'improved techniques of fish preservation, processing and product development. In expanding appropriate technology efforts, women's role is a vital one, particularly with emphasis on improved simple fish processing and preservation at the household level on a community or cooperative basis. One example of this is a fisheries project at Malakal, Sudan (TF/SUD 19 DEN Regional Fisheries Training Centre) which encompasses facilities for fish processing for smoking, salt drying and sun drying. During the second

phase of the project, a programme will be developed for local women to attend demonstrations and training courses in fish processing.

(b) *Population Education:* Preliminary findings of surveys within select fishing villages of three Asian countries (Indonesia, Philippines and Thailand) show that both fertility and infant mortality in fishing villages appear to be markedly higher than national averages. Delegates attending the Second Inter Country Workshop on Population Data/Family Planning Services in Asian Fishing Communities (November 1978, Jakarta) reported that fishing work patterns seem to foster attitudes that support high fertility.

At the workshop, Dr. Nibhon Debavalhya, Director of the Institute of Population Studies of Chulalongkorn University, reported on data gathered in Thailand among 600 households. The study indicates that women in fishing communities have an average of 4.3 children as compared to the national average of 3.9 children. The study also indicated that the average age of marriage of women in fishing communities is lower than the national average. Within the three provinces surveyed, there were strong negative attitudes of husbands to family planning (68.8% disapproved of such an idea).⁴

Based on these surveys' results and the fact that the socio-economic level of fishing communities appears to be lower than the national averages, population education should be integrated within training programmes for fishing families. This FAO/UNFPA project will be expanded and extended to other Asian countries in response to requests of Government.

(c) *Consumer Education:* In some regions, an entire consumer education effort is required to influence local populations on the purchasing and utilisation of fish and overcoming traditional barriers. Effective communication and information materials should be developed with full utilisation of educational materials, radio/television/video recordings and traditional folk media. An educational effort should focus on fish as an excellent source of protein and the possibilities of incorporating fish with local foods.

(d) *Income Generating Efforts for Rural Women-Priorities for Aquaculture and Fish Marketing:* Aquaculture development appears to be an area of great potential for women's direct involvement and with opportunities for employment at the household level with substantial income gains for the fishing family. The importance of this activity, with a checklist of women's participation in aquaculture activities, has been outlined in a paper "Women in Aquaculture: The need for Extension Workers" prepared by Dr. C. L. Yap, FAO Fisheries Officer.

Attention also needs to be given to women's increased involvement and benefits in fish marketing through improved marketing and storage facilities and access to transport.

4. Rural Women's Access to Rural Services

Oftentimes, rural women do not receive equal access to resources and services in fisheries as in other aspects of agricultural and rural development. Legal and cultural barriers prevent women from equal membership in cooperatives and access to credit and banking facilities. Incentives must be given to rural women to develop fishing cooperative schemes with their full legal participation, equal economic returns and participation at the policy level and management levels. Japan has probably one of the best cooperative endeavours for women in the Asian region. For example, the women's groups of the Japanese fishermen's cooperatives numbered 1,331 in 1975 with a total membership of approximately 200,000 women. The women's groups saved

⁴ Report of the Second Inter-Country Workshop on Population Data/Family Planning Services in Asian Fishing Communities (RAS/77/P10), Indonesia, Philippines and Thailand. Workshop held in Jakarta, Indonesia, 16-18 November 1978, FAO/UNFPA.

a total of US \$ 7.7 million out of a total of US \$ 197.7 million by the Japanese fishermen's cooperatives in 1975. Deposits are made in the names of individual women.

Careful consideration should be given however to the most appropriate alternatives for an effective involvement of women in fisheries cooperatives : (i) the establishment of a women's group as an adjunct to fishermen cooperatives (ii) proposing a separate legal and economic entity for a women's fisheries cooperative or (iii) striving for women's equal membership and participation in cooperatives which were initially developed for men.

5. Women and Fisheries — Requirements for Policy Endorsement

Since the International Women's Year (1975), an increasing number of countries have established women's bureaus, commissions or other units for coordination of efforts and women's integration in national development. In some cases such machinery does not give due concern to the needs of rural women or to women involved in agricultural and fishery related fields. There is need to strengthen national mechanisms on women development, both governmental and non-governmental and obtain their involvement in the design and implementation of projects benefitting women in the fisheries sector. National and international technical assistance needs to be obtained and reoriented with consideration at the project formulation stage for women's present and potential role in fisheries endeavours.

Relevant government ministries must be convinced of the role which women can make to fisheries development and encourage women's involvement in appropriate fishing activities with equal access to training and services. A request for fishery programmes to include benefits for women is made not only on behalf of women and families, but also for higher levels of achievement of fisheries development and government goals in the fisheries sector.

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Appendix 3

WOMEN-ORIENTED PROJECTS IN BANGLADESH

by Ms. Meherunnessa Islam

Consultant, Women's Development Programme, UNICEF

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Introduction

The problems of rural women cannot be separated from the problems of rural Bangladesh. It is impossible to isolate women from the social milieu in which they are placed. Poverty, illiteracy and ignorance accompany unabated population growth, land fragmentation, ever increasing landlessness (40%) and unemployment. Although the vast majority of the rural population is underprivileged and poor, the women are the poorest.

In traditional Asian culture women are largely ignored. Their contribution to the family's economy is taken for granted ; their status as mother assured only after the birth of a son.

Role and Status of Women

Information on women in Bangladesh is scattered and incomplete. There have been some sporadic attempts to study women from a socio-economic perspective, but most of them have been carried out by expatriates, and are based on western norms describing women as unproductive and marginal. In the absence of baseline data and standard statistical enumeration, these studies do provide information. One of the major constraints of this position paper is that the whole issue of women's status rests on their means of production and their subsequent roles in the organization of production, including family based production units which are characteristic of the rural economy. Lack of organization and awareness regarding these factors of production have lowered the status of women. In actual fact the contributions of women to the rural economy are staggering.

Rural women are accorded a lower social status than their male counterparts because of the traditional social order in which women do not own the means of production. They take part in the development process without benefiting from it. Most of their work is not regarded as gainful work. Even the earning and saving activities of women are regulated by menfolk.

Most of the rural poor live below the poverty line; women are a sub-sect who survive under the sceptre of destitution. The destiny of mother and children is inseparable; in a poor rural home a mother hardly gets a square meal. She is the residual claimant of food ; she feeds her men and children and constantly practises self-denial.

Women who are economically active form only 20% of the organized sector. Another half a million women, mostly of the so called destitutes, are wage earners in and outside agriculture. About 95% of the female population live in scattered villages. Muslim women live in *pardah* or seclusion. About 15% of the women, who are either Hindus or tribals, are seen in the open labour market.

The exceptions among the Muslims are the poorest of the poor, widows, divorced or abandoned women, the wives of the landless labourers — they work for survival in agricultural fields. Less than 20% of the girls are sent to schools, and the rate of literacy among women is only about 12%, about one third of the male population.

Bangladeshi women can be classified on the basis of their socio-economic status into three groups. The first group, the so called “destitutes”, usually beg or are hired by others. The second group may include landless women or wage earners, sharecroppers or small farmers (holding less than 1½ acres). These women constitute an estimated 70% of the rural women. The third group of women consists of wives of larger landowners (holding above 1½ acres), traders and paraprofessionals constituting about 15% of the population. They are usually the first to make use of employment and training facilities in rural areas.

Although women play a major role in production activities, rural women are seriously neglected by the major extension services in the country. For example, the agricultural programmes, which use the services of 16,000 village extension workers, overlook the key role rural women play in the economy. This may be ascribed to deeply rooted ancient beliefs about traditional sex roles and the negative attitude towards women’s participation in economic activities.

Economic Activities of Women

Economic activities in the traditional sense refer to wage earning. But the tasks that rural women perform in a subsistence agricultural framework are unpaid although such tasks are critical to the processing, preservation and storage of food-boiling and husking rice, puffing rice products, growing family food, raising livestock, growing vegetables. The only recognised part of their work is unpaid “housekeeping”. Women do not work for wages, but they help create utilities that have a great impact on the total production of the agricultural sector.

Change of Women’s Attitude toward Work

During the last decade, particularly since the creation of Bangladesh, there have been many changes affecting the status of women. Population growth, war and inflation have created an awareness of the dependence and seclusion of women in the national economy. Destitute women have shed their inhibitions out of necessity and engaged in productive activities. Poor women are now involved in tough construction jobs under the food-for-work programmes. An expanding handicrafts programme is emerging under women’s sponsorship, crossing national boundaries. A large number of poor rural women are engaged in pisciculture, sericulture, goat rearing, cow fattening, -poultry, dairying, bee keeping, net and gear-making and other cottage crafts. There is a growing demand to make their activities more productive and at the same time to build up the leadership of women and their self-confidence. Women who formerly led sheltered lives are now eager to do the same type of work as men, but they need the services of day-care centres for their children and training in management.

Government Policy

The determination of the Bangladesh government to involve the enormous number of unemployed in the country’s development process has injected hope into what seemed a hopeless situation

of unending dependence on international charity. Government policies have acknowledged the fact that women constitute half of the population and that their needs and requirements will have to be taken care of. During the last few years, the government has made conscious efforts to raise the status of women, integrate them into the development process, set up a number of institutional facilities, and encourage voluntary agencies to guide and assist in the development process. However, cumulative prejudices and age-old ways of looking at women have resulted in gaps between needs and policies.

The declaration of 1975 as International Women's Year by the United Nations has inspired efforts by nations everywhere to integrate women into the national developmental process. Apart from outside influences, Bangladesh has been impelled domestically to acknowledge the importance of women in development. Since 1975, the government policy emphasized the necessary involvement of women in development and it is a significant feature that in Bangladesh most social programmes are designed to reach the poorest women.

The government has recognised that women's participation is central and not marginal in the total development process because one cannot think of any development strategy for a society that does not explicitly take into account the role of half of its human resources.

During 1976, the government declared that 10% of all jobs in the government and non-government sectors would be reserved for women. In the two-year plan of the government, the main thrust of women's activities was to provide welfare services and promote socio-economic activities.

During 1978, a full-fledged Minister took charge of the women's division in place of a Special Assistant to the President to plan for the 35 million women of Bangladesh. This is a welcome change and a big step towards the realization of our national goal.

Measures necessary to attain the goal include:

1. Establishment of vocational training centres for women.
2. Agriculture-based development programmes.
3. Establishment of cottage industries for women.
4. Production and sale centres.
5. Creation of facilities for working women.
6. Setting up of cooperatives to train rural women to be self-reliant.
7. Establishment of career women's hostels.
8. Establishment of shishu (children) academy.
9. Establishment of a Bangladesh national women's organization.

The representation of two women members in the existing 4350 Union Parishads and of two women commissioners in the municipalities has enhanced the administrative strength of the women's community of Bangladesh. In addition, the number of seats in the National Assembly has been raised recently from 15 to 30.

Programmes for women cannot be developed in a vacuum. They relate to the socio-economic context of existing structures and to government policy. Feasible projects have to satisfy a set of criteria -technical, social, administrative -for success.

List of Existing Programmes for Women

(a) Governmental or government-sponsored agencies :

- BWRWF (Bangladesh Women's Rehabilitation and Welfare Foundation)
- Social Welfare Division (RSS Mother's Club)
- Integrated Rural Development (Women's Cooperatives)
- Bangladesh Jatiyo Mohila Shangsta (National Women's Association).

(b) Voluntary Agencies/Organizations :

- Jute Works and Jagaroni
- KARIKA
- CONCERN
- International Union for Child Welfare
- BRAC
- Jalchatra Cooperatives and others.

The organizations vary quite widely in their primary objectives of developing income-generating activities for women. Seldom are the activities treated in isolation; they are part of a series of social services whose primary goal covers a wide spectrum : from relief, rehabilitation and family planning motivation to development.

Mother's Clubs (RSS), IRDP Women Cooperatives and the special programme of the Bangladesh Women's Rehabilitation and Welfare Foundation (BWRWF) were started as experimental integrated programmes to motivate the rural population for family planning. They received financial assistance from the World Bank through the relevant ministries. These organizations offer courses for rural women in various thanas (19 experimental thanas for Mother's Clubs, 28 thanas for IBRD Cooperatives and 8 thanas for BWRWF). The courses cover family planning, health and hygiene, child welfare and literacy. They include income-generating activities of different kinds (horticulture, handicrafts, cottage industries), and they find that this component of their programme is the most powerful incentive for promoting educational activities. Poor women attend the programme primarily because they hope to acquire a desirable skill and thereby push incomes. It makes them accept the education content of the programme.

There are however some notable differences between these programmes. The Mother's Clubs are directed at the poor rural women. Their primary objective is to increase the self-respect and independence of these women by providing them with basic education and commercially viable skills. It is hoped that this will motivate them to plan their families.

The prime objective of the Women Cooperatives of IBRD on the other hand is to develop the capabilities of rural women through improvement of skills, provision of credit, and new forms of social organization, such as cooperatives, and thereby increase rural women's independence and status as independent producers and income-earners. The IBRD aims at training village women in cooperation and management. Emphasis is placed on training village women leaders, who in their turn are expected to train the other village women, producing a multiplier effect.

The programme of the Bangladesh Women's Rehabilitation and Welfare Foundation (BWRWF) developed out of concern over war-affected women and their dependent children. BWRWF

was established in 1972, and the special programme for integrated services for family planning is heir to their regular programme. It aims at providing these women with skills which would make them self-reliant.

The special BWRWF programme for family planning developed in eight thanas is similar to the programmes of Mother's Clubs and the women cooperatives of IRDP, but the productive activities are systematically tackled by introducing such skills as weaving, sericulture and pottery. The BWRWF's regular channels are used for marketing these skills. Kindergartens are also attached to the centres. The BWRWF emphasises skill-training as a means to self reliance.

The Bangladesh National Women's Association (Bangladesh Jatiyo Mohila Shangsta), established in 1976, moved immediately into the area of productive activities for women. This association is attached to the Women Ministry. It is supposed to implement projects that reflect the government's policy on women. The two main priority areas now being family planning and the establishment of productive activities for the poorest women (in the fertility age and having dependent children), Bangladesh Mohila Shangsta is approaching women's problems from different angles. Its involvement in productive activities for women is in line with Government policy. BJMS recently held an exhibition of handicrafts produced by rural women which are aimed to be produced for the foreign markets.

KARIKA sprang up from the concern of a group of women who wanted to help the rural poor by reviving the production and marketing of crafts. It is now well established as a federation of cooperatives involving 12,000 men and women.

KARIKA intends to establish a federation of primary cooperative societies for the marketing of rural craft products. In addition it provides raw materials, credit facilities for cooperatives, and training for individual craftsmen and families associated with the cooperatives. They are now well established as a marketing agency and want to improve their performance, besides being of use to craftswomen.

The promotion and development of cottage industries is the responsibility of the Bangladesh Small and Cottage Industries Corporation (BSCIC). The Corporation recently drafted a comprehensive scheme on the development of rural cottage industries on the basis of an appraisal made by an ILO expert. Research and development of new designs, quality control and the organization of a marketing system are among the major measures BSCIC is considering.

The Shawnirvar movement attempts to stimulate self-reliance at the village level. Because of the new policy of the government the movement is involved in productive activities. Women, who represent half of the rural population, are supposed to be included as an untapped labour resource.

The Bangladesh government recently developed a policy for the development of the country's handicrafts and cottage industries.

The Bangladesh Rural Advancement Committee (BRAC) was founded after the country's birth in 1972. It is an organization constituted under the Societies Registration Act. The largest operation is in Sylhet with 42 field motivators initiating and facilitating multi-sectoral activities including those of 30 paramedics.

There are eight major activities in the project area : agriculture, horticulture, cooperatives, fisheries functional education, construction of community centres, health care and family planning, vocational training.

BRAC gained recognition for its elaborate and effective method of functional education: 80 lessons that raise the villagers' consciousness about their own problems, help them analyse the

problems and find their own solutions. Texts are written in Bangla and simple audio-visual material is extensively used.

Some villagers are recruited as teachers on a part-time basis. There are 30 female teachers, and 400 learners have already completed the 80 lessons.

In agriculture and horticulture, training and supplies are provided.

Regarding medical care and public health, 31 paramedics have been trained (all male) and there are mother's clubs for pregnant and lactating mothers. Trained family planning organizers work at the village level, supervised and supported by the paramedics in charge of their village.

Some vocational training centres have been established, and 89 women have been trained at vocational training centres for 3 months in tailoring.

Common Problem Areas and Suggestions

The productive and income-generating activities for women, especially in rural areas, mostly represent part-time employment that fits in, with the chores of domestic life. A number of cottage industries are best suited for women. They can utilise their spare time and supplement their income reasonably, provided they do not have to face production or marketing problems. This is why the organizations promoting productive activities should themselves pay more attention to these aspects.

In the case of agricultural and para-agricultural activities around their homesteads, soil and water have to be prepared, seeds and fertilisers have to be supplied. Most of the organizations working in the field have been tackling these problems, IRDP being the most prominent among them. However, what is needed is a massive nationwide movement to involve women increasingly in these activities. This is an area with many possibilities for augmenting both domestic consumption and production.

The cottage industry products are sold mainly through the village bazaars and "haths". Sales are generally in the hands of men, the profit margins of middlemen are high, nearly 100% even for ordinary items like bamboo baskets. Facilities for reserving a corner of the bazaar or "hath" or some specially built shops for women can help them deal directly with consumers and thus improve their earnings. Groups/cooperatives wherever formed should take up direct marketing, rather than depend on middlemen.

For handicrafts meant for urban markets, some voluntary agencies like Corpus Christi Jalchatra and CONCERN follow a sound marketing system; they have their own outlets or tie-up arrangements with regular marketing agencies.

COMPREHENSIVE LIST OF PROJECTS FOR WOMEN

1. Handlooms
2. Hosiery
3. Silkworm rearing
4. Reeling and weaving
5. Netting, embroidery, dyeing and printing
6. Tailoring
7. Sikka
8. Blacksmithy
9. Jewellery
10. Cane, bamboo, and wood work
11. Pankha-making
12. Pati and mat-making

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|---|--|
| 13. Coir, jute and hemp rope | 36. Small mechanical workshop |
| 14. Bakery and confectionery | 37. Gur-making |
| 15. Spices and pickles | 38. Toy and doll making |
| 16. Agricultural equipment | 39. Catechu (colouring agent used on betel leaves) |
| 17. Hukka and pipe-making | 40. Gum-making |
| 18. Pottery | 41. Locksmithy |
| 19. Footwear and leather craft | 42. Rice husking, wheat and pulse crushing |
| 20. Brass and bell metal work | 43. Sports goods |
| 21. Book binding, stationery and paper conversion | 44. <i>Agarbatti</i> , attar and rose water |
| 22. Conch shells | 45. Unani and ayurvedic medicines |
| 23. Mathals (summer caps) and umbrellas | 46. Household utensils |
| 24. Carpentry | 47. Country boat building |
| 25. Lime processing | 48. Button manufacturing |
| 26. Net-making | 49. Fancy handicrafts |
| 27. Fish traps and gear making; glue and scale work | 50. Spinning |
| 28. Bidi and cigar making | 51. Honey processing |
| 29. Oil ghany (extraction of oil from oilseeds) | 52. Salting of fish |
| 30. Jarda and kimum (Condiments used with betel leaves) | 53. Fruit processing |
| 31. Wooden sandals | 54. Fish processing |
| 32. Musical instruments | 55. Handicrafts |
| 33. Fish drying | 56. Garment making |
| 34. Cart work | 57. Jute works |
| 35. Salt manufacture excluding factory processing | 58. Light agriculture |
| | 59. Poultry |

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Appendix 4

THE POTENTIAL TECHNICAL AND ECONOMIC ROLE OF WOMEN IN FISHERIES

by Ms. C. L. Yap

Fishery Industry Officer, Fishery Industries Division,
Department of Fisheries, FAO, Rome

This paper was distributed at the Meeting on the Training of Women Extension Workers held in Madras, India, 23-27 April 1979.

1. Introduction

Various suggestions have been made on how to involve women in those small-scale fishery activities which fall within the Bay of Bengal Project RAS/40 (SWE). These suggestions range from training women in the repair and maintenance of fishing nets and gear, to improving their methods of drying, distributing and marketing fish. However, there is more potential for developing a women's component in fish farming than in marine fisheries, because of the present general widespread interest in promoting fresh water and brackish-water fish farming as complementary or alternative activities to marine fishing, which at present is beset in some countries by problems of unemployment and over-fishing. This is illustrated by the significant and increasing number of aquaculture programmes in the countries bordering the Bay of Bengal, with Thailand and Malaysia being the prime examples of countries with this approach to fishery development. Although most of these fish farming projects do not come within the auspices of RAS/40 (SWE), it is felt that there is a need to devote some space to a discussion of the potential and possible involvement of women in fish farming in addition to the discussion that would be made on women in marine fisheries. This is in recognition of the fact that this meeting is the first of its kind, and hence should explore to the maximum the various ideas and suggestions of participants in the meeting.

II. Women in Aquaculture

The role of women in fish farming, especially when the farms are small-scale family activities, has long been predominant. In Asia, the tasks of looking after a pond and preparing fish feed are usually relegated to women, while men are engaged in other aspects of farming, such as ploughing the land, digging the drains and repairing the hedges. However there remains considerable scope for the further expansion and improvement of women's role in fish farming. There is scope for increasing the number of women involved in this industry, because of the rapid physical expansion of aquaculture activities; there is scope for further improvement, because the present level of technology is low. In fact, the provision of some rudimentary training in water management, stocking and fertilization techniques could effectively increase their contribution to the development and promotion of aquaculture. Perhaps even more important, from the point of view of development strategy for aquaculture in general, is the demonstration effect from women's

participation. Mothers would generally delegate certain tasks to their children and in so doing also impart the skills and training they require. This is a quicker way of disseminating knowledge at grassroots level than could be achieved through a general training programme. From the point of view of development strategy for women, it is also a good way to begin, because concrete development effort in aquaculture has only just begun in many countries, and this will provide the initial impetus and give time to formulate clear plans.

There are several features in aquaculture that make it an eminently suitable area for increasing the participation of women in small-scale fisheries. Unlike in marine fisheries where there are certain major areas such as fish capture with only a very low potential for women's involvement, women can participate in all aspects of fish farming. A check-list of the basic activities in fish-farming (see Table 1) confirms this. Most of them being further extensions of their domestic activities, their performance does not require long periods of absence from their household activities. Thus in Table 1, we see that 9 out of the 13 basic activities commonly associated with aquaculture, have a high potential for women. It is interesting to note that although women are not generally engaged in pond construction and the value attached to their participation is low this does not mean that they cannot take on this activity. In Swaziland, the Domestic Service Demonstration in the Home Economics Section of the Ministry of Aquaculture has successfully demonstrated and encouraged women to site, construct and maintain fish ponds. In Bangladesh, women also construct their own ponds and in India women are employed as casual labour for this task. The willingness to assume the strenuous work of constructing a pond ultimately depends on the type of alternatives available. When poverty is widespread and opportunities are lacking, strenuous work is not an insurmountable obstacle, especially when it need not involve long periods of absence. The latter, as would be explained further, is a greater socio-economic obstacle to the development of women's participation in fisheries training than the sheer size of the physical task itself.

III. Women in Marine Fisheries

Women's participation in marine fisheries has been confined mainly to shore-based activities, such as net making, fish handling (sorting, grading, weighing, gutting and icing), fish trade distribution and processing. A more detailed list of marine fishery activities and the potential participation presently envisaged for women in these areas is attached as Table 2.

The present involvement of women in predominantly shore-based activities is frequently not a result of deliberate attempts to exclude them from fish capture, though there is some bias against recruiting women for commercial fishing. This bias could be partly due to social taboos against having women on board fishing vessels, but more important, it is really a reflection of the choice that women in fisheries have to make when deciding the lines of activity they would assume.

It is a realistic fact of life that women must combine their income earning activity with their responsibilities at home. Looking after the family, cooking the meals and raising children are activities not easily relinquished unless the economic returns from taking on other activities are sufficiently high to enable the employment of domestic help, and unless there is no resistance from within the family. These are not easy conditions to meet. Income from fishing is often low and uncertain, while the traditional views regarding woman's role as being mainly that of a housewife die hard.

In view of these difficulties, it is perhaps more realistic to concentrate on improving the technical skill in shore-based activities in which women are already engaged, instead of attempting to increase their involvement in fish capture or even to increase the number of women engaged in shore-based activities. This is a more realistic approach and contribution to the development of women's participation in fisheries because the technical and economic problems faced by

women already within the industry are many, and unless these are solved, there may be little purpose or justification for the further expansion of their activities. It is perhaps also true to say that it is not always possible or appropriate to increase the number of women in marine fisheries, because in many countries this is a declining industry, having reached a point where no further absorption of manpower could be envisaged. This may be a result of problems of over-fishing, so that the numbers employed in fishing have to be reduced. It could also be due to mechanization and industrialization, which generally make the production process less labour intensive.

IV. Improving Women's Participation

The development strategy that could be adopted to improve women's participation in small-scale fisheries is determined by the type of problems -economic, technical and social-that women in fisheries face, the socio-economic environment within which they work, the existing fishery policies or programmes of assistance, and their successes and the future assistance and inputs required. A thorough knowledge and examination of these factors, perhaps through discussion of each factor in relation to the different types of activities involved in marine and fresh water fisheries, could provide the necessary basis for deciding :

- whether there exists a problem and the reason for it,
- whether there is a possibility of utilizing the existing governmental or statutory machinery to do the task, or whether there is a need to introduce new machinery, and
- the target group at which development effort should be directed.

There are already many projects within RAS/40/(SWE) which could incorporate a definite women's component and these are shore based projects relating to net making, fish drying and handling and fresh fish distribution. However, the machinery to be utilized for improving women's activities in these areas would still depend on the answers to the questions raised above. It is certain, and as would be repeatedly mentioned, that although the meeting has been described as a Meeting on Training of Women Extension Workers, this is not to suggest that it should be treated as the irrevocable approach to reaching women in fisheries. In some countries, it may not be possible to train women extension workers because they are employed by the government. It is not possible to train women extension workers if there is no prior firm agreement that once trained they would be actually employed and used for extension. What could result is a pool of trained unemployed extension workers. Again, ideally much could be said for recruiting women at the grassroots level to be used as extension workers after training. They have a deeper and more realistic knowledge of the various problems and having better rapport and more local contacts could achieve, say in a matter of several days, what would take a field officer with only a technical background, months to achieve. However, not all countries could use this approach. Women in some areas are less mobile than others, or it may be difficult to identify women leaders. In view of these difficulties, it is perhaps best to approach the problem of improving women's potential economic role in small-scale fisheries through a more thorough understanding of the key issues presented above.

Table 1

A CHECKLIST OF SOME BASIC AQUACULTURE ACTIVITIES

List of activities commonly associated with aquaculture	Possible participation by women	Instruction and training required
1. Construction of fish ponds	*	Selection of suitable site, planning, design and construction of ponds to take account of water and soil conditions and the appropriate size and structure of ponds.
2. Stocking of the pond	***	How to avoid understocking (which will result in incomplete utilization) and overstocking. Recording of data on fish weight, growth time, growth rate.
3. Stock correction and growth check	***	Timing and method of growth checks.
4. Stock manipulation in mixed fish culture	***	How to maximize returns through the greater utilization of food by the use of a variety with feeding habits and capacity which are of a complementary nature.
5. Improvement of environment (preventive measures)	**	Weeding of ponds; use of protective devices against wild fish which would act as pests eating up fry of the cultivated fish; construction of water filtering device; use of chemical control.
6. Improvement of environment (provision of nutrients)		Optimum fertilization process (excessive fertilizer is biologically harmful) ; chemical fertilizer; the use of manure and animal waste products.
7. Fertilization	***	As above
a. Feeding of cultivated fish	***	Preparation of feed; the use of artificial feed; the daily ration required in relation to fish stock and weight.
9. Harvesting	**	Methods of harvest; recording of crop data.
10. Storage and transport of fish	***	Ratio of water supply necessary for the storing of live fish awaiting marketing; weight loss of fish.
11. Transport of live fish from pond to storage tanks	***	Methods of transport.
12. Transport of live fish to market	**	Ratio of water to fish weight; ideal temperature; methods of avoiding fish spoilage.
13. Other activities: canning and preservation	***	Simple canning methods; the use of materials for fish canning.

¹ * Minor participation
 ** Average participation
 *** Large participation

Table 2

POSSIBLE WOMEN'S PARTICIPATION IN MARINE FISH PRODUCTION

Activities	Women's Participation
Fish Capture	*
Net care, maintenance and mending	***
Boat and engine care and maintenance	*
Simple gear construction	***
Fish unloading	*
Fish sorting, scaling, gutting	***
Fish weighing	***
Records	***
Icing	***
Boxing	***
Processing (including salting, etc.)	***
Drying	***
Canning, including scaling, gutting, filletting, packaging	***
Marketing	***
Distribution	***
Accounting and business management	***

Note : • Little or low participation
 ** significant participation
 *** very significant participation

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Development of Small-Scale Fisheries (GCP/RAS/040/SWE)

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