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Papers Presented at National Workshop on Women in Fisheries (Some Methodological Issues) held from 28th - 30th Aug. 1993 at Baroda

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Fishing as an Industry is one of such activities where both men and women are playing responsible roles as seen also in agriculture. Fishing is looked upon as a family business in which women play equally important role. Whereas fishermen work on high seas in catching fish, fisherwomen work almost exclusively in shore-based activities. The retail trade of fishes is heavily shouldered by the fisherwomen in India. However in recent years they are being increasingly recruited in the processing units of Fishing Industry also.

Fisher women in India take care of the major units of fishing business which comprises of grading. processing. preserving and marketing of fishes. They also make preparations for men's voyage to sea and look after the members of the family left behind. The general image of the fisher woman is that of an illiterate woman, preoccupied day long in the selling of fish in the stinking business of fishery. However, if analysed carefully fishermomen share an equal shoulder to shoulder burden and responsibility in carrying out the business of fishery. The life of fishermomen depends upon the quality of various activities in the fishing trade like catching, processing, preserving and marketing of fish.

# Development of Fishery in India :

Development of Indian Fisheries is regarded as necessary because of the poverty faced by fishermen's families as well as their claims to priority of attention in the development programmes. Fishery has been identified as a trade and industry which can contribute towards poverty alleviation under IRDP as well as the 20-point programme of development.

India continues to occupy seventh position in the world in terms of fish production with the production of fishes to the tune of 3.8 million tons (1990). India with an export

target of Rs.1500 crores worth of sea food durin, 1991-92 has entered into deep sea fishing in a big way in collaboration with leading firms in Japan, Korea, Phillipines, Thailand and Gemmany.

Thus, fish production in India has gone up mayy-folds and the fish related activities have expanded considerably. Substantial investment in the past decades have started yielding regults pushing up the fish production to an average of 3.50 lakh metric tons during the first four years of 7th Five Year Plan.

The level of development has now reached a turning point when innovative bold steps have to be undertaken in areas like deep sea fishing and value added processing and preservation of fish which is traditionally not consumed in our country but is abundantly available on our coasts. This calls for more as well as better manpower. Women in fishery thus become important human resource which needs to be trained and developed in areas in which they have been working for since ages.

The development of fishery sector to the present level is achieved through :

the Five Year Plans

the assistance under the Technical Cooperation Mission (TCM)

the Special Package Programme of FAD entitled 'GROW MORE FOOD' under this "Expanded Nutrition Programme" was in roduced in fish eating regions on eastern coast in 1960 where household fishery was main activity.

- the Institutional Financial Support, and
- the World Bank supported Integrated Fisheries
- Development Project (IFDP).

# Fishery in Gujarat State :

Gujarat is the northern most state on the west coast of , India. It came into existence on 1st May 1960 and includes former United States of Saurashtra, the Kutch State and the Gujarat Regions of the erstwhile former Bombay State. It is surrounded by Arabian sea in the west and has two extensive gulfs - the Gulf of Kutch and the Gulf of Cambay. There are about 82 river systems passing through the

The coastline in Gujarat is 1600 kmts. long and the total river length available is estimated to be 3685 kmts. It is also estimated that the State has 1,70,280 Ha of fresh water areas in form of rural ponds, irrigation tanks, reservoirs and lakes.

Thus the fisheries sector is of great significance in view of the excellent physical and biological sources. There has been tremendous development in the fisheries in Gujarat State since 1960.

Gujarat State ranks 1st in marine fish production and 3rd in the total fish yield of the country. The marine fishery production which was to the tune of 79,000 tonnes in 1960 has since been increased to about 3,27,000 tonnes till 1988.

Similarly the inland fisheries which was practically unknown in this region till the formation of new State of Gujarat has since resulted in the yield of about 23,000 tonnes of fish. The transference of Gujarat State into a major fish producing and exporting state has been achieved through various developmental programmes of the Central as well as State Government.

Recently, Gujarat Government has made an announcement in terms of increase in plan outlay of finance for fisheries. Census data on marine fishing villages and fisherman population in Gujarat indicates that there are 127 fishing villages and 23,100 lakhs fisherman households. The total Fishermen population is 1,520 lakhs, of which 0.365 lakhs are active in Fishery which amounts to 24.01 percent.

# Women in Fishery :

With all these facts on promotion of fishery in Gujarat, very little information is available in terms of women's participation in fisheries in Gujarat. Preliminary exploration in this direction revealed that there was only one round table conference held in SEWA Ahmedabad which was an attempt to inform/study the migrant female labour in fish processing units in Veraval. However, there were a few attempts like studying fisherwomen's participation and problems related to sales and marketing of fish in Navsari taluka of Valsad district (Suryavanshi, 1991).

At present there are two major projects involving women in fishery. One is MATSY-GANDHA Project in Kaira district which is dealing mainly with women's participation in imland fisheries. The second one being the Wansi-Borsi project in Navsari Taluka of Valsad.District which deals with women in marine fishery. This project had a component of training and development of women in fisheries with particular reference to Jinga-culture.

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A number of researches on participation of women in fishery are done in other parts of the country namely West Bengal, Orissa and Tamil Nadu. These studies help in identifying various characteristics of fisherwomen involved in fishery. Mostly the fisherwomen involved in fishery are in the middle age group of 31 to 40 years. Their earning from fishery related activities ranged between Rs.100 to 200 per month which was recycled in fishery business only. They were mainly involved in sales and marketing which was retail sale. Other activities in fishery in which they were involved were processing, preserving, freezing and packaging which they performed traditionally. They were not exposed to scientific innovations or technologies related to their work. The new technologies preferred by women in fishery were related to net weaving and mending. Fish culture and fish seed collection from rivers and creeks.

Fishery is considered to be a potentially self employing area. Therefore it is felt that training and development of fisherwomen in fishery could help them make considerable economic gains. Forming small groups of five women for processing and preservation or fish cultivation and culturing under DWACRA can also help them generate income. Their economic contribution to the family ranged between 10 to 20 percent. However most of this amount earned was spent on food and clothing and very little attention was paid on other aspects like housing, health and education. Majority of fisherwomen were found to be illiterate:

Women are found to be participating in brackish, marine as well as inland fishery on the eastern coast of India. However a large number of fisherwomen (over 60%) were found to be unemployed in lean season and had no venue for alternate employment. This aspect thus calls for attention of planners and policy makers so as to utilize this vital human resource in the most lucrative business of fishery.

One of the major problems faced by women in fishery is EXPLOITATION. Since they are involved in retail trade and are not UNIONIZED more often they are exploited which results in poor economic gains. Where employment of women in fishery is concerned there are no labour laws governing conditions prevalent at site of employment or terms in contract which the employers would adhere to. Even the occupational hazards to which women in fishery processing units are exposed to like long hours of work in air-conditioned plants in humid condition which result in upper respiratory track infections causing severe cold., cough, asthamatic conditions and even pneumonia, containeous standing on wet water-logged floors which results in skin disorders and illness related to the ergonomic posters. Decaying of nails, fingers and finger tips in case of those who are involved in contineous shelling of prawns and removal of prawn heads. There is no provision for insurance or economic compensation to women involved in big fish processing units. There is no institutional support system for pregnant and lactating mothers nor day care centre provision for working fisherwomen's children and old dependents.

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Women in fishery need to be trained in various scientific and technological aspects concerning fishery to put in better work in this industry. Main among these activities could be fishery production, processing as well as preservation.

They need to be organized in small groups or cooperatives for better gains through this activity.

There is a need to have better extension linkages through grassroot level workers like MATSYA SEVIKAS on the line of Gramsevikas to help and assist women involved in fishery.

There is a need to systematically study women's participation in fishery and various related aspects which affect their participation in it. For this a systematic approach to conduct research on women involved in fisheries needs to be developed.

We have gathered here today to share our experience research based and otherwise in relation to women in fisheries, evolve if possible suitable methodology to study women in fishery, identify issues related to training and development of women in fisheries and work out recommendations for suitable extension programmes to be considered by planners and policy makers for promoting better participation of women in fishery.

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I wish the participants of the Workshop success in their venture of seeking solutions to the above aspects.

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FISHERIES SECTOR

Prof. N.D. Chhaya Principal, College of Fisheries Dean, Faculty of Fisheries Gujarat Agricultural University VERAVAL - 362 265

It is in the fitness of things that a National Workshop on "Women in Fisheyy" is organized at Baroda in Maharaja Sayajirao University, which was a long standing tradition of having women at highest levels of University structures. The first Vice-Chancellor of this University was no other than internationally respected Dr. HansabebMehta. If I rember, well the first Dean of the Faculty of Social Works, the first Head of the Department of Geography. for long time enough at, the Mathematics Department and many others at different levels were women including naturally, the Deans of the Faculty of Home Science. Each one of them have contributed immensely in the development of this University and creating a very positive incernational immage for this University.

I am proud of being an alumni of this University and feel happy about the Workshop of National level on this subject being organized here because for the last many-many years. I have had the privilage of being associated with fisheries sector and feel strongly about the need for better and higher opportunities for women in fisheries.

There are large numbers of experts from various fields concerned with working women who have gathered here and I do not feel very competent in addressing this August body as an expert of this subject. However, having being associated with this sector for quite some time in research, development education and extension, I shall put forward a few remarks on the basis of my personal observation and experience.

In Gujarat and other parts of India, women are engaged in this sector at grass root levels. You will find them on Sea shore carrying the fish catch from the boat to the shore line, helping fishermen and merchants in cleaning them or drying them and also engaged in retail marketing. In fact women dominate in field of retail marketing in many places. Large numbers of female labourers are engaged in the fish processing factories in Gujarat. They are deft mainly in grading, peeling and such functions.

Surprisingly, most of these graders and peelers come from Kerala under labour contract. They are exploited in various ways and something needs to be done for their well being physical, social and financial security. There are working women's hostels in various cities of Gujarat but at Veraval, Mangrol and Porbandar, where the fish processing factories are concentrated, they were no working women's hostel. Time and again, this issue has purpped up at various levels, lip services have been given but nothing realy tangible seems to have been done. I hope that when a special National level Seminar is being held today, serious deliberation will take place and concerte follow ap actions resulting in definate improvement in the situation will result.

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Gujarat has large numbers of fisheries coopegative societies. However, I do not know of single fisheries gooperative society at least in the Marine fisheries sector where, there is a woman President of where the executive committee has reasonable number of women. The situation is not different in other states, though in some states, things have started to move. Some Fish Farmer Development Association (FFDA) have started to allot water bodies to women's fish culture association, like in Manipur. However, here too, the women's associations are mostly given smaller water bodies and thus end up earning less. I am not aware of any women's fisheries society or fish culture association in Gujarat, though their was some talk about a step in this direction. A couple of years back in some Eastern States, women were able to get a credit of Rs.10000/- to 20000/- for purchase of fingerings from hatcheries and graw them in ponds. But these are rare cases which require to be replicted state wise, district wise and 'taluka wise.

Fish Farmer's Development Associations (FFDA) are now in almost every districts of Gujarat. Simplilar situation is seen in many other states. This Agencies are expected to motivat and train beneficiaries and also help them to became independent in marketing. However, here too, there is male dominance exception their rules.

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Gujarat is a progressive state and it's apex fisheries cooperative body called GRCCA Ltd., is respectfully sppoken of in various corridors of nation. I had the privilege of bein, it's Managing Director some years back. However, even this apex, fisheries cooperative body of progressive state did not have any woman on it's executive body and to my knowledge does not have any woman on the board today. The situation has to change. The National Dairy Development Board (NDDB) developed a model to promote reles for women in dairin dairying sector but there is nothin, similar for Fisheries sector in Gujarat and most of the other states.

Perhaps, Kerala and some Eastern state could be better placed basically because of the matriarchial social structure prevalent in some areas.

Coming to a higher structures in fisheries sector, there are ample opportunities for women to constructively and fruitfully contribute their mite.

There are mandatory quality control labouratories in all processing factories. A back ground in Microbiology, Bactariology, etc. related to aquatic schences is essential. Women can definately contribute in this field.

There is an explosion of fish culture activity in the Inland, Brackish and Coastal Aquaculture, all over India. There are ample opportunities for female scientists in the fields of Hydrobiology, Fish diseases, Pathology, Fish Genetics etc.

It is not good to think of women for such protected labouratory based or station based activities, particularly, when women are more out going, climibing Everst, go for trekking and nature studies, and under take many such field activities for advanture and pleasure. They can as well take up work in exciting fields of Marine resources survey, fresh water resources survey, actual fishing trips and related areas. In fact, there are a few women scientists at ISRO/SAC who have been successful in such areas of activities. Gujarat State Fisheries had two women Technicals Officers at nongazated levels. At least one of them was out going and produced results. Both seem to have left and the state fisheries, does not seem to have any women personnel on technical, research or development staff at any level.

Many Agricultural Universities have Colleges of Fisheries. Qualified women, could compet for academic and technical positions in suitable departments. Unfortunately, it is my personal observation and experience, that, while women seek admission or positions in sectors like fisheries, they do so without being prepared for undertaking tasks which their male counter parts do undertake daily as routine. At that point, women & invariably ask for special favours and pergetives . Equal rights also call for equal responsibilities which is not always forthcoming.

Looking to the fact that the number of women in the present census is almost equal to or at some places more than men, the opportunities for this 50 percent of population should be also to that level. In order to attain that, a suitable climate, avenues of opportunities and willingness of Government and society to take definate steps in this direction are needed.

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In Gujarati there is a saying which means : The hand that moves the cradle, rules the World. For centuries, we have used such opium, to keep this 50 percent of population under social anaesthesia. It is high time that something positive is done fast without any complexes or reservations.

It is not enough to have one woman Prime Minister or a woman Vice-Chancellor and be satisfied with it. What is necessary is awaking and uplifting of this 50 percent of population, as a point of responsibility of the society and the Nation.

OBSERVATIONS AS CHIEF GUEST AT NATIONAL WORKSHOP ON :: (a)
\* "WOMEN IN FISHERY" (a)
(a) SHDSIC (FORD FOUNDATION) M.S. UNIVERSITY OF BARODA (a)
(a) 28 th - 30 th AUGUST : 1993 (a)

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PARTICIPATION OF WOMEN IN FISHERY SECTOR

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#### G.D. VASAVDA

Participation of women in the fishery sector is as old as the history. The first known woman worker in fishery was Matsya Gandha of Mahabharat era. Fisheries was a subsistance occupation up**to** the known near past.

Large scale women participation in the fisheries sector came up with the commercialisation of our Fisheries. I know a 90 years old lady in Saurashtra who used to work in the Bombay duck fisheries as a child. Her mother also worked in the same field. Therefore participation of women in the commercial fisheries is atleast as old as a century - say, about 125 years - still however the participation, though on a large scale was unknown and unnoticed to the common world.

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It was for the first time during 1980 that the issue regarding problems of women working force in Fisheries sector came into lime light. A news paper report on exploitation of women labour in Gujarat appeared .on national level. It so happened that young girls were being brought from South Inda to the fishery port of Veraval in Gujarat to work in the processing plants as prawn grading girls. These girls ranged between the age of 14 to 30. About 2000 South Indian Girls worked in our processing plants. These women labour were recruited in Kerala and Karnataka by unscruplous contractors. The factory owners in Gujarat used to entre into a contract with these contractors to supply prawn grading girls as per their requirement. These girls are experts in the art of grading of prawns. Simply by touch, they were in possition to gra e the prawns in different size and weight. Prawns are the most important exportable variety of our marine product and its different grades fetched value as per the size and weight. Grading machines as used in Japan, USA etc. were unknown to India at that time and hence these girls were of high potential human force.

Unfortunately, they were not paid according to their skill and the importance of work, they were carrying. The

contractor used to encash money from the processor on the weight in Kgms. of prawns processed. He in turn used to pay a paltry sum of Rs. 300/- to 900/- p.m. to the worker as per their seniority and experience. To and from fare, hostel facilitiese and medical allowance were being paid to the women labours. This was because of the care taken by the Labour Department of the Kerala Government. The contractors used to earn a minimum of 2500/- onwards per day after meeting all average expenses. The hostel facility provided was very limited, unhygenic and many a time filthy. This is the story of the beginning of awareness of women labour in an organised fishery section. Since then lot of change has taken place and the women labourers working in fish processing plants are in much better condition. An act regulating their employment, minimum wages etc. is enacted and is in force - inspite of this, constant vigil and inspection is necessary by the labour welfare department. This is the labour force in the organised sector of fish processing factories.

Thousands of women labourers work in the fishing industry in utterly neglected conditions, low paid and highly exploited. For example, we can take the Bombay-duck fishery workers on Saurashtra coast at Jafrabad, Navabander, Rajpara and Diu ports. Nearly 15% of Gujarat's fish catch is contributed by the Bombay-duck Fisheries. Here the men folk bring fresh Bombay-duck from the sea and they are cleaned, processed - dried on scaffloeding by women workers. About 5000 women work as processing labourers for almost 12-18 hrs. a day for 8 months in a year. Here the payment to labourers in done in a fixed quota rate basis. 19% of the value of the catch is shared by eight processing labourers and 81% of the cost goes to the fishermen who go to the sea and has invested on Boats, nets, etc. The labour charges increase with the increase in fish rates. The rates per 20 Kgs. of processed fish in 1965 was Rs.50/- has today risen to Rs.250/- to 300/per 29 Kgs. The individual women labourer earn about 4000/to 6000/- per season or 8 months. During the add 4 months of monsoon, these workers sale the dried fish etc. which they obtain as personal consumption, and sarn their lively-hood.

Similarly about 10 to 12 thousand women labourers work on Saurashtra coast between veraval 1 and Okha. They are 1

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also engaged in the processing of dry fish and earn a monthly income of about Rs.600/- to Rs.1000/-. The working conditions are hazardous, unhygenic and improper on rewarding

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Some of these women workers have by shear grit and determination have progressed better, economically. <sup>1</sup>here are examples in Veraval and Porbunder where women workers like Smt. Paniben, Deviben etc. on Veraval coast and like Smt. Liliben of Bharuch, who have worked as successful fish traders. It will be a surprise to many of us that these women traders conduct fish business worth Lakhs of Rupees. Their sale transactions extend upto Bombay, Hyderabad, Delhi, Kerala and Assam etc.

As said in foregoing paragraphs the women labourers are still being exploited both economically and socially. There do not exist any labour laws for their welfare and regular income. This is partly because, they are uneducated and untrained. They conduct supportive labour to their men flok. A beginning is done at Sutrapada, Ahmedabad, Kheda and Himatnagar of organising the fisher-women or the women labourers into organised cooperative section. A fisher women cooperative of Sutrapada is functioning and helps the menfolk in the manufacture and repairs of fishnets. The cooperative in Ahmedabad is engaged in fish sales through the help of an apex cooperative body. A tribal womens cooperative functioned under the guidance of 'Disha', a voluntary organisation based at Himatnayar in Sabarkantha District. The cooperative members are engaged in the rearing of Fish seeds, fishing and marketing of fish catch of inland waters. The present status of this cooperative is not known.

In Maharashtra, Karnataka, Kerala, Tamilnadu, Andhra and West Bengal - the women workers engaged in fish processing plants get a better deal because of awareness of union activities and strict labour law vegilence. The women workers in Bombay duck fisheries and retail fish marketing business in Bombay in particular and Maharashtra in general is well known. The koli women are much better paid lot of the entire women force in India. Tamilnadu, Kerala, Andhra and West Bengal have comparatively lesser women force in the field activities, unlike Gujarat and Maharashtra.

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(P.T.O.)

The number of educated young women particularly in Research, Education, Administration and Extension jobs in Fisheries sector is increasing day by day. Many women ... scientists in Kerala, Karnataka, Andhra, West Bengal have contributed substantively in the fields of fisheries research. Education and Extension. Improvement in the skill and education of the large women force in the field of fisheries sector is highly essential. The present skill is unscientific and acquired bb long experience as a labourer. But due to total lack of education, new ideas and development strategy are not easily absorbed.

It is therefore, necessary to educate the coastal and bribal women population from childhood. Schools in coastal village, towns and cities should have lessons in fisheries hygine, sanitation and fishery science subjects in their primary education. The fisheries college, state training centres can operate mass education and extension programmes in coastal and tribal areas.

The recent force on developing prawn.1 and fish farming in coastal and inland areas will have faster growth of our women labour force in villages get extensive and intensive training.

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#### WOMENS' PARTICIPATION IN FISHERIES

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NALINI NAYAK

Women have from all time been actively involved in fisheries whereas in some parts of the world they have been good navigators, involved even in main capture fishery - as still exists in a limited area in our neighbour country of Srilanka. In India they have been involve in the preparatory phase, by the net weavers spending long hours making, setting and mending nets. It is also interesting to note that in the martrilineal societies of South India, the daughters have inherited the fishing gear from their parents at the time of marriage and it is they who are owners of the catch. For Example, in Kasarpod - Kerala, the fish catch is physically divided when landed on the shore. Each women owner - of the N boat then takes custody of it and handles it from them. Today, in the modern fishery, some women in Vishakapatnam even advance the running capital for a fishing voyage to the traveller boat owners. This gives them a sure hold over the catch landed. In Tuticorin women are known for their skill as part divers and in many areas they dive for cocles and pich muscles. In the inland water in Kerala they are known for their

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expert . skills of catching shrimo with their fingers -"thappuka" as they are called. They can be seen evading in the water of the Venbraned lake. While the above may only be stray examples, the larger and more accepted phenomenon is the participation in post harvest activity. Fish, unlike most other agricultural products, cannot be stored. Neither can it be the major food component in the diet. It therefore has to be exchanged for other food and with efficiency and skill before it detriorates. This task of preservation, distribution and converting the catch into food, has always been the pero gative of women. It is almost sure, that before the coming of ice, this sphere was compeletly handled by women. All distribution, using only human energy was organised by woman. This took care of two things 1) exchange of fish for other food 2 ) reaching of fish - a source of protein - to other rural consumers. This was done at tremeddous costs too -

generally walking long distances, carrying heavy loads on their heads and involving long working hours.

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All fish that couldn't be sold immediately was dried or salted. Women had developed ingenious way of preserving fish knowing which varieties to clean, how to pack and even techniques of oil extraction etc. Because of these techniques fish reached even remote areas and we all know the long distance much fish, even travels today.

Besides all this, the running of the home, carrying for the children, cooking food and sexually servicing the men has always been the role of women in the community. Since this activity has fallen within the nature of what is called domestic production - often called reproduction - it has never been calculated and is infact considered something that is done naturally. So much so that wives of fishermen, if they are not involved in direct fish related activity, are not included as fish worker. The fact is that womens' participation in fisheries has never been recorded, have alone qualified. Infact, it is only since a few years too that any data on fishermen waseriously collected. Earlier, it was only the production figures that were recorded. And even there, together with craft gear figure were collected under the census as part of agricultural data. Little a nothing was recorded on womens' participation.

Today women in fisheiżes, like women in all artisanal sectors, are being marginalised or being turned into image labour.

First of all, in the matxilineal societies, where they owned the craft and gear, the system charged radically when the state intervened and made loans available to fishermen alone. The men became owners of craft and gear. It is interesting to see the impact, this change gradually began to have on the status of women. In a community where dowry did not exist, it gradually began to be introduced, women gradually had to entire the ampetitive process to get fish if they still wanted to remain in fish vending.

The introduction of ice and refridgration is considered to have radically transformed the distribution of fish and this is true. But it also facilitated the entry of other

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interests in marketing. People who had larger capital, better transport facilities, and these were mainly men became participant amidst whom poor women were poor competitors. Hence only the very strong and more enterprising women probably reamined in the sector.

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The construction of landing centre and harbour has also generally affected womens' role in distribution. With large catches that are landed and with larger men merchant in the frey women have not been able to take advantage of these situations.

Over the last 15 years, the deminishing fish resource has also affected women. They have had to go to more distant markets to purchase fish. For instance, it is not economical for women from Triv. Dt. to go as far as Manglore to serve and Kalinada spend days at Vishakapatnam awaiting the by catch of the travellers. Women hire lorries, sit with the cate and travel back - for 18 - 20 hours journey back-to their home villages. In Kerala the women vendors were able to get a special train rayon allotted for them to purchase and carry fish from Vaizag to Quilon.

For women who do not have either the resources or the enterprenaual skill, they have been turned into wage labour either unloading the fish from the boats, or drying fish for merchants who purchase in bulk. There are women employed in the sorting of shells at certain lending centres too.

Large member of women lost their only source of livelihood when machine made nylon nets were introduced for fishing. Today it is probably only in West Bengal that a large number of women are still involved in net weaving because it is cheaper for the fishermen to buy these nets on credit from local merchants than directly from the companies. Today, the modern sector claim that jobs are created in the shrimp and canning plants. It is true that there is work for women in this sector but all under very explotative conditions. The story of migrant women labour in the shrimp factories in the coastal states in now more widely known and the owners of such plants are extremely suspitious of anyone who iniquits about this. There are more detailed studies in this area.

(P.T.O.)

So what have women really gained in the so called development of fishers in  $I_n$ dia. What do we mean by participation today. I think we have to look at participation at different levels.

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1. In the fishery itself

2. In the community

3. In the broader social movement for change.

1. In the fishery : Where ever women have still a role in the capture fishery we should find way and means to not only support them but to enhance their skills and create the infrastructure so that they can fight the forces that tend to out number them. The problem of women in each of these areas should be studied and looked into. The ways tand means to make them continue to remain in the field should be worked out. Where as the most primary need may be expressed as the availability of credit - this is not the only need of women. Creating infrastructure of storage at landing site that women can hire, availability of ice at controlled rate, shelters for women to stay and transport facilities may be some of the related needs of women.

We know now that even the availability of salt is a big problem. With the government pressing for the production of iddised salt, the salt pans are being closed down and this indirectly affects women too.

Since merchant buy the traveller by catch in bulk, a lot of fish that could otherwise be directed for human consumption is now going for fish meal. If women were organised and buy this in bulk, they certainly would not let fish go for fish meal.

Whereas women themselve should be helped to organise to retain their space in the sector where they are being marginalised, there is a big role that the state and the academic institutions have to plan back to find alternate employment for women. For some time most institution concentrated on developing value added products like pickles, wafers etc., whereas. None of these really proved a success as their main target group was not the women who were being earning that a fish vendor makes in the market. 0

The new trend is the thrust given to aquaculture as an area for increasing production and employment. Fresh water pond culture has more advantage for women who own pond. Brackich water culture is more difficult because of availability of water area and the fingerlings. Infact hundreds of women are not engaged in the collection of fish seed. On the other, hand this is ecologically destructive as it deminishes the fingerlings in the common water and distruct the astrains. On the other hand, women spend many hours a day wait deep in water by which they can contact all kinds of diseases. While acquaculture could be an area to be considered for training, aquaculture skills without support for access to water bodies and the organisation of market, will not help.

2. In the community : Enhancing women's participation at the community level is divided in two approach :

a. enhancing women's participation in decision making in the community.

b. improving facilities that will free women from cecept routing burdens and give them the time to participate in activities outside the home .

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The community participation has to do with the comput of emprowing women. This is a large discussion in itself and we must take time to discuss it in detail. Infact, talking about women's participation as a idiology plays in the marginalisation of women. Unless this is balanced change in women will never find the space and scope leading to their participantant in the community

3. In the broader social movement. When we speak about change it means that we do not fully endorse the on going processes of development. In fisheries, we are dealing with a natural resource, used primarily as a food, modern development in fisheries have paid no heed to the basic factors thereby leading to icological over fishing, now economic overfishing, Ecological distruction because of aquaculture and all kind of other poplution questions because of industrial development, new trend in tourism development are also affecting coastal communities. It is a

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Conformed fact that modern development that is technology intensive, making use of non-renewable energy resources, cannot be sustained on the one hand, and on the other had be used to the advantage only of a small percentage of the population. In this process the poor at large get more and more disadvantaged and the plight of the women becomes hand. In our area women from the fishing community are forced to even go in for underscriable occupation like illicit lequour brooing and men prostitution. Hence fisher worker have to organise to fight for their rights of survival and wherever they do women are in the front of the struggle. Infact, in 1989 when the National Fishworkers organised & coastal ecclogical march from Maharashtra in the west and West Bengal in the East, culminating in Kanyakumari, hundreds of women joined the march spontaneously. This was because the slogan of the march was 'Product Health Product Life'. There were issues very close domomen hearts and this gave them the courage to fight against the odds too.

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This is an area again that we need to discuss at greath length and in which a lot is said and written than done.

What I would like to emphasise is that these three aspects must go hand in land in building up a consciousness in these three sphras. It is a much wanted responsibility of scientists and researcher as it is of social activite and community leaders government and the NGO's.

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# PARTICIPATION OF WOMEN IN FISHERIES IN MAHARASHTRA

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Ms. Ratna Tewari Senior Scientist Central Institute of Fisheries Edu. Versova BOMBAY

Fisheries is an important sector in the economy of many . developing countries. About 12 million people are engaged directly in fishing world wide and an equavalent number in fish processing, marketing and other related activities (IDRC, 1988).

Women often play a major role in fisheries. They may be producers in their own right, directly support men's activities or may be engaged in a variety of post harvest activities, all of which are crucial to the welfare of their families and community. In some regions, women engage in fishing, serving as crew on boats with men or may fish from small boats, canoes or the shore; they may collect molluscs or seaweeds. They may also cultivate and harvest fish in ponds or weirs. In many communities women indirectly contribute to production by making or mending fish gear.

In most fishing communities women have a major or even an exclusive role in post harvest fisheries activities. Women often assist in unloading fish and nets and are normally responsible for whatever processing is done with the catch which includes sundrying, salting, smoking, preparing fish paste and cakes etc. The primary and often exclusive responsibility for marketing fisheries products lies on the women in many regions of the developing world, including India.

In Maharashtra, the fikherfolk population is 2,46,986 out of which 1,20,966 are females constituting 50 percent of the total fisherfolk population (Maharashtra census of fishermen, 1987). In the traditional Koli fishing community of Maharashtra fishing is a family based occupation where men and women play significant roles. In addition to their 'inside' duties i.e. caring for children, purchasing and

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preparing food, cleaning and collecting water and fuel, the coastal fisherwomen usually perform all the post harvest handling, icing, washing, sorting, drying and marketing of fish in the rural as well as in urban fishing areas in Maharashtra. After the fish has landed it is the women who take over charge The only shore based activity in which men are involved are making and mending of gear.

Marine fish production in Maharashtra is a seasonal activity. Active fishing takes place for about nine months from the month of September to May. Most of the fisherwomen (60%) were engaged for a period of 8 months in fisheites activities and rest of the fisherwomen (4.%) were involved throughout the year (Table 1). During lean sesson, mostly dried fish or fresh fish caught from the shores was sold.

Table 1 : Period of activity of shierwomen

Period (in months)	Urban Area Rural Area
8 12	77 (55.00)102 (78.75)63 (45.00)58 (21.25)
Total	140 (100.00) 160 (100.00)

Figures in parantheses indicate percentage

1. Processing :

The fish is processed by the fisherwomen before marketing. Most of the processing is carried out at the landing centre itself.

The fish was sorted according to its size and commercial value. As observed in Table 2, about one half of the fisherwomen were involved in sorting in Maharashtra. They were spending 1.10 hours in sorting of fish. The fish was then washed in the sea water by about 70 percent of the fisherwomen to remove the sand. After washing, the fish was iced by 62.3 percent of women to preserve it for longer time. On an average 1.52 hours were spent by the fisherwomen on this activity. Ice was an important and commonly used means of fish preservation. The ice procured was crushed, mixed with salt and put into baskets on which layers of fish were kept. The fisherwomen were procuring ice either from cooperative ice factory (68.67%) or from local ice factory (31.33%).

2. Preservation :

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Salting of fish was a common means of fish preservation in earlier days. However, it was found that a mere 1.87 percent of rural fisherwomen were using salt for preserving fish now. It was practised only in rural area. None of the respondents used it in urban area. The decline in demand of salted fish and increased demand of fresh fish might be the probable reasons for this trend.

Another activity practised in both the areas was drying. The fish was dried either for consumption, for immediate sale or for sale during monsoons. Bombay duck was dried on specially erected platforms while smaller fish was spread on the landing centre or roadsides. Bamboo platforms were also erected in the courtyards of fisherfolks in the area.

About a half of the fisherwomen were involved in drying of fish and about 3.34 hours were spent in carrying out this activity. It was revealed that more time was spent on this activity in rural area as compared to the urban area. This might be due to the reason that the urbab women found a ready market for fresh fish in the city itself.

3. Marketing :

As revealed by the data presented in Table 2 it was observed that selling of fish was predominantly a women's activity. About 87 percent of the fisherwomen were involved in selling of fish. While collecting data, it was found that all the urban fisherwomen were sellin g fish. Fish was not sold by some fisherwomen in rural area because of family problems and ill health. They were spending about 4.06 hours in selling fish. Leaving aside the fish for domestic consumption and crying, rest of the fish was sold by the women either in retail, in wholesale or on headload. Non participant observation, revealed that guality fish was sold by men to the

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cooperative society in rural area, whereas in the urban area the entire catch was handled by the women folk. This trend might be due to increase in catch which the rural women found difficult to handle as no market was available in the nearby area. Some women whose families did not own boats, procurred fish from other women. Fish was sold at sea beach, fish markets, roadside markets or from door to door. Various socio-economic studies carried out by the Bay or Bengal Project of FAO (Drewes, 1982; Kalavathy, 1985; Anbarasan, 1985 and Menzes, 1991) in the coastal villages of Tamilandu revealed similar findings that large majority of fisherwomen were involved as auctioneers, wholesalers and retailers of fish.mChandrasekharan, 1979 and Azad, 1984 have also reported similar findings.

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Marketing of fish was done in morning as well in evening but most of the fisherwomen (72.7%) marketed fish in the mornings. The time of marketing dependedon the time the vessels landed, their catches. The gill netters landed their catchs in the morning and trawlers in the evening. Catches from the trawlers were generally kept in cold storage for sale the next day, though a few women marketed it in the evening itself. Another reason for different times of marketing fish was the market timings where the women sold fish. The women who sold fish in the morning were generally those who went to fish markets where the timings were fixed wher as those selling in make shift stalls generally sold in evening. Similar findings have been reported by Drewes (1982) and Templeman (1987).

Majority of the fisher women (56%) sold fish outside their area of residence. In the rural area, some of the fisherwomen were selling in the surrounding villages or in Bombay. About one-fourth of the fisherwomen sold fish locally. Selling dried fish in their homes was a phenomenon observed in the rural area only. Just 5.57 percent fisherwomen sold fish in their home only. Similar frend of fish marketing has been reported by Drewes (1982). Weighting of fish was not practised. Fish was generally sold either in heaps or in numbers. It was found that 55.7 percent fishwerwomen were selling fish in heaps and 30.3%

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in numbers. A neglible (0.01) percentage of fisherwomen sold fish by weight. The reason for not using standardized methods of measurement was the cumbersome nature of these methods.

The means of transport used by the fisherwomen were lorry, headload, train, bus and autorickshaw.

The most.commonly used means of transport were lorry (31.67%) followed by headload (21%), bus (18.67%), Train (14.67% and autorickshaw (12%), respectively.

4. Net making and mending :

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Net making and mending was predominantly a male activity. Only 12 percent of fisherwomen were involved in net making and mending. The nets were made on order in their homes manually for individual fisherwomen or cooperative society giving yarn for net making.

Table 2 : Fisheries Activities Undertaking by Women

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Activity	Urban Area	Rural Area	Total
Net making and mending	24 (17.14)	12. (7.50)	36 (12.00)
Sorting	68 (48.57)	81 (50.62)	142 (47.66)
Washing	98 (70.00)	106 (66.25)	187 (62.33)
Scaling and gutting	25 (17.85)	39 (24.37)	64 (21.3)
Icing	81 (57.85)	106 (66.25)	187 (62.33)
Drying	75 (53.57)	. 74 (46.25)	119 (39.66)
Salting		.3 (1.87)	3 (1.00)
Marketing .	140 (100.00)	122 (76.25)	262 (87.33)

#### Multiple response

The division of labour amongst the fi sherfolk of coastal Maharashtra was found to be more sex typed, catching of fish being the man's job whil all the post harvest handling of fish was carried out by fisherwomen. This was because the women were still unlikely to do certain citical kind of "men's

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work" because of social taboos which existed in Maharashtra. Although all the post harvest activities were being carried out by the fisherwomen, marketin, of fish was the major activity in which they participated. Out of the total 18 waking hours about 8.35 hours were spent in fisheries activities and 5.20 hours were spent in household work. This left about four hours durin, which the fisherwomen relaxed. Fifty percent of the total time spent on fisheries was spent on fish marketing.

The participation of women in fisheries was significantly related to their age, family income, family occupation and the type of fish the women were selling.

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PROSPECTS FOR INDIAN WOMEN IN PRAWN ARMING

- 27 -

VIJAYALAKSHMI R. NAIR

The Indian Ocean covers an expanse of about 75 million sq. km. and has an estimated potential yield of 14.4 million tonnes of fish (Nair, 1986. At present, a part of this 3.6 million tonnes - alone is being exploited. Deep sea fishing operations are very limited and the present fishing activity is mostly confined to the coastal waters within 40 -50 fathoms. The coastal marine resources are exploited to the optimum level and expoitation beyond this is required to raise the annual production in India from the present 1.6 million tonnes (FAO, 1992) to 3 million tonnes over the next decade. This requires adoption of a prop. blend of research and development and technology utilisation in fishery science. Implementation of this programme will take time and hence it is wise to depend on other sources to enhance fish production.

Acquaculture as an alternate method to augment fish production has already been established and this should not high priority in all future research and development programme. The fish production from inland water has shown a faster growth rate than the landings from caputure fisheries. It is estimated that by 2000 AD the protein contribution by fish will have to be enhanced to 13 million tonnes in order to achieve a balanced diet for the mankind. Aquaculture is the area which can contribute additional fish of about 7 million tonnes by 2000 AD. This will also help in augmenting the export of fish. In addition to producing the desired type of quality sea food aquaculture could generate employment and substantial supplimentary income during the lean monsoon period.

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Among the different organisms considered for aquacultme shrimp is the most important owing to its export potential. Now out of the world fishery trade of approximately 36 billion dollars, the share of shrimp is 20% (MPEDA, 1992). India is recognised as one of the world leaders in shrimp production and export. The most suitable species of shrimps for culture in India are the tiger shrimp (Penaeus monodon), white shrimp (P. indicus), banana shrimp (P. merguiensis) and flower shrimp (P. semisulcatus). Farming techniques have been developed for the first three species and the last one is still in the experimental stage. The technical improvements made in shrimp farming in many parts of the world paved the way to increase our shrimp product through aquaculture wo adopting extensive and semi-intensive systems of shrimp farming in the areas where environmental conditions are congenial. India is endowed with rich natural resources in the coastal zone in the form of brackishwater/estuaries for taking up shrimp culture.

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The brackishwater area available in the country for culture is estimated to be about 1.4 million hectares of which only around 65000 ha. are now under Shrimp farming (MPEDA, 1992), mostly adopting the traditional practice (50,000 ha.) and partly by the extensive method of culture (15,000 ha.). The traditional system of shrimp farming is being carried out in the States of West Bengal, Kerala, Karnataka, Goa and Maharashtra.

AQUACULTURE TECHNIQUES DEVELOPED AT NATIONAL INSTITUTE OF OCEANOGRAPHY (NIO) :

Aquaculture techniques have been developed bb Central Marine Fisheries Research Instiute (CMFRI), NIO, Central Institute of Fishe ies Education (CIFE) and various Academic Institutions involved in marine science research. Although major attention has been paid to the shrimps, aquaculture potential exists for developing shell fish fin fish and seaweeds. At NIO techniques for culturing green mussels has been developed which can give 2 - 3 crops/year (Desai and Kesavadas, 1988) and the yield amounted to 480 tonnes/ha/yr giving a high profit of 181%. This technique has been demonstrated to fishermen and potential fishfarmers of Goa in association with the Government of Goa. NIO has developed improved t chnology of traditional paddy field prawn culture in Kerala which enhanced not only the quality of prawn but also the yeidd upto 1000 kg/ha. Another technology developed by NIO is retrieving the juvenile shrimps alive so that

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they could be utilised as seed for culture. NIO could p rfect a technique for the commercial culture of Artemia and in an area of 1 ha. nearly 12 kg. of Artemia cysts were harvested. The methodologies for seaweed cultivation are also being standardised at NIO for the species Hypnea, Gracilaria, Sargassum and Monostroma.

WOMEN AND FISHERIES :

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The traditional fishery in India is almost a male dominated field where the participation of Indian women is very limited excepting the fisherwomen. In capture fishery women contribute a significant role at the landing site, marketing, preservation, drying and processing which is spread over to the extent of 50-70%. However, in culture fishery the role of women is negligible except in the processin, side. This might be due to the fact that their capability and concribution have never been identified. Once identified, there will be ample opportunity for employment in this field with proper training.

PROSECTS FOR WOMEN IN PRAWN FARMING :

In prawn farming there are four major stages :
 Site selection, design and construction of pond.

- 2. Seed production, hatchery and nursery
- 3. Selective stocking and pond management
- 4. Harvesting and marketing

Among these the second aspect is very important and can very well absorb women employees. The success of culture depends mainly on the availability of seed. Currently in shrimp farming most of the farmers still depend on the wild seed stock collected from estuaries. This source will be seasonal and undependable. The best way is to maintain a hatchery. To ay the total quantity of seed production in hatchery is estimated to be around 200 millions (MPEDA, 1992). As this rate of production is unable to meet the existing demand of farmers, more hatcheries are prosposed to be established. Government of Maharashtra has proposed to establish 3 hatcheries. The Marine Products Export Development

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Authority (MPEDA) offers regular training programmes in shrimp culture at Cochin, Kerala and hatchery management is a part of the course. Often CIFE and CMFRI are also extending similar training programmes. Women can be inducted into such training programme with proper planning.

## TRAINING :

For hatchery management training should be given under two major lines namely physico-chemical and biological parameters.

Physico-Chemical Parameters :

- Temperature : It plays an important role in the growth of fish and prawn. Intensive spawning activities are associated with higher temperature.
- 2. Salinity : This is the most important limiting factor influencing many functional responses like metabolism, growth, reproduction etc. All cultivable species tolerate a range in salinity which varies from species and at different life stages. Most penaeid species grow faster at lowered salinities when they are in the uvenile phase, prefering estuarine habitat and later migrate to higher salinity waters before attaining maturity. The tiger shrimp can be cultured round the year at a salinity range of 10-25%. While the preferred ...salinity range for white shrimp is 15-35.
- 3. Dissolved oxygen : The oxygen concent of the water has profound influence on the general metabolism and growth. DO content at or above 4 mg/1 is required to reduce mortality and stunted growth.
- 4. pH : The optimum pH for culture is between 7 and 8.7.
- 5. Nutrients : The water should be rich in nutrients like nitite, nitrate and phosphate to support good primary production.

6. Suspended solid : Excessive load of silt will weaken the fish stock and turn them vulnerabl to disease and parasites.

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- 7. Calcium content : The calcium content of prawn moult is high and hence lack of calcium in the surroundings would affect the frequency of moulting and adversely affect the growth. In a calcium deficient environment the osmoregulatory mechanism breaks down due to defective permeability of the membrances.
- 8. Poplution : Affects the quality and health of the species under cultivation.

#### Biological parameters :

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- Training required for identification of brooders, study of maturity stages, fecundity and brood stock management.
- Types of spawning are important and these include natural spawning, induced or artificial spawning, hypophsation through pituitorys dosage and stripping.
- 3. Should be familiar with different hatchery techniques, various types of diseases associated with hatcheries and their control and hatchery management.
- Technical knowledge required in culture of live food organisms like algae, Brachionus, Moina, Artemia and formulations of different compounded feed.
- Maintenance of the nursery in a healthy condition is a very important aspect.

Depending on the educational status of the women, trainees need to be categorised for various assigned work. Work which requires precision and technical skill can be handled by women at graduate level. The routine work can be allottedx to trained women with lower educational background. With some experience the women engaged in hatchery work can also manage the marketing of seed to farmers. CONCLUSTON :

The advantages of selecting trained women in hatcheries are many.

- 1. It is purely an in house establishment.
- 2. Women are expected to excel in this field because of their sheer natural instinct to handle sensitive work with utmost care and precision.

3. The percentage of literacy and working women are significantly low especially at rural sector. The aquaculture practice which is being the rural oriented programme the rural women are to be encouraged and supported.

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AN EXPLORATION OF WOMEN'S PARTICIPATION IN FISHERIES

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Ms. Kiran Patel, M.Sc. (Home)

Since the international women's year in 1975, the international organisations have placed greater emphasis on the role and status of women in third world councries. The emphasis grew out of conviction that women can contribute to the process of National Development and out of the realisation that they represent almost one half of the workd's populations, whose skills and energies must be lapped for this effort.

Fishery is one such activity through which women not only can earn but can make substantial contribution towards enhancing the quality of life of the family. However it was for the first time during 1980 that the issue regarding problems of women working force in fisheries came into lime light.

Fishing as an industry is one of such activities where both men and women are playing responsible roles as seen also in agricultural activities. Fishing is looked upon as a family business. Where women play equally important role.

The women take care of the major units business such as processing, preserving and marketing of fishes as well as preparation for men's voyage to sea. Besides all this the running of home, carring for the children, cooking food for family has always been the role of these women in the community. Thus the fisherwomen play a dual role of earning for as well as looking after, their family.

The general image of fisherwomen is that of an illiterate women pre-occupied day long in the selling of fish in the stinking bisminess of fishery. However, the fact that women's participa-tion in fisheries has never been recorded.

Very little information on women's participation in fisheries in India is so far available. A few reviewed studies on training as well as participation of women in fisheries indicate that the fisherwomen in India participate in activities like processing, preservation and marketin, of fishes. They also indicate that the fisherwomen are eager to get trained in various aspects of fishery.

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Most of these studies are done between 1981 to 1991 in different parts of the country namely West Bengal, Tamilnadu Orissa and Maharashtra. These studies mainly dealt with participation of women the area of fisher. Only are systematic study on women's participation in fishery was conducted by Suryavanshi ( 1999 1) in Navsari of Bulsar District.

Hence the present investigation is indertaken to study the overall participation of fisherwomen of Borsi Machchi Vad in various activities related to fisheries as well as studying the problems faced by them.

The study further aims at identifying the difference in participation of fisherwomen in various fishery related activities due to trainin, received as well as selected variable aims at studyin; the economic impact of productive activities in which fisherwomen are engaged and the benefits accurued by individual women and her her households from ... the economic gains earned through fishery.

The population under study comprised of randomly selected fifty trained and fifty untrained fisherwomen from Borshi Machchi wad. It was a purposeive reandom sample. Data were collected with the help of an interviewed sheeduled consisting of three sections calling for background information nature and extent as well as various aspects related to fishery in which fisherwomen participated. The data so collected were analyzed in terms of frequency and percentages. Chi-Square technique was used to study association of participation with selected variables.

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The Major findings of the study revealed as per the following :

All the respondents were married of which majority belonged to nuclear family. Little over half of them had an average size of family with eight family members whereas little less than half of them had more than nine members in the family. Majority of them belonged to the age group of 25 years and above.

Eighty two percent of the total respondents were illiterate. Majority of them were occupied in fishery as x main occupation. More than fifty percent of the respondents had no other subsidiary occupation. However 30 percent were engaged in construction work 12 percent in the dramond cutting trade also.

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All respondents were engaged in marine fishery whereas 30 percent of them were also employed in culture fishery.

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There was significant association between the criterian variable namely training and participation women in sorting grading processing, **presspring** as well as weighting and vending of fish. Highly significant Association was found between family type as well as size and participation of fisherwomen in sorting, cleaning, preserving and marketing of fish. Significant association was found between family type as well as size and women's participation in processing as well as in ancillary activities.

Training was found to be xx associated with women's participation in ancillary activities like repairing of nets and backets. Higher percentage of trained fisherwomen book help of men and women than untrained fisherwomen.

There was significant association between the problem concerning the extent of participation of women in fishery in terms of lack of work in off season and fishery as main occupation. Majority of the respondents faced the problem of lfutuatingmarket price, and lack of financial facilities followed by lack of transportation.

The fisherwomen under tudy also expressed lack of improved fishery material. Lack of knowledge regarding prodessing and preserving of fish as problems : in which the fisher women wished to be trained.

Majority of the respondents under study were self motivated to participate in fishery. Majority of them participated in fishery as they belonged to families of fisherwomen and it was their family occupation. All the respondents worked any time of day and might in fishery related task as per the fish catch. More than half of the respondents spent seven to nine hours in fishery related task. Nearly 40 percent of the respondents earned more than Rs.200 from fishery trade. All of the utili ed the income earned through fishery for food and clothin, followed by children's education and reinvestment in fishery.

All respondents utilised fish in their **dwa**t twice a day All respondents were engaged in household work whereas 47 percent of them were engaged in construction work during off

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season in fishery. All of them were not aware of new thechologies in fishery and improved methods of fishing. They were interested in taking training in various aspects of fishery.

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The fisherwomen were not aware of minimum wage act or benifits of unioni ting ; for proper payment as well as work condition as far as the fish trade was concern.

The study pointed out at greater need to collect data on participation of fisherwomen in various types and aspects of fishery in various geographical areas. It also pointed out at the need to identify the training requirement in various types of fish farming as well as in various aspects concerning it to promote better participation of women in fishery. There was a need to train female trainers' from KVKs and FTCs to promote fishery among women.

There is a need to identify participation of women administrators and seiencitists in various fields and aspects related to fishery.

There is a need to undertake field experiment for promotion of participation of women in fishery through action and participatory action researches.

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AQUACULTURE : A VERSATILE INCOME GENERATING ACTIVITY FOR RURAL WOMENFOLK

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B.K. Sharma Principal Scientist and Chief Training Organiser KVK/TTC of CIFA Kaus alyaganga Bhubaneswar - 751 002

There is no gain saying the fact that the choice of appropriate technology is most fundament to enlarging the scope of income generation, of a dependable and steady nature, for rural women and in this agriculture and allied aspects naturally claim top priority, given the pivotal place of agriculture in our economy. The issues, in a real sense, pertain to a thrust towards achieving a quantum jump in the income level of our women folk, possibly leading to economic empowerment of women, by increducing a set of advanced and well tested technologies with freedom to choose either one or a combination of them at ease. A more facile way. however, is to seek such technology package that have the inherent capacity for adoption in small scale operations, as for beginners, as well as in an expanded manner in large scal ventures which the more experienced and skilled encerpreneurs may require to fall back upon in course of time. In the context of women and technology the most crucial considerations that take precedence, are intensive motivation, practical transfer of skill on the basis of 'learning by doing' and 'teaching by doing' sustained levels of technical as well as material assistance by way of incentive, prolonged follow-up action to take ware of field level problems and build up sufficient confidence level and multiplication of similar first line extension efforts over a wider region wider clientele group. The development plans for income generation for women would lack substance and coherence without emphasis on such aspects.

Aquaculture in fresh and brackish water, however, fits into above mentioned criteria and offers a tremendous scope for gainful employment appropriate for womenfolk in a variety of ways (Sharma and Thakur, 1988; Tripathi, 1988). To many it may sound paradoxical but it is a stark fact that aquaculture yet remains an unemploited field in which rural womenfolk can find ample scope of job opportunity for additional earnings. In fact our rural scenario offers scope for certain vary, specific small fisheries projects which can be managed remarkably well by rural womenfolk. This is not merely a kind of suggestion based on any hypothesis. It is based on well tested experience of the Krishi Vigyan Kendra and Trainers' Training Centre of CIFA, Kaushalyaganga, Bhubaneswar which has b en instrumental in launching successful schemes of fisheries for welfare of rural womenfolk in some of the village of district Puri.

A pilot project entitled "Fish Farming for Rural Womenfolk" funded by Department of Science and Technology, Government of India was operated by the KVK/TTC of CIFA from 1986 to 1989 in the Puri district, with very encouraging results (Sharma, 1989). The paper highlights the methodology, achievements, constraints and suggestions for strengthening future programmes.

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2. SURVEY :

For the transfer of various need based aquaculture technologies a detailed village survey and farm family survey in the target area was conducted in order to have a comprehensive information pool on the resource potential, production level, traditional field practices and skill level and a benchmark of socio-economic status. The survey data served to identify the technology gaps and structuring of extension strategy. The total population of district of Puri is 2,911,720 out of which 1,484,799 are male, 1,426,921 are females with a sex ratio of 961 femal is to every 1000 males (Sharma and Thakur, 1988).

The district presented a rich aquaculture potential. There are 17,811 number of tanks in the district with a total water spread area of 2,140,759 ha out of which 1,059,144 ha. in shape of 6,846 tanks are readily suitable for fish culture. In addition to this villages are virtually dotted with small pools, puddles homestead ponds in them back yard as untapped water resources. The pre-operative survey indicated that the the rural womenfolk in the district facted severe under employment in the off-season and also go without employment for a comparatively longer period in a year than men. It was observed that the average employment period for women folk in agriculture sector is 125 days and in the non-agriculture sectors is 25 days, while they remain engaged in household work for 35 days in a year (Table - 1). The unemployment period for womenfolk in rural Orissa during the course of a year thus works out to 180 days (Radheyshyam et al., 1988).

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The stress caused due to unemployment/underempolyment during this period could be overcome through gainful employment in non-agriculture sectors only. The small scale pisciculture projects in fact could fill this void as then come in handy and prove befitting for rural women to earn a good income.

3. APPROPRIATE TECHNOLOGY :

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Selection of appropriate technology is an important exercise that assumes particular significance when it relates to the rural womenfolk. Aquaculture which has traditionally been dubbed as a male domain, in fact, offers a wide range of activities which could easily be adopted by womenfolk, either exclusively or with small support services from male members. Although the range is wide enough only such technologies are to be identified as appropriate for women which satisfied the following conditions.

- i. Compatible to the physical capacity and general aptitude of rural womenfolk.
- ii. Ease of adoption and highly rewarding the economic terms.
- iii. Marginal need for investment capital, coupled with diminutive demand on labour time.
- iv. Drawing upon locally available and/or domestic resource base.
- v. Ease of expansion into moderate to large scale enterprise in due course.

vi. Scope for combining with other economic activities/ occupational pursuits in the respective operational areas. Based on the above the following technologies appropriate for womenfolk of district Puri were identified.

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i. Fish seed raising

ii. Common carp breeding.

iii. Successional aquaculture/fishculture in backyard

iv. Horticulture integrated with fish culture

v. Net weaving.

4. SELECTION OF BENEFICIARIES :

The programmes on fish farming was launched in five villages of district Puri involving a total of 50 womenfolk (Table - 2). In all, a total of 13 small ponds covering a water area of 0.3 ha. were put into action. The ponds were mostly in the shape of private backyard ponds while some were renovated derelict ditch s and a few newly dug-out ponds. Details pertaining to the bench mark survey with to the socio-economic background of the selected womenfolk have been given in Table - 3.

5. MOTIVATION :

Beginning with an emphatic motivational drive, the target group was exposed to thorough training and practical demonstration on need-based aquaculture technologies at their own villages. Film shows, slide shows, exhibitions and organised melas constituted an integral part of this effort. Essential inputs such as fish seed, fish toxicants, feed, . nylon twine, breeding kits were provided by the centre. Group discussion and meeting were held at the adopted centres in an effort to motivate the momenfolk to come forward and make use of the aquacultural technologies. Subsequently, training programmes on the need-based technologies were organised. For the womenfolk of villages located in the vicinity of the centre, on-campus training programmes were organised while for villages located at far off places, the training programmes were organised at the respective villages. Practical demonstrations were given on each step of the technology.

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6. ACHIEVEMENTS AND PERFORMANCE OF TECHNOLOGIES

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Some of the aquaculture technologies which have been found very useful for womenfolk in field trials in district Puri are described below :

Fish seed raising : After rains, our villages 6.1 virtually get littered with small water holdings in the form of road side borrowpits, ditches, pools and other such lowlying areas. They usually go Unnoticed and one hardly ever realises that such small water bodies have immense potential for economic productivity. Such water masses, in fact, come in haddy to be used as seasonal nurseries for raising short term crops of fish fry and fingerlings by rural womenfolk. The only essential pre-requeisite for this would be the fish spawn and need based training which can be obtained from the nearest fish seed farms/KVK. Altennatively a person or two in each locality can be trained on the art of fish breeding whose job will be to breed the fish and supply fish spawn to such seed growers. With growing awareness of fish culture in rural sectors, fish seed has become a much sought after commodity and is sold as hot cake at very attractive prices. The trained women of village Pubasasan, district Puri earned an income of Rs.7180.00 during the two fish breeding season of 1988 and 1989 by taking up fish fingerling raising (Table-4).

6.2 <u>Common carp breeding</u>: Common carp is being widely used these days in the multi-species system of carp farming in the country and its seed are sold like hot cakes. A plus point with this fish is that it readily breeds in confined waters and does not involve much technicality as in other carps. It easily breeds under controlled conditions. One has simply to provide weeds, grasses or kakabans as egg collectors and the fish would deposit eggs on it. The art of common carp breeding can be easily learnt by the rural womenfolk and they can practise it as a very paying enterprises. There are a number of villages in Puri district namely, Nakhaurpatna, Gopinathpur, Ekchalia, Nuasan, Pubasasan, Barabati, Mangalpur etc. where womenfolk have adopted this technology and are earning a very handsome income from it

(P.T.O)

• 6.3 Fish culture in backyard ponds . Backyard ponds are a very common place occurrence in our villages, particularly in the state of West Bengal, Orissa, Bihar and Assam. These ponds are mostly used for bathing, washing of clothes, and utensils. These ponds hold immense potential for raising seed as well as table size fish. They can yield fish in amounts sufficient enough to provide the much peeded animal protein for proper health of the farm families besides giving additional income. Women folk can play a great role in making use of such water masses as their kitchen ponds. They should, however, be trained through the process of learning by doing so as to know which species of fish would be ideal to grow in such small water holdings, in what stocking densities they could be best grown and the required steps with regard to its various management measures.

These water bodies, can be used as nurseries for raising crops off fry and fingerlings and thereafter for raising some table size fish in succession, called as 'successional aquaculture'. A case study of successional aquaculture taken up by a group of rural women in a small pond of 0.03 ha at village Nuasasan has shown that within a period of just 17 months the successional aquaculture fetched an income Rs.6,673.50 to participating womenfolk by spending Rs.1,537.00 (Table-5) Thakur et. al., 1988).

6.4 <u>Horticulture integrated with fish culture</u>: Horticulture is yet another area in which farm women, can claim as their own domain. They can be motivated to adopt integrated horticulture with fish culture by making use of the pond embankments for growing various types of fruits and vegetables crops. As we all know, daily diets of the rural poor remain extremely deficient in green vegetables and fruits. This can be amply made up if the women in rural areas are properly, motivated to shoulder these responsibilities by raising nutrition gardening in the back-yard of their houses as well as on the pond empankments. Water from the pond can can be used for irrigation of these crops. Several such programmes of integrated farming have been launched in a number of villages in the Puri district of Orissa by this

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Krishi Vigyan Kendra. It has been observed that the programme is catching up well and is paying rich dividents to the farm families (Radheyshyam et. al., 1989). Integrated fish farming involving live-stock raising, horticulture and fish culture offer excellent scope for women participation. Women can make productive use of water and land resources and can tenderly look after the cattle, poultry, duck and pigs.

6.5 Net weaving/mending : Fishing net is a costly input which is normally beyond the reach of a poor fish farmer. Whenever a pond is required to be netted, the net has to be hired by the farmers which entails heavy expenditure. The art of the net weaving and mending is easily learnt by the rural women. If the technology of net fabrication is transferred to the rural women, they can make use of their leisure hours in fabricating nets. It has been estimated that the average net weaving capacity of a trained women is 689 double knots/hours, with an average earning capacity of about Rs.14/per day without much physical strain (Radheyshyam, et.al., 1988a). Net weaving can prove to be an attractive enterprise for the rural womenfolk as it does not essentially necessitate them to come out of their homes. Some hand operated net-making machines have recently appeared in the market which could be made use of for better output.

7. DISCUSSION

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From the foregoing account it is very clear that our rural scenario has got the potentiality to offer plentiful scope in the field of aquaculture for self employment of rural womenfolk. Small aquaculture projects like fish culture in backyard ponds common carp breeding, fish seed raising, prawn farming in small ponds, net weaving and nutrition gardening on pond embankments etc. can work marvellously in generating substantial income to the womenfolk.

Very small backyard ponds ranging in area from 0.01 to. 0.03 ha can generate a steady stream of income throughout the year by a succession of activities such as fry rearing (20 days), fingerlings rearing (3 months) and table size fish culture for the rest of the year till these ponds dry up. Road side borrowpits can also be used as nursery and rearing

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ponds (Radheyshyam et.al., 1982). Use of pond embankments for banana, papaya, and vegetable cultivation results in added economic benefits to the farm women.

Net weaving is another very useful technology for the rural women as it ensures substantial earning without having to go out of the their houses. 6

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All these highly lucrative aquaculture activities could be pursued by the womenfolk at their convenience and in leisure time without detriment to normal vocation or domestic chores. These technologies can go a long way in raising the economic status of rural womenfolk and removing the drugg@ries in their daily life. The Extension/Research agencies and lead banks can play a significant role in disseminating such technologies in the country. An elaborate and well conceived strategy for transfer of appropriate aquaculture technologies, backed by financial support can assure better and happier future for our rural womenfolk.

8. CONSTRAINTS AND SUGGESTIONS :

Involving womenfolk in aquacultural programmes is to be set with a few problems, the prominent among them are :

- i. It is only the womenfolk from the most down trodden lot who show eagerness to take to aquaculture activitive. Women from well off families tend to view it as a low grade profession.
- ii. It is difficult to involve rural womenfolk in aquacultural programmes unless such activities are already in vogue in the locality involving the menfolk.
- iii. Aquacultural programmes are largely dependent on availability of fish seed and supply of other essential inputs. Womenfolk involved in aquaculture would naturally have to depend on others in procurement of such essential items often from distant places.
- iv. Effective training on need based technologies before setting up any project is a very important step. While dealing with the womenfolk, particularly from the far off villages, it often becomes problematic to organise their on-campus training programmes. Under

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such situations, the training programmes have to be organised at the villages itself with very limited scope for pratical demonstrations.

v. Extension programmes launched for the womenfolk in rural areas are often very difficult to manage unless there is a well-versed lady in between to act as a negotiator.

On the basis of observations made under the present programmes some suggestions are also noteworthy.

- Opportunities for self-employment should be made available to the rural womenfolk giving greater coverage. At least one third of the rural youth who are trained for self-employment should be women.
- ii: While mobilising the womenfolk in rural development programmes one should not ignore their male counterparts as they are complementary to each other.
- iii. Top priority should be given on training aspect through learning by doing.
- iv. There must be provision for social amentties and social security to safeguard the rural women workers' interest.
- v. Credit facilities are to be made available to the raral womenfolk through flexible and innovative procedures so that it reaches in the hands of the poorest of the poor.
- vi. There must be a provision to have greater number of female extension workers in respective fields in order to provide a fillip to the projects which are exclusively designed for the rural womenfolk.

In modern times new technologies are changing the nature of the jobs and the composition of the workforce. In a progressive society the relevance of a planned strategy to reach the benefits of the science and technology to womenfolk in order to make them equal partners to progress can not be over emphasised.

# 9. ACKNOWLEDGEMENTS :

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## TABLE - 1

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Time spent by the rural womenfolk of Puri District in different activities during the course of a year (Radheyshyam <u>et.al.</u>,'88

Age Group (Year)	Period of employment in agricul- tural work (days)	Period of occu- pation in non- agricultural persuits (days)	Time spent in house hold works (days)	Unemploy- ment period in a year (days)
15 - 25	168	45	22	130
26 - 36	1.28	27	30	18 0
36 - 45	104	23	38	200
46 - 55	100	5	50	210

# TABLE - 2

Details of the adopted villages and selected womenfolk under the S & T programme at KVK/TTC, Kausalyaganga.

Village	Jurisdict GP.	<u>ion</u> BL OCK	Distance from the centre (Km.)	Nos. of sele- cted women- folk	Ponds Nos.	in use Total water ar <b>e</b> a (ha)
Mangalpur	Mangalpur	Pipli	19	15	1	0.01
Ekchalia	Pamasara	Pipli	· · 2	* 10	2 .	0.10
Gopinathpur	Itipur	Bhubanes	war 5	- 5	2	0.04
Nuasasan	Nuasasan	Piple	18	12	6	0.10
Pubasasan	Laxmi- naryanpur	Pipli	Jan <u>L</u> rai	8	2	0.05

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Details pertaining to the socio-economic background of the selected womenfolk under the S & T programme of KVK/TTC, Kausalyaganga

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Village	Nos. of selected women- folk	Community to which they belong	Source of livelihood	Present monthily income per women (Rs.)
Mangal pur	15	SC	Husband's earning + her own by	120
			working as daily paid labourer	
Ekchalia	10	ŚĊ	-do-	120
Gopinathpur	5	SC	Totally dependent on the earning of	Nil
			the men- folk of the family	
Nuasasan	12	SC	-do-	NIL
Pubasasan	8	SC - 4 GC - 4	-do-	Nil

SC = Schedule Caste

GC = General Caste

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# TABLE - 4

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Income details of the womenfolk through aquaculture activities from 1986 to 1989

Village	Pond	Income generating	Item wise income (Rs.)		
(NO. Of Women folk)	sıze (hr)	activities/pro- duction of	1986-87	1987-88	1988-89
Mangalpur (15)	0.01	IMC fingerlings	-	1850	
(13)	7	Fruit & Vegetables	950	28 0	15834
Ekchalia	0.1	IMC fry	950	1650 .	1250
* · · (IO)		IMC fingerlings	750	2250	2700
		Table size fish	533	431	800
		CC spawn	-	525	-
·	-	Fruit & vegetables	2153	550	960
Nuasasan	0.1	Net weaving(wage)	1040	1440	2280
		IMC fry	2250	3000	3500
		IMC Fingerlings	1500	2500	2250
· * * * * * * * *	~	Cable size fish	600	1032	1087
		CC spawn	1500	2000 -	2050
		CC fry		5200	4030
		CC fingerlings	-	58 0	400
		Fruit & vegetables	- *	975	1500
Pubasasan	0.05	IMC fingerlings	-	3.68 0	3500
		Table size fish	-*	1140	900

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IMC = Indian Major Carp CC = Common Carp

# TABLE - 5

Details pertaining to production of fry, fingerlings and table size fish in a succession by a group of womenfolk in a backyard ponds of 0.03 has at village Nuasasan.

	Trial No.	L Date	Stocking (acutal nos.)	Har Total no. of fry	vesting Total no. of finger- lings	Total no. of table si fish Kgs	Income ze .)
	I.	<b>5-8-</b> 86 15 <b>-</b> 9 <b>-</b> 86	2 lakh (Indian Major Carps)	- 19,500		-	975.00
	•	11-11-86	-	-	2000	-	500.00
		8-1-87	-	-	-	15	225.00
	II.	10-2-87	2 lakh (common .carp)	-	-	-	1000.00 (Sale of spawn)
		13-4-87		15,000	- in	-	750.00
		7-6-87		. H × <u>2</u> (4)	3330	· · · · · · · · · · · · · · · · · · ·	832.00
		20-7-87		-	-	8	96.00
•	III.	27-8-87	2.1 lakh (Indian Major Carps)	-	-	-	-
		22-9-87		25,000	-	-	1250.00
		3-11-87		-	3700	-	925.00
		26-12-87		-	-	8	120.00

Note : The selling rate of spawn was Rs.250/per lakh, fry Rs.50/- per thousand and fingerlings Rs.250/- per thousand

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#### TRAINING 'WOMEN IN FISHERIES"

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Mrs. Aleyamma Vijayan

In a broad sense "Women in fisheries" means the wives of fishermen or women from fishing families and communities whose socio-economic status and well being are intimately and intricatly affected by the uncertainities of fishing as those of fishermen. In a strict sense the term 'Women in Fisheries' (WIF) is used to indicate women who are involved in fishery related activities like trade, processing, net making, acquaculture etc. Very little data exists on the involvement of women in fisheries in India. Although their role is very crucial, it remains largely invisible and unrecognised.

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Fishing is the traditional occupation of certain caste bound communities in India for many centuries. The subsistance fishing relies heavily upon small scale production of marine resources for home consumption and for sale or exchange in nearby households or communities. Participation of women in these activities, specially land based activities like net making, curing and processin, of fish, marketing etc. are very high. The rapid changes in the fisheries sector influenced by foreign technology and the increased importance of fish as a major export item (foregin exchange earner) has led to the commercialisation of fishing. In some areas of the country this has led to overfishing and depletion of the marine resources and ecological destruction. In this process women's role and position also has been adversely affected. The incroduction of large net-making machines, refrigerated vans/lorries for transport of fish, mushrooming of ice plants and cold storages and sophisticated fish distribution system etc. has completely unbalanced their role, As trade becomes more centralised and capital intensive, fish vendors bargaining power is lost; little fish is left to dry and process. In many instances women are turned into casual wage labourers. This casualisation of women's work is also seen

in the new intensive acquaculture practices too. Socio-cultural factors force women to combine income earnings with household responsibilities. The poor sanitation, lack of housing, drinking water and medical facilities, increasing illiteracy etc. are other factors which adversely affect the socio-economic status of women in fisheries.

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TRAINING NEEDS OF WOMEN IN FISHERIES :

Identifying the training needs of women in fisheries very much depends on the perspectives of the planners or trainers about the society and existing development paradigme. Generally planners and policy makers speak about 'integrating' women in development and the development interventions focuses on improving the daily 'conditions' of women's existance. People are helped to 'survive' in the existing developmental process. Women in Fisheries who are being marginalised by the so called development in the sector are trained" in better fish preservation methods, in improving the hygienci quality of products, in better fish handling practices, improvement of traditional technology of processing etc. While these are important and needed, they are not sufficient. The macro development process which affects women's position itself is not challenged. Kate Young feminist writer makes the distrinction between the "condition" and 'position' of women. Condition is the material state in which poor women live-low wages, poor nutrition, lack of health care, education etc. Position is the social and economic status as compared to men. Most training approaches focuses on the former on improving the daily conditions of women's existance. But they lack the perspectives and skills to enable women to critically analyse power structures and social inequalities and act on them.

In this context, it is also relevant to understand the differentiation made by Maxine Molyneux (1985) about women's interests and needs. She makes a distinction between "practical gender needs" and "strategic gender needs".

"Practical gender needs are those formulated from the concrete conditions women experience, in their engendered position within the sexual division of labour and deriving out of this their practical gender interests for human survival. They are usually a response to an immediate perceived necessity which is identified by women within a specific context" ex. fuel, water, income-earning activities etc.

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"Strategic gender needs are those needs which are formulated from the analysis of women's subordination to men". It challenges existing structures and gender relations e.g." abolition of sexual division of labour. alleviation of burdens of domestic labour and child care, removal of descrimination as regards to rights to property, assets, access to credit, adoption of measures against male violence etc.

The training needs of women in fisheries can now be identified as follows :

- Practical gender needs women fulfil the triple roles of managing the household, the fishery related actities as well as managing community services like drinking water, health, housing education etc. These necessitates certain skill training to better their income and help them to meet the immediate needs of survival. Basic services like drinking water, sanitation child care, housing etc. are also needed.
- 2. Women are also involved in marketing, net-making, acquaculture etc. These income earning activities are influenced by the macro developmental processes and women are being marginalised. Women need skills to analyse the present situations and problems, challenge their invisible and unrecognised status and acquire skills of mobilisation and collective action.
- 3. The reality of gender appression is an inter-sectoral phenomena and women in fisheries need to analyse sexual division of labour and gender oppression and forge alliance with other movements. This is addressing their strategic gender needs to change their 'position' in society. Such struggles also have to be linked up to broader struggles for the transformation of society.

#### PROCESS OF TRAINING :

The terms "participatory training" 'empowerment' 'consciousness raising' etc. are used often to describe the process of awakening. Women to analyse and understand the realities of their existance, see the inter connections and mobilise towards action.

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Generally we speak of 'giving training by an expert to. a group of people (receivers). This process lacks participation and learning from one another. The participants hardly have any opportunities to share their speriences and to discuss whether the "experts" opinions are meaningful or relevant to them.

The poor and oppressed groups may be illiterate but they are not ignorant and unintelligent. They posses a wealy of knowledge and practical experience. So the best approach of interaction and training should be of a participatory nature where the facilitator also is willing to learn from them and respect their knowledge and experiences. The 'searching together' can be possible only if an atmosphere of mutual trust and acceptance is created and where the women feels comfortable to share their ideas and points of view. The following points have to be kept in mind while designing training for women.

- Women in fisheries is not a homogeneous category.
   Therefore the training needs of various groups, approaches, processes etc. could be also different.
- b. Women are generally overburdened with work, managing both home and income earning activities that it is difficult to draw them into a training programme. It is important that the sessions are very interesting where their active participation is ensured and they experience some benefits like added practical knowledge, elevation of social status, better skills or strength of collective action.

c. Women are often weighed down by feelings of insecurity and negative self-image, as a consequence of years of cultural conditioning. So it is important to work towards a better self-image and self-acceptance as well as create an atmosphere of trust and confidence so that their active participation is ensured. Participatory training should enable the women to discover their own abilities and potentials and generate self confidence. This will surely pave way for a deeper and sustained involvement in action.

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The focus of such training programmes is to help women to understand and analyse their socio-economic, political, cultural realities and move on to collective action to regain their status and equal position in society. It is strengthening and enabling women to challenge the existing model of 'development' which marginalise s and dehumanises them. Since women experiences oppression differently according to their caste, class, cultural realities and production process, they have to challenge oppressive structures and situations simultaneously at different levels. In the development circles such a process in often termed 'empowers ment' to denote the powerless gaining control over resources and decision making. 'Power' is identified less in terms of domination over others and more in terms of gapacity of women to increase their own self-reliance and collective strength. This is identified as the right to determine choices in life and to influence the direction of change, through the ability to gain control over crucial material and nonmaterial resources. (Caroline O.N. Moser). It is non-hierarchical, and is about sharing, giving, creating, developing the potential of every human being.

STRATEGIES AND METHODOLOGIES :

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Here I would like to share briefly our experience of working with women in fisheries and their process of empowerment.

Kerala has a coastline of 590 Km. and about 8 lakh people are depending on fishing women comprises 49% of the total fish-workers population. They contribute a significant share of the income in the fishing families most of which remain invisible and unaccountable. As mentioned earlier, the women fishoworkers are being slowly marginalised by the so called 'development in fisheries'.

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But the artisanal fishing community in Kerala has made waves of history by mobilising into a non-party political movement to demand protection and conservation of natural resources of sea. Many of the existing developmental approaches have been challenged and the fishing community is united to protect the 'commons'. Women are in the forefront of these ecological struggles. They are very militant and active and have also successfully waged struggles to demand transport facilities to go to market, against unjust market taxes, harassment by tax collections etc. Their struggles also have been against wife beating and male violence, police atrocities, neglect of girl child, rape and dowry deaths etc.

What has been the process of training and mobilisation of women ?

The women fishworkers are formed into group of 30-40 a. women in their own respective villages. These registered organisations have elected committees who meet regularly (bi weekly) and prepare the General Body which is conducted every month. Women community organisers of an NGO assists them in the process. All relevant records are maintained. These women's groups become the training forums where women. can exercise leadership, talk about their problems and issues and learn skills of maintaining records take collective decisions etc. Local issues and problems are discussed here and action taken on them. Saving and credit programmes, income generating programmes, childrens educations programmes like creche, Balavedi etc. are conducted under the auspicious of these groups. Such groups are functioning in Trivandrum District since early 70's.

b. Mobilisation :

In 1979, the women came together to form a district women fishworkers organisation to collectively take up some of the common issues related to their occupation as fish vendors. The initial demands and struggle.were for transport facility to go to market. After 2 years of struggle, special Õ.

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buses were provided for the women fish traders to go to market. This boosted their self-confidence and they have waged struggles against unjust market taxes, harassment from merchants and tax collectors etc. These process of struggles had been a great learning experience in understanding structures of oppœession and inequality. When in 1980, fishworkers movement became active to demand protection and conservation of marine resources women also became activie participants in the struggle.

c. Coastal Women's Front :

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Although women were experiencing harassment in the family and outside in the early periods these were considered as 'pesonal' and family issues. The rising gender awareness in the country influenced the thinking of the animators and facilitators and since 1984 such strategic gender issues were also included in discussions and trainings and taken up in the local groups and in the fishworkers movement.

But when certain broader feminist concerns like 'sati', police atrocities in a village in Kerala etc. took place, the need was felt for a platform to raise such gender specific issues which were not related to the fisheries sector as such and the coastal women's front was born. This is an informal network or platform for action.

Within the fishworkers movement, serious discussions took place about the taking up of specific issues of women and how they get often marginalised. The need for a women's subcommittee within the broad movement to be a watch dog is accepted now and a process of consciousness raising for men in the movement is going on.

d. Training Programmes :

Training here refers to the formal and informal process of learning together which took place in the last two decades with the women in fisheries in Kerala. Various forums like local organisations, fishworkers movement, struggles etc. were used to communicate and intemact with women. Women's practical and strategic gender needs were given equal importance and the process of doing so was given particular attention.

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Formal training sessions of different durations were also conducted for various groups.

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- a. Women animators or community organisers are trained in organisational and communication skills, analytical understanding of micro and macro processes in society, trends and changes in fisheries, gender perspectives etc.
- b. The elected committees of local organisations are given special training in managerial and leadership skills etc. organisational process etc.
- c. Selected women undergo training sessions of 10 days (1 day each month x 10 month). This is a long process of equipping them with self-knowledge, societal analysis, gender perspective, mobilisation skills etc.
- d. One day seminars are regularly conducted for men and women on current issues and topics.

In all these training programmes with illiterate women who are burdened with triple work burden, it is always advantageous to use exercise, games, charts, posters, slides, video films, case studies, stories exposure visits etc. to communicate ideas and exchange information. The best approach always is to move from familiar situations and experiences to unfamiliar ideas and concepts. The starting point usually is sharing their own experience as women. As atmosphere of confidentiality and mutual acceptance is created by the facilitators. Women rarely get such occasions to reflect on their own lives seriously and this opening up itself has the effect of a 'catharsis' and the sharing of suffering and pain creates a feeling of comradship and solidarity. This and some exercises also lead to self recognition, positive self-image and stimulates critical thinking.

Certain common issues and problems are elicited and identified from this life story sharing process. This then becomes the basis for social and gender analysis. Gender is the understanding of how the relationship between man and woman is socially constructed and in which women occupy a (3

secondary position. These relationship also interact with caste, class, race and other social relationships in marginalising women.

The next step would to be understand origin of caste, class and gender oppression - the historical evolution of society.

From this, tools of social analysis is developed. In the existing social analysis, production of commodities and its labour process are investigated and on the basis of this strategies for social change are evolved. But a gender perspective social analysis also want to examine the labour within the family in the production of life and see the inter-linkages between the two. Patriarchy is defined as the concrol of women's labour, sexuality and fertility. Use of case studies and stimulation exercises helps to bring out values, attitudes, priorities and practices of the group.

Analysis of the trends in fisheries, relationship to nature and resources etc. are also examined. In this process it is very valuable to document strong oral traditional knowledge existing in these societies.

The critique of existing developmental models leads to discussions on alternatives - alternative models of development, power relations, leadership styles, gender relations etc.

Mobilisation for action locally, regionally and in alliance with others groups emerges from this. Training leads to increased knowledge and empowerment and this is turn leads to action and mobilisation for a more human, participatory and sustainable society where gender justic is achieved and where all inequalities cease to exist.

#### SUMMARY AND CONCLUSION :

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As this paper shows, the training needs of women in fisheries varies with the production process, the socioeconomic and cultural backgrounds etc. The identification of such needs depends also on the perceptions of planners, policy makers, village level change agents or facilitators. If the focus and goal of the training programme is changing the 'condition' of women's daily existance and assisting to meet practical gender needs, then their training needs may be identified as acquisition and enhancement of skills in fishery related takks like marketing, processing, net making, acquaculture or other income related activities. This will also be helping them to efficiently fulfil their roles as wives and mothers. The outcome will be the integration of women in the ongoing development process, helping them to survive.

Complimenting this and at times in contrast to this is the focus on changing the 'status' of women or attending to their strategic gender needs. Such training process will facilitate critical and analytical skills and process of change rather than helping women to survive in an oppressive and exploitative social structure. The emphasis will also be on developing alternative visions and models of development and building up collective action and organisations which will sustain such a process.

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METHODOLOGICAL ISSUES EMERGED WHILE STUDYING WOMEN IN COASTAL FISHERY OF SAURASHTRA IN WESTERN INDIA. X XX XXX

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# INTRODUCTION :

In view of the length of the coast line, marine fisheries in India, and in Indian context, fisheries in Gujarat and in Saurashtra hold paramount importance. Fishing is identified as a decentralised sector activity and it falls within Governments priorities so far as its socialistic goals are concerned. Such goals, however, have not excluded Indian fisheries from the development process. Government has gone far in favour of introducing scientific technologies in fish catch and processing activities.

Fishing in India and elsewhere has remained, still, relatively and familial, decentralised and marginal occupation. This is largely because of the given properties of marine eco-system. Marine eco-system compells those who depend on

X Presented at the "Workshop on Methodological Issues on Studying Women in Fisheries in India&. 28,30 August,'93 WHODSIC (Ford Foundation). Department of HDRS, Faculty of Home Science, M.S. University, Baroda.

XX I am greatful to Professor K.K. Khakhar, my academic collague in fisheries related researches, for going through the draft of the paper and providing resourceful discussion.

XXX References have been purposely not cited.

marine resources to stay away from the landed communities. They have maintained their traditional way of life to a great extent. They may be found relatively more isolated, decentralised and marginalised communities. Their traditional way of life has helped them maintaining bonds, coherence and integration among themselves. Fishing is considered as sinful and unclean occupation by traditional Hindus. As a result, fishing and non-fishing communities are found keeping distance from each other based on their perceptions. Perhaps for the reason that these communities are not easily accessible, not many social scientists have ventured to study them.

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In these contexts, the organisers of this workshop deserve special appreciations for holding he workshop on Methodological Issues on Studying Women in Fisheries in India.

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# BRIEF EXPLANATION ON CONCEPTS :

Before identifying methodological issues, I would prefer to clarify some of the concepts related to my presentation. Any researcher, while developing the problem of his/her study, has to take into account atleast preliminary theoretical aspect or an approach to the study. Then, method or generally named as methodology follows. The concept of methodology, as In understand, means a scientific study of methols. We know that there are various methods namely. comparative, experimental, historical etc. This means that methodology is an important branch which studies methods of research scientifically. I would like to emphasise here the point that most of the beginners, while reporting their researches use the concept methodology sysnonymously with methods of data collection. Methods of data collection include various tools and techniques used in collecting data. They are interview, questionnaire, measurement sales/scaling techniques, sampling, observation, etc. These tools and techniques are not methods of research. They may be called

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methods of data collection. It is known that methods of research and methods of data collection are free from issues and problems.

This is suggestive of the fact that both are two different things. However, the difference between two is not an absolute one, I thetafore, puzzled, what do our workshop organisors have in mind about the meaning of methodology. I pressume, they mean it methods of research. On this presumption, my presentation will be limited in scope confining to the problems of methods of research only. I shall discuss the problems of methods of research, namely, comparative and interdisciplinary, taking islustrations from our studies.

The concept of fishery also needs to be diwcussed. There are various firms of fishing; coastal fishing/marine fishing and inland fishing, mechanised fishing and nonmechanised fishing, off-share and deep-sea fishing etc. etc. When we talk of fishery, we should take into consideration all these main forms of fishing based on fishing techniques. There are a number of shiermen communities based on caste, sub-caste, creed and region etc. found earning their livelihood through fishing activities. Fishing is their major family occupation and females have been found engaged in various operations of fishing. When we say studying women in fishery, it means studying females involved in all these various forms of fishery-operations. Because, each such form indicates distinct social ecological and operational situations. Situation in marine fishery is different from the situation in inland fishery. My presentation, therefore, is confined to the issues of studying women in marine fishery only.

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# A. Interdisciplinary Method :

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I. jointly with K.K. Khakhar of Economics Department of our University have undertaken an UGC financed research project on Female Work participation in fishing activities and its social implications taking the case of Saurashtra Coastal fishery. Our main aim to undertake this research was to understand the impact, if any, of familial occupational participation of females on their own social position in a largely male dominated Indian Society. We attempted to know this through females' level of participation in fishing related activities and their involvement level in a decision taking process in family related activities and their attitudes and opinions about their social position. In this study, we used interdisciplinary method combining two disciplines, namely, Sociology and Economics. Work participation falls in Economics while decision taking and social position fall in the area of sociology. The problem that we faced was about integrating/synthesing the collected data in a theoretical from that we accepted. The collected data should be integrated in logical and meaning full manner. This we could do by constant discussions and reading offer such studies and thereby learning something about each other discipline.

B. Comparative Method :

As a part of the study mentioned above, I prepared and published one paper, with a comparative method, on malefemale role allocation, conflicts and adjustment among fisher folks of Saurashtra and of the west. It analyses the traditional role of females as house-wives. When her husband goes out far a longtime fishing, a female feels here self free from a traditional role of a wife. During the

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abscence of her husband, she performs other roles, including those usually played by her husband. When he is at home. When husband returns back, she has to take up the traditional role of a wife again. This process of shifing of roles is characterised by role strains and adjustments. This has been found from the studies on the fishermen communities of the Western Countries. I wanted to know and learn about such a process among the fisher females of Samrashtra and I therefore, did a comparative study. The methodological issues found are as follows :

Hypothetically speaking, if some one is studying with a comparative method, he/she has to take time dimension into consideration. For example, takin a base year 1947 one can study a community of today, comparing the past with the present, to locate the change resulting from the impact of development plans. One can also study in the same time, taking the units/results of other studies for comparision. One can also study, taking the units of other studies of other areas where in space dimension in involved. In both the cases, some problems and issues are involved. In my above referred study. I have taken the role behaviour of fisher females as a unit for comparision, dependent on time and technology levels of fishing. The problem that I faced was about the time and technology of shing. In the developed countries, there are sophisticated trawlers, doing deep-sea fishing. Fishermen while fishing remain abscent from their families for about a month. While in Saurashtra, there are trawlers, but they are not like that of sophisticated trawlers of the West. They do off-share fishing but not deep sea fishing. As a result, fishermen remain abscent maximum for a week. Moreover, socio-cultural and legal environment is also different in Saurashtra when compared with that of the developed countries.

In a strict sense of the term, I found the difference in time of male abscentism from family, different trawlers based on technology and the different socio-cultural and legal environment which influenced the comparision attemped to analyse the role behaviour, strains and adjustments of fisher-females of Saurashtra with their Western counterparts.

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## A FINAL NOTE :

In the foregoing presentation, I have identified issues emerged in interdisciplinary and comparative methods of our research on fisher females of Saurashtra and not the issues emerged in methods of data collection. The concern here is how to address the methodological issues in studying women in fisheries. The perfections, to my opinion, can be achieved in a laboratory situation in methods of research in natural/ pure sciences like chemistry, physics etc. But as we " know, social sciences deal with human stuff, a living orgamism having culture-bound feelings and perceptions and thereby interacting with each other. In these situations, it is difficult to achieve perfections in methods of research, like those of experimental and comparative methods in natural sciences. However, our intention should be to achieve highest level of validity in our generalisations.



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