

Agenda

Women's Livelihood in Coastal Communities: Management of the Environment and Natural Resources

*Venue: Ecumenical Resource Centre, United Theological College, Millers Road,
Bangalore
June 6, 2005*

Session I

9.30 a.m.

Welcome and introduction to the workshop.....Prof A. Vaidyanathan, Chairperson, Board of Trustees, ISST

10.00-11.00 a.m.

Presentation of background papers:

Coastal communities in the Asian region*:... ..Chandrika Sharma, International Collective in Support of Fishworkers, Chennai

Coastal communities in India: women's livelihood and resource management*: ...Nalini Nayak, Sakhi Women's Research Centre, Tiruvananthapuram

*(*titles to be confirmed)*

Session II

11.00 a.m. -1.00 p.m.

Discussion

1.00-2.00 p.m. Lunch

Session III

2.00 – 4.30 p.m. Developing ISST's Work Programme in Bangalore

2.00 – 2.30 p.m.

ISST Research 1980-2005: an overview: Bhuvana Krishnan

And future: Ratna M. Sudarshan

Session IV

2.30-4.30 p.m.

Panel: (to comment on the day's discussions)

Sumi Krishna, Leela Gulati, Devaki Jain

Discussion

4.30-5.00 p.m.

Summing up

Report on ‘Women’s Livelihood in Coastal Communities: Management of the Environment and Natural Resources’

Seminar organised by the Institute of Social Studies Trust, Bangalore, June 6, 2005

I.

The seminar was flagged off by presentations made by Chandrika Sharma, International Collective in Support of Fishworkers on ‘Women of coastal fishing communities in the Asian region: An agenda for research’ and Nalini Nayak, Sakhi, Tiruvananthapuram, on ‘Sharpening the interlinkages: towards feminist perspectives of livelihoods in coastal communities’. A brief presentation on coastal Karnataka was given by Prof Ramachandra Bhat, Professor and Head, Department of Fisheries Economics, College of Fisheries, Mangalore.

With these presentations and background papers, the discussions covered a wide area and a number of themes. This note attempts to summarise the issues discussed under a few broad heads, as a first step to developing a research programme on this theme.

1. Globalisation, economic growth and coastal communities

The systems of production and marketing of fish have evolved over the years into complex networks and commodity chains, generating livelihoods all along the way. Globalisation and the emphasis on economic growth has impacted on this in many different ways. For example, a well established domestic chain with ribbonfish, which started at Gujarat and the product was sent to different parts of the country, including Kerala and the North-East has been disrupted – affecting both livelihoods and domestic consumption – with the export of this fish variety. (Ribbonfish, unlike some of the other export species, has a good domestic market, so that its export has greater livelihood repercussions). New chains have emerged, such as with the export of ribbon fish from Gujarat to Japan and China. The changing economic situation has had several different aspects to it. These include,

- Changes in technology used, which today is more aggressive, mechanized, and whose use has altered the patterns of landing with a concentration of the activity in harbours instead of the earlier dispersed activity across villages.

- Change in consumption patterns of the fishing community – previously, the best fish was kept for the home, now it is sold. This is also because the investment required to fish competitively has gone up, as has indebtedness, hence the compulsion to increase returns from the fishery. The nutritional intake in households and specially for women was always low on non-working days; however there may now be an impact on all days. The overall impact on the standard of living is not clear.
- Women earlier had easy access with boats landing in the village; with increasing trend towards controlled landing at specified places, only some groups of women are able to continue the active engagement in fish processing and marketing.

The implications of these changes are difficult to communicate effectively in the absence of data on earlier situation and the impact of policy changes. But clearly there have been changes in all aspects: production, marketing, commodity chains, employment/work, consumption patterns. Some groups would have gained and others lost, but by and large women have been adversely affected.

2. Gender and social implications of changing fish economy

The changing patterns of production and marketing have been associated with a wide range of social changes too. It is reported that the sex ratio in fishing communities in Kerala is low. There is an increasing incidence of dowry, fundamentalism and a more aggressive stance towards women within the home. This community faces many kinds of risks, including the nature of the work itself, political boundaries at sea, natural disasters of which the tsunami is an especially horrifying example, and these result in a relatively high death rate for men. What coping mechanisms exist, what is the access to social security provision, needs to be explicated. There is reported to be a high incidence of indebtedness. Inter generational change is taking place, with changing aspirations. The problem of non enrolment or early drop out is especially acute among young boys who start young at sea. All of these issues call for deeper study to understand the kind of social transformation or change that is accompanying economic change, and its impact on intra household relations.

3. Organising and Voice

Fish workers movements are fairly well established and are perceived as strong movements. At the same time their role in voicing the problems faced by the community has been partial. For example, some demands made by women (such as that some varieties of fish should not be exported and should be reserved for domestic consumption) have not been taken up by the groups, perhaps because men and women are differently located along the commodity chain and perceive the benefits differently. At a micro level, the weak situation of women thus translates into a weaker voice. At a macro level, the groups have not been able to influence the trading agreements regionally or internationally to take adequate note of the emerging problems.

4. Governance and institutions

Coastal communities are the site of many different kinds of institutions of governance, formal and informal. These include fish workers movements, caste panchayats, and others. The formal Panchayat Raj institutions also exist although there is no evidence that they have a concern with issues of livelihood or natural resource management. Other institutions promoted and supported by the government include fisher women's co-operatives, self help groups, Fishermen's Guidance Bureaus. There is need to study all of these to understand to what extent the structures are responsive to, and able to address and articulate the needs of the local community.

5. The role of the Government – policies and programmes

There are two different aspects to this – one is the programmes and schemes introduced by the government and the need to evaluate their design and impact. The second is the fact that major decisions relating to the use of coasts are not within the ambit of local government control, making it very difficult for local voices to have any say. Ways of sensitizing the fisheries department could be explored. There is need to facilitate dialogue with government, to examine the assumptions on which the official approach is based, and be able to identify clearly where the differences lie.

6. Beyond fishing

While fishing has been a major driver in the economy of coastal areas, coastal communities include people dependent on a range of other sources of income, including agriculture, wage labour, salt extraction,

coir making etc. There has been even less attention paid to these groups. A range of other skills exist, and need to be introduced and strengthened; and there is need for diversification and multiple sources of livelihood. There are also significant differences from one place to another in the people who live there, their customs and traditional occupations. Riverine routes are a part of what is happening in the coasts; an ecosystem approach is essential in any study.

Overall, there was an agreement that an eco system framework is needed to explore these issues further. Apart from the physical aspects of an eco system, the social aspects – the nature of the groups, communities and livelihoods, and the interdependence between them – needs to be documented. It was also felt that a ‘gender lens’ will enable us in examining both the ground reality and the macro picture. Finally, while data is needed at the micro level, it may be that for effective advocacy we should think at national/ regional level.

II.

This seminar was held in ISST’s Silver Jubilee year, and thus also provided an opportunity for stock taking and planning for the future. Bhuvana Krishnan presented a brief overview of ISST’s research over the period 1980-2005. The underlying principle of ISST’s work, which has tried to ‘triangulate action, research and policy’, has been the recognition that a strong backing of research drawn from the varied and lived experience of men and women is essential to advance activist causes and sensitive policy making.

In holding this seminar, ISST’s hope is that the research agenda that emerges from the discussion would help to shape our research programme in Bangalore.

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Institute of Social Studies Trust The Last Twenty Five Years

Bhuvana Krishnan ¹

1. INTRODUCTION

1.1 Leading and Developing a Research Agenda for Women

As a pioneer in the field of women's studies, the Institute of Social Studies Trust has over the years taken major strides in initiating, promoting and disseminating documentation and research on a variety of issues pertaining to the status and condition of poor and marginalised women. The issues have ranged from looking at traditional practices in health and livelihood to incorporating the concerns of women into development planning. While almost all areas pertaining to women's lives have been touched on, by and large there has been a focus on four major areas of concern, namely, women and work, governance, health, and economic reform. This has arisen largely out of the needs and demands of "end users" including both government agencies and poor women themselves. A primary aim of ISST's work across the spectrum has always been to create a stronger voice for women, to raise their concerns in many forums, bringing a policy influencing focus added to the work on the ground. In this sense the end has been to knit micro and macro concerns into a holistic perspective for the greater benefit of poor women.

The purpose of this note is to provide a birds' eye of view of the work done over the last twenty-five years. While women' studies have been a major focus of many organisations, big and small, ISST's contribution in this field has been important, if only because of its attempt to lead the field in certain areas such as women's work and the link between fertility and socio economic status, which have since become better addressed and documented. Thus for instance, the research done on time allocation was the first of its kind, influencing major changes in the manner in which women's work was accounted for in government statistics. The use of case studies has also been a distinctive feature of ISST's work, adding a more qualitative dimension to its studies without diluting their rigour.

1.2 Building an Information Bank and Knowledge Base

A very important part of the organisation's effort has been directed to garnering and collating a vast quantity of published and unpublished materials on a range of women's

¹ Consultant, ISST

issues and concerns. Its resource centre has gathered a growing reputation over the years making it a much sought after and widely used source of information and knowledge for students, researchers and activists both in- country and abroad. The knowledge bank in ISST today continues to be of a high quality, promoting and serving the cause of poor women. Some of ISST's publications, such as those on local governance, have been seminal in nature, raising public awareness and debate on an issue that is of vital concern in furthering poor women's interests.

1.3 Activism in Research

As an "*activist*" organization, ISST's effort has been to produce rigorous research with a human focus. Its endeavour has always been to try and focus on areas and themes that have practical relevance for women, not as isolated beings but as active and significant contributors to the larger community and society. That women lack a voice, that they are overburdened, under-resourced, marginalized and oppressed is a truism. That they are at the same time the engines that power economy and society, and the biggest force for change, is less acknowledged, and this has formed a corner stone of ISST's philosophy, permeating all its work.

1.4 Linking the Micro to the Macro

While ISST's grasp of the ground realities and its day to day engagement and involvement in the field has never flagged over the years, the outputs of this work have been increasingly carried, whenever and wherever possible, to larger forums, in order to give them a larger hearing and focus more attention on these real concerns. This is reflected in its being granted consultative status with UNESCO for its initiative in placing women's concerns higher on the agenda of development initiatives. ISST's focus in knitting together the micro with the macro has been a consistent thread in all of its work, thereby ensuring an optimum convergence between field initiatives, and policy advocacy at a larger level. In terms of outreach, ISST's work has been the bedrock for its participation over the years in a variety of regional and international events and initiatives. The organization has played a key role in the development of international forums such as DAWN (Development Alternatives for Women in a New Era).

1.5 Promoting Alternatives

In an era where development is increasingly a search for alternatives, ISST has been in the vanguard both in fostering and pursuing alternatives at the field level as well as in improving the methods and practices of development planning. Examples at the ground level range from the work done in developing training models and support initiatives under the Mahila Haat programme for women producers, to increasing the uptake of alternative technologies in sanitation and cooking facilities in villages. In relation to development planning, ISST has consistently over the years tried to input the results of its work and the concerns raised as a result, into the planning and budgeting processes of the government. A variety of studies done over the years have sought to increase the

accountability of the government in incorporating and addressing directly the concerns of poor women not only as targets but agents of the development process.

1.6 Local Relevance and Participation

While pursuing its research agenda, ISST has always chosen to work closely with local organizations to ensure the appropriateness and applicability of the work done. A fundamental principle governing its research has been to ensure that the communities and families involved have been aware of the purpose of the research and been able to input into its design so that the outputs and outcomes can have as much direct relevance and applicability in their day to day lives as possible. It is in this sense that ISST has also engaged in action research whereby initiatives at the field level have been documented and researched over the years to map their progress and efficacy in bringing about real changes in people lives. The effort has been to chart real experience, drawing out the lessons learnt with a view to developing better strategies and methods. Looking at the evolution of the organisation's work over the years, while in the initial years there was a greater focus on short path breaking studies, this ceded over the years to including broader and more reflective studies. Both fundamental and applied research has formed part of ISST's agenda all through the years. As a non-academic organization, ISST's focus has been largely in serving the needs of poor women rather than being led by current debates of a purely theoretical nature. The work itself has been done in a manner to ensure its rigour so that it has had the potential to influence thinking both in academic and non academic circles. .

2. REVIEW OF RESEARCH AND DOCUMENTATION

In the sections below a review of ISST's research and documentation studies is provided, encapsulating the contents of each study to give a flavour of the organisation's work over the years. In terms of subject areas or "themes", the studies that have been reviewed are grouped under the three broad heads of Women and Work, Governance and Health.²

2.1 Women and Work

The issue of work and livelihood dominates all facets of poor women's lives. That much of this work is largely unremunerative, repetitive and often backbreaking is a matter of serious concern for all those working towards ameliorating the status and condition of poor women. Most of women's work is still not adequately covered, let alone acknowledged in the official statistics. The studies below have been done over a span of years starting as early as 1979. They include studies that look at the problems of fisherwomen, women working in sericulture, women engaged in small forest based

² This review is based on studies conducted by the office in Bangalore, and excludes research undertaken at Delhi, with a few exceptions. Consequently, the fourth area of ISST's work i.e. gender and economic reforms, is not discussed in this note.

enterprise, and women producer groups engaged in petty trade and other small enterprise.

Impact on Women Workers, Maharashtra Employment Guarantee Scheme – A Study (1979) This study was commissioned by ILO to look at the impact of the EGS on women workers, with a view to suggesting improvements in the scheme's design and implementation. The recommendations made included ensuring that differences between male and female workers be accommodated, changing the nature of the public works undertaken and the ratio of female/male labour, improvements in the payment system to ensure direct food needs of women and their families were met, as well as greater integration with other welfare schemes.

An Assessment of Women's Roles – The Karnataka Sericulture Development Project (1982) The study examined the Sericulture Development Project of the State Government with a view to understanding the benefits accruing to poor households, and women in particular. It suggests measures such as the inclusion of more female functionaries, better access to credit and appropriate training facilities towards this end.

Inter State Tasar Project: Field Survey (1982) The purpose was to look at how the tasar development project run by the Development Corporation of Vidarbha could improve the lives of tribal families. The findings suggested various improvements including a better understanding with the forest authorities, granting of leases to producers directly, greater protection of their legal rights, more linkages with other development programmes, provision of adequate credit and improved technical support.

Fisherwomen of Tadri: A socio-economic survey (1985) This survey was undertaken for the Indo-Danish Fisheries Project to assess the impact of modernising the fishing industry in the Tadri area of Uttara Kanada in coastal Karnataka, especially in terms of the effect on poorest households, and women in particular. The survey showed that mechanised fishing had raised fish outputs but a good part of the benefits had accrued to middlemen and agents. Despite this, incomes of boat owners and labourers had increased, but this had not necessarily resulted in increase in quality of life of the households due to problems such as alcoholism. The introduction of cooperative societies had also not been enough to displace the middlemen. Women in particular had not benefited and it was vital to promote additional work opportunities and improve their work environment.

Small Scale Forest Based Enterprises with Special Reference to the Roles of Women (1987) The study commissioned by the FAO sought to analyse the nature of the roles of women in small scale forest based enterprises in Karnataka and to present a tangible set of policy recommendations to strengthen these roles. The study was done at three levels: national, Karnataka state and micro level case studies. At the national level, the study found that participation of women was higher where local level technologies and skills

were used and limited to access to markets was a major reason for exploitation of women erosion of traditional rights over forest based produce had affected women adversely and very few attempts had been made to provide training or some sort of security to women workers. At the state level, the study recommended of the study at the state level it was suggested that there be a shift from major to minor forest produce, a greater emphasis on small rural based units and greater incentives from government to cooperative and self employment based activities as well as family labour. The case studies looked at the lacquerware artisans of Channapatna and uppage collection in the forests of North Kanara.

Impact of Sericulture Pilot Project in Kanakapura (1989) It was found that the introduction of female extension workers to provide training and support services to women engaged in sericulture had improved rearing practices, but by and large their services had not been found to be as helpful as expected, by the beneficiaries themselves. This had possibly to do with the fact that decision makers were primarily males in the households and that the take up of technical knowledge was a slow process.

Designing an Implement to Reduce the Strain on Women in Transplantation of Paddy Seedlings (1989) The aim was to undertake an appropriate technology project to design a device which would reduce the drudgery and health hazards of women while simultaneously improving their productivity. A review of various implements from across the country and world was undertaken supported by field research, in order to design a field model and test it.

Study on Shandy Women vendors in Thally Block (1989) The study looked at situation of shandy women, their problems and needs, in Dharmapuri district in Tamilnadu as part of the Mahila Haat initiative of ISST that sought to provide training and support to self-employed women producers. The study found that, although vending provided very low income in relation to the long hours and physical effort required, it was still a chosen option because of the lack of alternative livelihood opportunities and general backwardness. The gradual disintegration of the shandies as bigger markets displaced them was a major problem. The study suggested the situation of the shandy women could be improved through providing information of how to get credit support at reasonable rates and training in more viable livelihood opportunities.

Sustainable Development through Natural Resource Utilisation (1994) This case study done in Karnataka looked at the availability and rational utilisation of natural resources in two villages in Kanakapura with a view to drawing up and actioning a plan for their optimum use, with the involvement and participation of villagers. This included various measures such as improved agricultural practices, introduction of additional livelihood options and local self management of common property resources.

Development of Women and Children In Rural Areas, DWCRA – Preparation of a Plan with Focus on Women (1984) This study involved preparing a block plan as a model for demonstrating the methodology of working from below while also ensuring the workability of the plan through actual implementation on the ground. 400 households were covered in across 20 villages in Chikmagalur Taluk in Karnataka. The study findings indicated that many of the activities under the DWCRA scheme tended to be stereotyped and it would be better to take up more locally viable options such as poultry farming and rabbit meat export.

Progress Report on Mahila Haat (1989 and 1990) These two reports looked at the progress in the activities of the Mahila Haat project focusing on rural women producers in the states of Uttar Pradesh, Bihar and Tamil Nadu. The main purpose of the project was to give support and training to women producers, including encouraging them to form groups and the setting up of a sample room cum facilitation center to display their products. Apart from this surveys were conducted of the rural haats in different locations in the above mentioned states. The support provided to women producer groups included assisting them in formulating project proposals, accessing credit and helping them build up local market.

Workshop on Rural Women and Income Generation in Uttar Pradesh Participants included voluntary agencies, state government and local level officials among others. As part of the outcomes of the workshop it was suggested that income generating programmes of the government such as DWCRA for instance should be developed as self-help programmes and for the grass root level. Voluntary agencies should play a more important role given their close contact with the people. It was felt that income generating schemes promoted by the government in UP have not been quite successful for various reasons, such as problems in marketing, difficulties in getting loans, and activities that are not adapted to the skills and capacities of the beneficiaries.

Southern Regional Mahila Haat Workshop, Thally Tamilnadu The aim of the workshop was to interact with women engaged in various activities such as vegetable and flower vending, blanket weaving and beedi rolling in order to identify their specific problems and needs. Among the outcomes of the workshop it was suggested that a study be done on the issue of shandy land and its control by women. Other measures suggested related to better use of credit, securing identity cards for bidi rollers and possibilities for improving marketing.

Buying Time Against Poverty Report of the Mahila Haat Workshop for Women Producers Groups in Bihar (1989) The focus of the workshop was on Bamboo and Sikki workers, looking at their problems, sharing experience and suggesting concrete improvements. It was found that sikki work was very low paid but given the lack of viable alternatives there was a need to improve production and marketing. It was suggest that groups should be organised and supported to strengthen them.

An Appraisal on Mahila Haat/CSG Joint Action Project Thalli The study was conducted to explore and assess the feasibility of selected income generation activities that could be taken up by women based on their interest, capacity and experience. The activities studied in detail included agarbathi making, blanket weaving and papad making.

Technical Seminar on Women's Work and Employment (1982) – The Nature of Household Work. This paper presented at the seminar examines the nature of household work and how this has been influenced by cultural and social traditions, as well the power of the media, in various societies. It shows how, in general, household work done by women has been devalued and made to appear as insignificant. It suggest various methods by which household work can be calculated and given a tangible value.

Technical Seminar on Women's Work and Employment (1982) - Victims of Old Fashioned Statistics This background paper shows how women who support themselves or their families as farmers or agricultural workers are statistically invisible. Since they do not figure in national statistics, women are too easily excluded from the national development planning. The study suggests the need for a new statistical outlook. It looks at various methods by which the work done by women can be measured, and suggests how this can be done better, building on standard measures of economic activity in order to ensure that more useful data can be produced for planning purposes.

Technical Seminar on Women's Work and Employment (1982) - Sources of Variation in Female Labour Force Participation: A Decomposition Analysis in India The paper brings out the fact that detailed analysis of employment data shows that there has been a drastic reduction in the number of women workers as well as in their work participation rates. The main elements responsible for this decline is the substitution of male workers for female ones. An analysis is presented of the factors underlying this change in the female work participation rate.

Technical Seminar on Women's Work and Employment (1982) – A Study of Energy Use Patterns in Garhwal Himalaya The paper summarises a study done in the Garhwal hills. It identifies the kind and quantity of energy resources in use for domestic purposes, agriculture and industry. It looks at the nature of their use and the cost of these resources, and how the demand for these in the future can be met in alternative ways.

Concern and Conflict - Women's Work and Child Health and Development (1993) This study, sponsored by Ford Foundation, sought to evaluate the effect of the type of work women performed on the health and well being of their children. Almost 300 women in eight villages of Kanakapura taluk were studied, all of them mostly from the agricultural community. Women were classified as self employed, wage labourers, unpaid family workers and housewives. There were few women in the first and last category and there was a lot of shifting from one category to another. It was found

almost all households were indebted and that the general environment and amenities available were poor. Using Weight for Age, Caloric Intake and Reported Morbidity of the index child as the dependent variables, multivariate analysis was done, revealing no consistent effect of women's work categories or time spent on work. It was suggested that the stringer effects of other variables such as socio-economic status and caste could be masking any potential relationship between women's work and child well-being in this study.

2.2 Governance

This is an area that has emerged over the years as a focus of attention. In the area of governance the key issues for women are of gaining greater recognition, involvement and control over allocation and disposition of government resources. This includes greater and better access to information, incorporation of their concerns in the planning and budgeting process, and overall, improving the functioning of existing government mechanism and institutions.

Catalogue of Agencies Reaching Poorest Women In India (1981) This study was commissioned by SIDA in order to identify organizations, preferably women's organisations who were working effectively with underprivileged women, and capable of taking on an additional programme of work supported by SIDA. Around 100 organisations were identified across the countries which were working for women's development, reaching the poorest, with fairly widespread coverage and sustainable projects.

Integrating Women's Interests Into A State Five year Plan (1983) The purpose of this study, sponsored by the Ministry of Social Welfare, Government of India, was to assess the implications for women of the implementation of the State Plan in Karnataka as it existed, and secondly, to generate for the consideration of the State Government concrete suggestions for better integration of women's interests in both plan formulation and implementation. Recommendations included building a more comprehensive and gender disaggregated data base with a redefinition of categories itself so that terms such as "occupation" for instance would be differentiated for men and women separately, accounting properly for the household work of women, making of area wise plans and decentralization of decision-making.

Directory of Welfare Agencies in Karnataka State (1987) ISST was invited by the Ministry of Welfare, Government of India to compile a directory of agencies working in the field of welfare of children, women, the aged and the disabled. The aim was to include both institutional and non-institutional services provided by both government and non-government agencies. The compilation was based on the premise that the greater emphasis in the fifth and sixth plans, as also in the seventh, on involving non-governmental agencies in implementing government welfare programmes, required

identification and listing of welfare agencies nationally. Only registered welfare agencies were taken cognizance of, in keeping with the government's directives. .

Roundtable on Development: Survival Strategies of The Poor - Traditional Wisdom – A Reflection (1987) The outputs of this deliberation, involving participants from across the world stressed the importance of viewing the development process in terms of people and social change. For this, increasing democratization was needed involving greater participation and empowerment, with the key focus on subordinated people, especially women and families. Various measure were suggested to implement this in practice including documenting of traditional knowledge, building coalitions, increasing support initiatives and working primarily with women.

Integrating Women in Development Planning – The Role of Traditional Wisdom (1989) This study, sponsored by UNESCO, looks at indigenous knowledge and practices and, how, they can improve the planning and effective implementation of development services especially for the poorest and most marginalized. Through a series of case studies on traditional markets, grain storage and traditional health practices, they show that people, especially poor rural women are producing, storing, trading with the use of local materials, with easy access and using local spaces. In the process, they are achieving less wastage of resources, better dispersal and access and more income earning opportunities.

Significance of traditional Wisdom in Development Design (1990) This study, sponsored by UNESCO, seeks to catalogue, assess and revitalise development practices which have evolved form the indigenous scientific and technological heritage. Since not all traditional practices are necessarily rational, efficient or even relevant, the study evaluates surviving traditional practices in three areas, namely food storage, marketing and health, in terms of their comparative advantage over modern practices. The aim is also to enhance popular participation, endogenous development and, therefore, a better quality of life for poor households.

Report of the UNESCO Seminar on Ways and Means to Incorporate Women's Concerns in Human Resource Development Strategies (1991) This seminar was convened with a view to explore how the interests of the vast majority of women workers who are part of the "unprotected" sector of the economy could be promoted. The purpose was to come out with specific recommendations for all the concerned stakeholders, ranging from UNESCO itself and other UN agencies, member states, NGOs and research institutions. It was suggested that the very connotation of HRD should be expanded, to go beyond education and training, so that henceforth it would focus on the enhancement of human capabilities to pursue sustainable livelihoods. Apart from this, the need for protective mechanisms, better infrastructure support and more sensitive and focused polices was also brought out.

Discussion Paper on Institutional Mechanisms for Women's Advancement (1991) This study, prepared as part of the Women's Information Services Project, looked at the Indian experience in the area of promotion of women's advancement, by recording the milestones, describing the structures, processes and circumstances under which they operated to provide insights for future strategies. In particular it examined the Indian Landscape in terms of pre- and post decade efforts for structuring women's advancement, as well as the autonomous women's movement, and the contribution of women's studies. It discussed change – or absence of it - in Indian women's lives and the reasons for this, and, based on a review of the subject as a whole, proposed an appropriate mechanism for the South countries.

The UMA Mela for Women in Panchayat Raj (1994) The report describes one of the highlights of the UMA projects activities – the Mela organized by ISST for 250 elected women representatives of the Karnataka Gram Panchayats. The events leading up to the Mela, what was hoped to be achieved and, the planning involved in organising it are described. The proceedings of the Mela itself have been captured in an innovative manner designed to bring out the spirit of the Mela itself.

Workshop on Alternative Methodologies and Curricula for Women in Panchayat Raj (1994) The report describes the proceedings of the workshop and articulates some of the ideas brought out during the discussions, which were focused on building a relevant and appropriate curriculum for women in Panchayat Raj. A framework and guidelines were developed, various methodologies and materials discussed and the experiences of women representatives shared. A core group was formed to carry the work forward in building the curriculum step by step.

Strengthening the Participation of Women in Local Governance (Project UMA) (1995) The report covers the rationale and strategies adopted in the project and the work carried out by the Resource Centre for Women in Panchayat Raj which was set up under the project, sponsored by Ford Foundation. The report also includes studies on women in Panchayat Raj carried out in eight states, as well as suggested areas for future action. Apart from this, there is coverage on the proceedings of the UMA Mela, a workshop for women Gram Panchayat representatives, and a compilation of research papers from eight different states prepared for the resource center. The second volume of this report presents a detailed documentation of the facilitation and training camps carried out by the training wing of the project.

Report of the UMA Facilitation Camps for Women Representatives (1995) Under the UMA project, ISST undertook the task of conducting training and facilitation camps for women Gram Panchayat representatives in eight areas of the state. The report covers the methodology and process used, the contents of the training, as well as its impact on the participants as stated in their own words. In general the participants found the training

very useful in helping them articulate their needs, build their confidence and take positive action in their own lives.

National Seminar on Women in Panchayat Raj – Women in Panchayat Raj: Perspectives from Different States. (1995) The report presents research studies on the situation of women Panchayat members, carried out in eight states under the UMA project. While ISST covered Karnataka, groups in seven other states – Himachal Pradesh, Maharashtra, Orissa, West Bengal and Tamil Nadu - were approached to undertake the studies there. Different approaches were followed, highlighting a gamut of experiences. The issues debated included how women's participation is perceived, how to enable more effective participation, the need for better documentation and dissemination of information, the role of political parties in Panchayat Raj and the caste factor in politics.

A Report of the Workshop on Training Methodology and Materials (1998) This workshop funded by Ford Foundation, brought together women representatives and NGO workers to look at the most effective methods and materials that could be used for training of Panchayat Raj elected members, especially women, at the grass root level. The purpose was to get feed back on past experiences, discuss better methods and improvements in quality as well as build a network amongst all the stakeholders.

National Seminar on Women in Local Governance: Exploring New Frontiers (1999) The report summarises the proceedings of UMA's second national conference to assess the participation of women in Panchayat Raj. It brought together participants from diverse fields to exchange ideas, explore new linkages and discuss how to strengthen women's participation in local governance. Papers were presented from seven states identifying region-specific issues, assessing government and NGO initiatives, looking at the effect of intervention programmes, and the impact on women members and their families. In addition to this, participants looked at issues relating to research, training and advocacy. The purpose of the conference was essentially to look ahead, keeping in mind what had happened before.

UMA UTSAV: for Women in Panchayat Raj (1999) The report is a compilation of the activities undertaken at the UMA UTSAV organised by ISST to facilitate the Elected Women Representatives who had made a remarkable contribution as Panchayat members and to encapsulate their experiences in the previous five years. An additional objective of the workshop was to know whether they were interested in recontesting the next Gram Panchayat elections.

Workshop on Prevention of Child Trafficking in Belgaum District (1999) The report examines the prevalent system of Devadasis and the more modern problem of child prostitution, and presents the proceedings of a workshop on this issue. Having discussed the reasons for child prostitution and previous efforts geared towards its prevention, participants drew up action plans for tackling the problem. Measures

suggested included awareness generation, education, health inputs, providing alternative economic opportunities, better policing and legal amendments.

Report of the Project - Women in Local Governance: Networking and Dissemination at UMA resource Centre (2000) The report details the aims and objectives and proposed activities of the UMA resources center, set up with a view to promote greater awareness among elected women representatives (EWR) and build their capacities. It proposes, a study of woman's participation in the Gram Panchayat, information dissemination to the women and men representatives, as well as community leaders, and greater awareness generation and networking in the larger community, including research organisations, NGOs and government.

Redesigning from the Roots – Critical View of training Initiatives: Towards Empowerment of Women and Redesigning Policy (2000) The purpose of the study was to evaluate training experiences undertaken towards empowering women, as part of a larger study sponsored by the Department of Women and Child Development for the preparation of a Policy Document for Women's Empowerment. Recommendations included the suggestion that training be seen as an ongoing exercise rather than as a one-off event, given priority and resourced properly by the State. It was also suggested that there be a larger information base available and greater collaboration between organizations working towards women's empowerment.

Seminar on Women in Local Governance: Experiences and Effective Interventions in Andhra Pradesh, Karnataka, Kerala, Maharashtra and Tamilnadu (2000) The purpose of the seminar was to bring together organisations involved in working with women in local governance, with a view to sharing their experiences over the past five years, in order to distil the combined wisdom of these experiences to build a strategic thrust for future initiatives.

Gender, Governance and Gram Sabha Presentations from Karnataka, Tamil Nadu and Andhra Pradesh (2001) The report documents the proceedings of a regional seminar organized by ISS, aimed at creating a space to ponder about women in the context of governance and Gramsabha. The purpose was to share ideas and experiences with a view to developing future strategies to strengthen the Gramsabha and engender governance.

Winds of Change: Report of the Study on All Women Gram Panchayats (AWGPs) at Athnur and Wanjarkheda of Karnataka (2002) This study was undertaken as part of the UMA projects concern to document facts from the field, stories that made a difference and grassroot realities. The study looked at the factors leading to the genesis of the AWGPs, their functioning and plans, as well how villagers, community leaders, officials and others had responded to their formation. The report told the story of these AGWPs in the words of the women themselves as well as those of other villagers and outsiders.

Completion Report of the Project – Women in Local Governance: Networking and Dissemination at UMA Resource Centre (2002) The report describes the various activities carried out under the project sponsored by ActionAid. These included field trainings and capacity building of women representatives in five zones of Karnataka; publication and dissemination of UMA Prachar designed to raise awareness and public debate among the women representatives themselves and others; other documentation and field studies relating to the working of the local governance structures.

2.3 Health

This comprises a smaller body of studies done over the last two decades. The focus in this area has been on a variety of issues ranging from sanitation, to traditional health care practices among women and their families.

Rural Sanitation Technology Options (1981) This report was based on a workshop to identify and appraise technology for sanitary latrines, bio-gas plants and smokeless chulahs. The purpose was to make a positive and practical contribution in identifying the available technological options in this field, and discuss their pros and cons. The main factors identified as vital in any rural sanitation programmes were to diminish health risks, liberate the scavengers from a demeaning job and cut costs in terms of better energy use. Various existing models of latrines, bio-gas plants and chulahs were analysed and suggestions made on how to improve them. It was also stressed that the participation of rural people itself needed to be enhanced in order to achieve greater uptake.

Rural Sanitation (1981) This survey looked at the status of rural sanitation in three very different states: Karnataka, Madhya Pradesh and Rajasthan. Various recommendations emerged from this exercise including the suggestion that traditional practices should be examined before devising or applying new schemes and local people, especially women, should be consulted regarding costs and materials to be used. It was found that low cost and locally relevant designs and schemes were likely to be more successful than more expensive and higher cost ones. It was also stressed that construction of toilets alone could not guarantee village sanitation without taking into account the specific character of the village and needs of women.

Providing Comprehensive Child and Family Welfare Services (1981) This study is part of an exercise undertaken by the UN Centre for Social Development and Humanitarian Affairs with a view to developing a model programme. In this context the ICDS project has been examined primarily from the perspective of I households and families accessing it through a field study in Coorg. The study found that the ICDS had strengthened the staff of the health delivery system and also improved its utilization. In this respect it had done better than other government projects. However, its targeting and access needed to be improved to ensure the poorest greater benefits.

Utilisation of Child Development Services (1985) The study sponsored by the Research Division of the Planning Commission examines the services in the states of Karnataka and Uttar Pradesh, with a view to looking at their efficacy and impact, especially as seen from the perspective of the beneficiaries themselves. The study found that among the various government programmes, the only one which encompassed the totality of services for children and mothers was the ICDS. This was so not only in terms of inputs such as health and nutrition but also as an instrument of change in the community. It was recommended that the ICDS constitute the major element in the child development programmes and be accorded a high priority in the country's development plans.

Linking Fertility and the Socio-Economic Activity of Rural Women (1987) In this case study of the Malur Rural Project of the Family Planning Association of India, the methodology adopted by FPAI in accomplishing social and economic transformation in the villages of rural Karnataka was analysed and the lessons drawn out. The study was sponsored by the Population and Labour Policies Research Programme of the ILO. It was found that there had been a decline in fertility, which, to a large extent was attributable to increased adoption of family planning methods. This in turn had been brought about through health and educational programme efforts to promote the Small Family Norm, greater demand and delivery of family planning and maternal health services, a high degree of local activism and community participation in local voluntary groups and socio-economic development schemes and most importantly, the provision of education and employment options for girls and women.

Lessons from the Malur Rural Project in Karnataka Linking Fertility and Socio-Economic Activity (1987) This case study undertaken on behalf of ILO explored the nature of the link between female participation in socio-economic programmes and fertility reduction over a decade in the Malur project implemented by the Family Planning Association of India. The study showed that development should be viewed more in terms of initiating processes to eliminate inequalities and promote human dignity and security, rather than merely as a rise in GNP. More specifically it showed that any policy relating to family planning should address itself to the root causes of fertility and poor health/poverty in order to be successful. The FPAI project had been successful because it was culturally sensitive, region specific, involving local voluntary groups and, overall, holistic in approach.

Identification of Factors Influencing Health and Nutrition of Rural Women and Children in Karnataka (1992) This study, sponsored by the Health and Family Welfare Division of the Planning Commission, aimed to document the various factors which influence health and nutrition of women and children, such as dietary and health beliefs, health care-seeking behaviour, and perceptions regarding desirable family size. The study covered over 300 households in eight villages of Kanakapura taluk, Recommendations suggested included providing education and incentives for delaying the age of first

child birth, encouraging beneficial traditions regarding dietary and other practice, education on safe management of deliveries, promoting local foods, and improvement of the health and ICDS services.

Income and Nutrition Effects of Shifts From Subsistence to Cash Cropping, especially on the Poor Farmers, Women and Children (1994) This case study in Karnataka, sponsored by Indian Council of Agricultural Research, examines, describes and measures the impact of shifting cropping patterns on the health and nutrition status of poor farmers in particular. By tracing and analyzing the complex link from the cause to the effect, the study finds that in general, the shifts from subsistence to commercial farming have benefited agricultural households, But, their impact on the income, consumption, food security, health and nutrition of different strata of farming households seem to be different. Recommendations include, paying greater attention to ensure adequate supply of food grains since commercialisation has created an overall shortage; assisting small and marginal farmers who have benefited unequally from the shift; and taking special measures for the poorest, both at the ground and policy levels.

3. CONCLUSION

Overall, it has been a very rich twenty five years in terms of ISST's work, and its experience in taking forward its mission of ensuring that all that it does is geared towards actually making a difference in the lives of real women, living in difficult circumstances, facing challenges on a day to day basis. For the organisation the main learnings have been varied, both in terms of the kind of work that is most relevant and appropriate to the purpose, as well as the challenges of accomplishing it within the given resource constraints, both organizational and within the larger society.

With regard to the emerging directions that will be leading its efforts in the forthcoming years, the emphasis will continue to remain on issues and areas where there is already a built up body of knowledge and experience, further consolidating and broadening its scope. These areas remain as relevant and significant today, as yesterday, and any future work is likely only to enhance the understanding already accumulated over the past twenty-five years. Apart from this ISST can also explore other areas that have been less focused upon such as education, but, by and large it would seem unnecessary for the organisation to make any major change in what has evolved over the years into a coherent and broad based research agenda.

**Sharpening the interlinkages: towards feminist perspectives of
livelihoods in coastal communities.**

Nalini Nayak

Seminar on

Women's livelihoods in coastal communities: Management of the Environment and
Natural Resources

Organized by

**The Institute of Social Studies Trust (ISST)
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Sharpening the interlinkages: towards feminist perspectives of livelihoods in coastal communities.

Nalini Nayak

I feel greatly honored that I have been invited to share my thoughts and highlight areas for study on a subject that is very dear to me. It demonstrates the interest of the ISST to contribute to the creation of knowledge and to develop feminist theory that arises out of the praxis of grassroots involvement. It will not be out of place here to acknowledge Devaki, who though much senior to me, has related to me with affection, appreciation and encouragement. I have always admired her untiring interest and commitment not only to contribute to the generation of feminist theory but also to relate her efforts and those of the ISST to strengthen women's collective agency through information and organisation. I acknowledge here the role played by her and her colleagues in the initiating of DAWN, the intervention at Nairobi and later to assert perspectives of southern feminists in the international feminist debate putting the issues of poverty and social exclusion center stage.

My own awareness and growth as a feminist commenced in the late 1970s after a decade of work in the fishing community in Marianad – not that I had ignored the women's issues prior to that. In fact we were already into mobilizing of women for their rights to correct food rations, right to travel on public transport with their fish and fighting exploitative market taxes when they sold fish in public markets. Women had also opposed the men's cooperatives from entering retail fish marketing which would impinge on their economic space. So we had built women's organisations focussing on the rights of women as workers as we were well schooled in Marxist theory of class and Lenin's theory of Organisation by that time. It was only in the early 1980s when some feminist asked me seemingly odd questions like 'why don't women fish?' and other people began to pressurize me to marry, that I opened my eyes to the ways we women are made to fit into boxes that are carved out for us by others and are therefore discriminated against in society. Through subsequent reading and interactions with other women I was introduced to the concept of patriarchy and the way it shapes the mind and all social relations. In sitting with other feminists particularly Chhaya Datar and Gabriele Dietrich I was able to see how patriarchy had a material advantage in controlling women's sexuality, fertility and labour. Ever since then together with my other women colleagues, I have tried to evolve a feminist perspective in fisheries in the fishworker movements nationally and internationally. These interactions unraveled the ways in which women are marginalised and how both policies from without and pressure from within confine and use women.

It is therefore very encouraging to know that the ISST desires to focus on women in fisheries in its research in the coming years. Fishing communities in general tend to rank

lower in standard indicators of human development and available evidence suggests that they are faced with a deteriorating quality of life, which certainly adds to the burdens of women to sustain life within the household. This challenge that ISST takes on itself, demonstrates the intent to move beyond generalities to more specific feminist analysis within a particular sector of production. Only such an approach will make women's economic and political rights operational.

In this paper I focus mainly on coastal communities making some reference to livelihoods in marine fisheries and brackish water aquaculture. This is to highlight that there are other communities that live in the coastal zone like salt pan workers, grassland dwellers, mangrove herders, coir workers etc etc. It would also be important to look at these communities in their natural interactive dynamics because the coastal zone by its very nature of inter related ecosystems and bio diversity implies that communities also live in close interdependence, the development of one impacting on the life of the other. This would mean that researchers adopt an ecosystem approach to understanding impacts and if so, this is likely to develop more realistic action oriented research. The research team would therefore have to clarify its own analytical perspective before proceeding with research, which is an important first step.

If one focuses on fishing communities per se, there are other fisheries that are removed from the coasts like the entire inland fisheries sector, which includes riverine and reservoir fisheries together with freshwater aquaculture. The problems of these communities will be slightly different. but are also food based sectors offering livelihood to millions of people and in which women play a major role.

In this paper I focus only on the marine fishing communities and in order to understand the framework in which the issues are flagged below, let me highlight some basic features regarding women's roles in fisheries and the impact of a particular development model on their lives and roles in this sector of production.

The Sexual Division of Labour in Traditional fishing Communities

In all traditional fishing communities, where fishing is also a commercial activity, i.e. more advanced than the food gathering stage, the sexual division of labour is very clear cut with the men doing the harvesting and the women doing the post harvesting work. Both men and women are generally involved in the pre harvest activity preparing the nets and tackle for work. Women also prepare the food for long trips beside all the service they render to the men and the family. With this division of labour, women have access to markets and are also in control of cash as it is they who convert the fish into money. This access to markets and the world outside, also gives the women a wider perspective as they relate not only to other vendors in markets, but with other kinds of people through consumer interaction. In several communities that are matrilineal, and matrilocal, the women are also known to inherit the fishing gear in marriage. This gives women a share of the catches and so in cases where she may not go to the market, her

access to fish, either for food or for resale on the shore itself is assured, thereby giving her a share to income as well. I consider this a complementary sexual division of labour where the household is the unit of production and the greater percentage of the returns of the production goes back to the household.

This active and participatory role that women play in traditional communities is rendered invisible as it does not give women a greater say in decision-making either in the home or in the community. These communities have been very patriarchal for several generations in India and the fact that the communities are also very religious, very patriarchal religious norms have governed the social life in the communities. Although all these communities have very active local community governance systems, women do not feature in any of these committees and are always at the receiving end. It is also obvious that these local institutions give least attention to women's needs like toilets, fuel for cooking, water facilities etc. leaving women to fend for themselves and increasing their burden to sustain the family. Nevertheless, what traditional communities did not have was the aspect of dowry in marriage. This in itself gave women a greater sense of self-respect and the girl child was not considered a burden in the family. Moreover livelihood though at subsistence in several cases, was not at stake. There were ways in which the community met the needs of the poorer, the old and destitute. Such people had access to the fish when it was landed and they could take freely for their day's need. This was so until the mid 1970s when Kerala and Tamilnadu had already seen the demographic transition and when the technological changes in the fishery were still restricted to certain bigger fish landing centres.

The impact of increasing State intervention: modern technology and markets vs livelihood

Things change very drastically with the modernisation of the fishery. While change is inevitable and while the traditional fishing community has been very open to technology transfer and creative innovations in their own way, dramatic changes came in with the intervention of the state. I say dramatic, because changes that are introduced in craft and gear by the innovative people in the community are tried and tested and the speed of introduction is slow thereby not making a drastic and sudden impact on the resource or on the labour organisation in the community. State induced change when accompanied by subsidies stimulates fast adoption. This has also brought non-fishermen into the fishery. The main features that accompanied the new technologies in fishing have been 1) the boats got larger; 2) they began to be propelled by engines dependent on oil; 3) the gear got larger; 4) more efficient, implying that they became less selective in what they caught; 5) the landings got more centralised; and 6) the fishing operation more capital intensive. This was all geared to meeting market demand and not fish for food for the communities that depended on this resource.

When the fishing boats get larger they require better landing facilities. The fishermen may therefore land their catches at more suitable landing areas and this may not

necessarily be close to the original village. This means that women have also to travel to have access to the catch. If the new landing site is too far, women have to forfeit her access to the catch. Bigger boats and more efficient nets also initially mean larger catches. Sometimes these catches are so large that women are not equipped to handle them as they did initially. It is very rare that the state would intervene to assist women in their work as it has intervened to help men with credit and technical aid. Storage spaces for fish or credit to handle larger volumes of fish have not been ways in which the state has reached out to women. This gap has been filled by male merchants thereby displacing women for their economic activity and from their space and say in the fishery. Such changes took place in Kerala and Tamilnadu in the mid 1970s.

Kanya Kumari saw hundreds of women displaced from the work of net making in 1979-1980 when the state of Tamil Nadu introduced the net making machine, throwing hundreds of women out of work. The introduction of nylon nets and then machine made nets was a threat to the subsistence wages of women, the old and the otherwise destitute.¹ In this struggle the fishermen did not stand by their women with the result that the machine came to stay.

The mid 1980s was also the phase when the better varieties of locally consumed fish were exported to distant countries to fetch better prices. While this is the change that brought fishers increased cash returns to invest in newer technologies, new boats, nets, motors, etc. this process gradually limited women's access to several varieties of fish. There have been some exceptional cases where women, in Vishakapatnam for instance, have entered larger trade, dispatching fish by train to Mumbai and some women in Maharashtra and Mangalore doing the same. But these are rare cases and the quantity of fish they handle is insignificant to the amount of fish that the male merchants deal with. Some women have found a space as commission agents, supplying fish to the bigger male whole sellers. Some women also financed the boat owners to make sure that they had the right to the fish landed. But again this is not a very significant number. Nevertheless, the fact that some women did do this is enough proof to show that women would have been able to remain in the post harvest market chain if they had been supported by the state in their work. These changes took place in the 1980s when women in the southern states had already begun to organise and demand their rights to fish for marketing and for recognition as workers by the state.²

Export trade has affected women in other ways as well. Formally all fish that was landed in bulk and which therefore did not fetch a good price, was dried and salted. This fish was the lean season insurance for women. They could sell their dried fish in bad times. In many cases dried fish moves across the country creating a huge chain of inter

¹ Lukas, J., 'Fish vendors meet their own credit needs', in Women First, Samudra Dossier WIF series, No 2, ICSF, Chennai, 1997, (pp-86)

² Nayak, Nalini; 'Women in Movements', in Women First, Samudra Dossier WIF Series, No 2, ICSF, Chennai, 1997 (pp-97-99)

dependents as agents of transfer and as retailers, the majority of the latter being women. Ribbon fish from Gujarat for instance, reached down-south Kerala and provided livelihood to large numbers of fish vendors in the months of June, July and August and cheap fish for consumers in these lean fishing months. Similarly, the chains to north and north east India that are otherwise areas that are landlocked are extremely intricate. The opening of the export market particularly in the mid and late 1990s saw this entire local market chain disrupted. During these years, particularly 1995-1998, ribbon fish was airlifted fresh to Hongkong³ which meant that there was no fish for drying and no fish for the women vendors in south and northeast India.

With women having less access to fish at their local landing places, they were forced to travel further to access fish. For the more daring ones this was possible. The others fell into being waged workers either cleaning shrimp for the processors or drying the trash fish landed by the trawlers. As the earnings as self employed fish vendors was substantially more than money earned in wage work, those women who needed to make a better living continued to fight all odds putting greater pressure on themselves in order to remain in the fish trade.⁴

The other interesting aspect is to see the manner in which the State dispossesses women in its interventions. In certain areas where the matrilineal system existed, the state came in with credit facilities to buy new boats and nets. The banks, through which the credit was channeled, recognised the men as the fisher and made the loan advances in his name. With this system in place, the women lost their rights of ownership of the craft and their right to the catches.⁵ On the other hand, when men desired to acquire a larger number of boats with state subsidies in Veraval, they transferred the older boats in the name of their wives although she in reality had no say over it. Women have been used like stop gaps when necessary and discarded when not needed. I hear that certain NGOs have allotted fishing boats to women in the post tsunami rehabilitation as a strategy to ensure that that they also have access to the fish catches.

The fact that improved technology creates new work opportunities, is more a myth than a reality after a certain phase of development. Capital has always sought out its colonies of cheap labour, overlooking the locals. Similarly in the fishing sector, although there was a spurt in the fish processing industry as the fishery was modernised, it was not local women who found work in the processing plants. Migrant women labour all the way from distant Kerala and Kanyakumari were employed in the processing industry in

³ Mathew, Sebastian; Gujarat Fisheries: Time to move from an exploitative to conservation and management regime. ICSF, Chennai, 2001

⁴ Vijayan, Aleyamma; The invisible women in Fisheries, Kerala, in Women First, Samudra Dossier WIF series No 2, ICSF, Chennai 1997, (pp-33)

⁵ Nayak, Nalini; Transition or Transformation, A study of the Mobilisation, Organisation and Emergence of Consciousness among the Fishworkers of Kerala, India, Department of Social Analysis- TamilNadu Theological Seminary, Madurai, 2002, (pp-68)

Gujarat, Maharashtra and West Bengal.⁶ As women were thrown out of work in Kerala and Kanyakumari, they became the cheap labour to be used in the fish processing plants in Gujarat and other states of India. The entire fish processing industry based in Maharashtra, Gujarat and earlier Vishakapatnam, in its formation stages, was built on the labour of these migrant women. It was only almost 20 years after its inception that the processing industry opened up to local labour while still employing some migrant labour and there are a few even from as far away as north-east India. Even this change was not voluntarily undertaken by the industry. Two important institutional factors imposed this change. The first was the Public Hearing organized by women in the National Fishworkers Forum in 1995 on the conditions of migrant women workers in the fish processing plants, and several reports made by women's organisations that caused a hue and cry in the State Assemblies, that drew public attention to the inhuman working conditions of these women. That forced the processors to review the situation. The second was the opening global market that imposed new sanitary standards on the export industry and forced processors to comply with labour standards. The processors were required to improve standards inside the plants and in order to cut costs; the processors resorted to other ways of avoiding what they considered added costs. They created a putting out system by which the initial peeling process was done by contractors who hired local women labour thereby minimising migrant labour and subsequently for the smaller numbers that were engaged in the plants, they provided better working standards.

As we entered the 1980s, the dowry system gradually began to creep into the fishing communities. This was also a period when the birth rate began to fall in the fishing community in Kerala and Tamil Nadu. The conjuncture between the introduction of new fishing technologies, the falling birth rate, the negative female sex ratio and the increasing practice of the dowry system is also an important point to note. If a girl was marrying a good fisherman, then his demand was for money to buy better equipment. If a girl was marrying a man with little or no fishing skills or who had no equipment, the dowry was sought to get a passage to work in a Gulf country. Now at the start of the 21st century, the dowries have grown phenomenally and this has certainly had an impact on the role of women in society. Women are forbidden to break out of this system, young people are forbidden to enter marriage alliances on their own and in this way women, through the marriage cycle, continue to be stabilizers not only of the caste system, but of the patriarchal family system as well, thereby keeping a fragile economy afloat. At the same time, the resilience of the traditional fishing communities is also based on the ingenious survival strategies that women develop to keep the home fires burning when returns from fishing decline.

It was in the 1990s that the 73rd and 74th Amendments of the Indian Constitution ushered in a decentralised process of local governance and the representation of 33% women in

⁶ Public Hearing on the Struggles of Women Workers in the Fish Processing Industry in India, Samudra Dossier, WIF Series, No. 1, ICSF, Chennai, 1995

local governing bodies. This suddenly threw women into the public realm, which in a way was a massive change, both for women and men. While a decade of this process has proven that most women are able to live up to the demands of public office it is also a fact that it is the men who find it more difficult to accept this new role of women in society. Men still continue to call the shots and women have not been able to steer decentralization of governance in their favour in the coastal communities in any major way. Unfortunately, no coastal panchayats have been able to address their sector specific issues in any substantial manner

Women in coastal communities, like elsewhere, are more aware of the impending social problems than the men. They realise that with the collapse of the fishery, their own material base is being eroded. Most of them seem to be aware that this is a result of overfishing by destructive fishing technology and they are also aware that indebtedness is increasing in very fatal ways. They recognise that the disillusionment among the youth results from unemployment and they are aware that the social fabric is disintegrating. They understand how extreme commercialization destroys social relations and increases the social differentiation in the community. Women feel that they too should go to work to supplement the family income especially the poorer ones who also face violence at home.

Methodological and ideological implications in evolving feminist perspectives

I am sure the ISST team understands methodological issues better than I do and over the years has certainly developed effective tools of research. I know that Devaki and the ISST initiated a process to question the earlier accepted 'indicators' of human development and what made up the Gender Development Index (GDI) and Gender Empowerment Measure (GEM). A sample household schedule was also developed to measure progress of development services especially to the poor, among other things. My interest here is to highlight that enhancing women's spaces in coastal communities and working towards sustainable livelihoods requires a more holistic approach of understanding the interlinkages in the economy of the coastal communities, an economy based on a common property living resource, namely fish. Sustaining the fishery itself requires an approach of participatory management and if management has to be life and livelihood centered it requires that women will also play a role in the decision making process in co management. This not only means that community rights over the resource are established and within this that the rights of the women are defined, but it also means that the coastal zone is viewed as an integrated ecosystem, with a land and seaward component, where humans and nature coexist and where interactions between people and nature are mutually dependent. The understanding of the economics of the sector cannot be assessed in terms of 'fish production' but in terms of livelihood sustainability, which requires a different set of parameters from those that are generally used. Developing the parameters itself is a laborious task but an indispensable starting point that will contribute to feminist economics. I have been intrigued by the way

Patricia Hynes⁷ constructed a feminist equation to demolish the earlier I=PAT equation in assessing the impact of population, affluence and technology on the environment. By introducing the category of patriarchy, which she spells out in terms of military expenditure, unpaid labour etc. otherwise incalculable or hidden, she arrives at a totally different equation and therefore at very different conclusions. Arriving at feminist conclusions that will lead to social transformation, necessitates developing feminist tools, categories and methodologies that are in keeping with a feminist worldview.

Having said this let me come down to the specific task assigned to me namely to flag the areas for deeper study.

Areas of concern

1. The absence of data

To start off let me say that there is simply no data on women in fisheries. Some state Governments have data on fishery households, literacy levels, male - female population, the number of fishermen – even if not disaggregated according to the fishing gear. The government of Tamil Nadu conducted a Marine Fisher folk Census in 1957, 1978, 1986 and 2000 covering literacy, housing and the sex ratio. The Kerala Fishermen's Census also has similar data but this is not regularly up dated. The government of Gujarat has some data on fishing households and on the number of women involved in different kinds of work in fisheries. Nevertheless, a basic profile of women in fisheries, the numerous kinds of work they are engaged in primarily needs to be enumerated and documented. This should cover two generations- the older /parental and the present. While the present will give the actual numbers of women and the kinds of work they are involved in, the parental information will help highlight the change and the reasons for it. Once we have the basic information in one of the coastal states of the country, we can then employ a state wise approach for more comprehensive data collection.

Together with my colleagues, I have documented case studies of the very different kinds of work women did in the 1990s. These could act as a baseline to then develop case studies on the kinds of work that have been left out or the new kinds of work that have evolved in coastal communities, which are not necessarily fish related. The fact is that women in fishing communities are also increasingly doing non-fish related work as their access to fish resources has diminished. The complexities of getting such work, the new hazards and its impact on the household needs to be understood. Women near the urban areas go for domestic work; others have got into the construction sector or do all kinds of home based and retailing work and of course also migrate out of the state. Case studies that are well done will highlight the connection to the changes in the coastal

⁷ Hynes, Patricia; Taking Population out of the equation: reformulating I=PAT, in Silliman, Jael and Ynestra King etc.; Dangerous Intersections: Feminism, Population and the Environment, Zed Books Ltd,1999 (pp39-70)

economies and from there one will be able to get a broad overview of the changing trends in fisheries and the impact on women's lives.

2. The impact of the State and peoples Initiatives on improving women's spaces in the fishing communities

The next stage would be to draw out areas of interest for deeper study in the context of the state policies and efforts made to increase fish 'production' and improve the lives of the coastal communities. Fisheries has always been part of the Ministry of Agriculture and the states have received allocations from the center for centrally sponsored schemes which cover the creation of infrastructure like harbours, diesel subsidies and welfare measures like famine relief, insurance together with the development of coastal integrated aquaculture. The States have also made their own allocations determining their own priorities for the development of the sector. There has been the well-known Bay of Bengal Programme supported by multi and bi lateral institutions with its own priorities and areas of focus. The State of Tamil Nadu, in order to institutionalize the changes as a result of the impact of the Bay of Bengal Programme created even a Department for Women in Fisheries with a Director in charge from as early as the 1980s. The presence of conscious women from outside the country working on this programme made it possible at that phase. An interesting integrated approach of promoting education, health and infrastructure development, together with an organizational framework of cooperative support was set up. It would be important to study this initiative and see what remains of it, what has been its impact and to what extent it was able to make a space for women's strategic needs and in turn influence policy, and if not, why. Other states have also had their pet projects. Much has already been written about the impact of the Indo Norwegian project in Kerala but there has been the Danida Project in Tadri-Karnataka where ISST was involved in the pre-planning phase and where the component of organizing the women fish vendors from that area was included as part of the programme and where an active women's organization was also created. Nevertheless the project changed the entire nature of the fishery, a clear example of how changed infrastructure changed fishing technology and thereby permanently denuded the women's spaces in the fishery. In the 1980s Kerala established the Matsyafed for the welfare of coastal fishers also as a result of the hue and cry of the coastal people through the KSMTF, the artisanal fishers trade union. Several of us have already documented the struggles and reasons that led to the changed focus of the government programme. Here again the state made an attempt to meet the welfare needs of the community through several social security measures. While it did not succumb to the major demands of the fishers for a trawl ban in the monsoon months all through the 1980s and 1990s or develop any fisheries management policy, it built up a commendable welfare scheme for the fishing community. It set up transport for women to the market and included them in the savings -cum- relief scheme, widows pension etc. It would be important to assess the State's true commitment to the needs of women. How did it procure the funds and then disburse them. They were progressive schemes built on new financing principles- were they sustainable and if not why?

Some of the states like Karnataka, Andhra and Kerala, to name a few, have also had very active non state/private initiatives in the fisheries – the Malpe Cooperatives in Karnataka, SIFFS in Kerala and Tamil Nadu, Shantidhan in KanyaKumari, together with Women’s Federations in Trivandrum and Calicut as some examples. It would be interesting to assess how these initiatives have tried to assist and help develop women’s agency, whether they have succeeded or not and why?. While one cannot compare them with efforts of the State, one could try to understand whether they were able to actually retain women’s spaces in the fishery and if so how have they been able to inform state policy. Such an initiative is valuable in the context of increasing NGO activity in the development field. As the state begins to withdraw from its responsibilities in social provisioning, does the increasing presence of NGO activity counter the tentacles of capitalism or merely provide a more human face to it as several of them now also join hands with the corporate sector in development activity.

3. Women’s access to fish resources and markets

In looking at these initiatives we have to relate to the forward and backward linkages in the marketing chains. As women vendors depend on access to fish for sale, how have new developments and market factors affected women’s access to fish. Understanding the development around fishing harbours itself is an important location for such studies. For example, in the expansion of the Vishakapatnam fishing harbour, traditional fishers first got displaced, dry fish women merchants moved away from their spaces near the harbour since they were provided alternate land to dry their fish. The fresh fish women traders had to find different ways to survive. Several of them went into financing the fishing operations and establishing territorial rights against other women who came from neighbouring areas to acquire fish. This led to further specialization built on superior and inferior qualities of fish as the local women with more liquid cash and able to handle the male mafia got the better varieties. Competition in the market brings out the worst in people, man and women alike. Studies around fishing harbours provide a fascinating canvas to understand how women cope with the pressures of modernization and market forces to retain their spaces in fisheries – and how the more blatant subtle aspects of patriarchy play out through the demonstration of masculinity playing either protective or exploitative roles in further controlling women’s sexuality.

4. The quality of life in the coastal communities

This is an area in which very little in depth work has been done. Coastal areas are known to have higher growth rates than the hinterlands and certainly higher population densities. The quality of life is fast eroding in coastal areas. Poor sanitation, poor availability and quality of potable water, the use of firewood in poorly ventilated homes, and the withdrawal of State support in health and education impacts on all round health. This is well documented in the Report on Coastal Fisheries and Poverty published by the International Collective in Support of Fishworkers in 2003. All this poverty despite massive amounts of money having been spent on population control

programmes, RCH, various TB, leprosy and AIDS control programmes. For example, Ponnani in the state of Kerala, which otherwise boasts of high social indicators, is a case in point. I just happen to have looked more intensively at this area in Kerala- not particularly focusing on health, and was amazed to find the high level of respiratory tract infection where no industrial pollution exists, where leprosy and filaria resurge despite long running control programmes . Ponnani happens to be Muslim, but there are certainly other such areas in Kerala and if so what are the underlying factors for morbidity in a fishing community in a State, which otherwise reports high demographic indicators? A survey conducted in fishing villages in Rathnagiri, in Maharashtra, showed the occurrence of epidemics and women suffering from gynecological problems due to unhygienic living conditions⁸

Whereas several coastal towns and villages have a less favourable sex ratios than the states in which they are located, the 2001 census shows a fall in the female sex ratio in the 0-6 age group in large parts of the country. Whereas some areas like Veraval in Gujarat had a favourable female sex ration earlier, this fall has also begun to show in Veraval. In a district like Knayakumari which has a more favourable female sex ratio than Tamil Nadu State, the panchayat of Thoothur shows a much more unfavourable sex ratio even lower than that of the state. This is a village with a vibrant fishery similar to Veraval. It would be important to understand the reasons for this growing male preference and how exactly this choice is executed as these communities otherwise have very strict social community controls.

Veraval, in Gujarat, also shows that 22% of children in the age group 6-16 still do not go to school. What are the factors that have encouraged school education in some communities and what keeps the literacy rates low in others. Dowries are also on the rise, violence against women is on the rise, very low work participation rates of women and open unemployment on the whole have been growing, are all these related to the changes in the fishing and if so how?

5. Women headed households in coastal communities

Certain fishing areas show a high presence of widows and single women in their populations. If that is so it is important to understand why this is so and how these women manage their lives and cope with economic and social pressures. It is also necessary to highlight whether there are community and state mechanisms that recognise and support such women.

6. Migration and its impact on women

Migration is another large area that impacts on the life of coastal communities. Fishermen have migrated as a tradition in several coastal areas. The nature, distance and

⁸ Mohite, S.A; 2003, Role of Fisherwomen in the field of fisheries with special reference to Konkan Coast, College of Fisheries, Shivgaon, Rathnagiri, Maharashtra

time of migration has changed in the last 10-15 years caused by declining fish resources precipitated by market led development policies. This migration of fishermen to harvest fish has kept the industry going. Fish processing and exports have continued to boom through the 1990s and early 2000. But what impact has the migration of fishermen had on the lives of the family in the home village in terms of increasing dowries, social control over women, increased labour burden on women, etc. On the other hand the declining fish resources at home and its consequences, has also forced women to migrate for work. Here there are both push and pull factors which need to be identified. The general census data reveals that more women are migrating alone for work and the remittance from migrant accounts is more than raised from the tourism and IT sectors. If this is so, what has the state done to secure migrant citizenship rights and facilitate the actual process of migration and ameliorate the difficulties that migrants are exposed to? It would be important to understand what kinds of work women have migrated for earlier and presently. What has happened over the years as the processing industry got more high tech, brought under the EU Sanitary restrictions, etc. How has women's labour been used in the processing industry, the hazards women are exposed to and how has this access to work, which is low paid, fed into the hands of the industry. Some feminists see such job openings as a means of increasing women's agency as it provides opportunities for mobility, economic independence etc. But we also know through the writings of Rosa Luxemburg and others that capitalism grows on the exploitation and creation of internal colonies of labour and feminists like Maria Mies and Benholdt Thomson see women as the last colony. While it is clear that poor women and men together make up the internal colonies, it would be important to highlight how the development of fisheries and other development policies impact on communities causing displacement creating colonies of labour and forcing people to migrate. Today fishermen from entire villages in Andhra migrate for work to the Gujarat fisheries. What are the factors that make them do so? What is the impact on women and livelihoods at home?

7. Development induced displacement, globalisation and its impact on women

While development is considered a constant necessity and whereas it is even socially 'acceptable' that short term costs pay for long term benefits, it is imperative to reassess the human cost benefits of such developments. The development of fishing harbours, the coming of industry and their related impact on the pollution of the environment, the establishing of nuclear plants as in Kalpakkam, now in Kudamkulam and their related hazards, military bases as in Karwar, Balsasore etc. and then tourism which is seen as a new and non polluting industry should all be subjected to such scrutiny. All these industries have serious consequences on the lives of the coastal communities. While one is not anti- industry or modernization per se, one has to objectively understand whether such developments have actually brought jobs to coastal communities, developed infrastructure for their welfare and the extent to which the quality of their lives have improved as a result of such developments. How have these developments destroyed the customary rights of coastal communities and transformed the concept of rights from

a community to an individual right, from the right to livelihood to the individual right to make profits. One would have to examine this in the light of various High Court and Supreme Court judgments as one epoch upheld the right to livelihood but later began to focus on the rights of the individuals/corporates to make profit. This seems to have coincided with the structural adjustment programmes introduced by India and when the State bureaucracy increasingly became the spokespersons for global capital and the multilateral financial institutions rather than upholding the rights of its citizens. So whither people's rights to livelihood?

8. The effects of decentralization and the gains of local self-governance

The 73rd and 74th Constitutional Amendments granted both political and economic power to local bodies and women in particular. In Kerala and Karnataka, where decentralization has in several ways effectively empowered local bodies and communities, it is important to understand how women have actually been able to steer the process to their advantage. If so in what ways and what factors facilitated this. If not why? There have been several gains in the process but it is necessary to assess whether these gains are sustainable and whether they provide a base for reinvigorating the coastal economies.

Decentralization has also been introduced at a time when neo liberal policies see the state withdraw from providing and securing the welfare of its citizens . It has also softened borders for capital flows and privatization of resources. The collusion of the international and national corporate interests increasingly pressurize the state to rule in their favour.

The cash strapped local bodies/ panchayats are forced to sell valuable coastal resources in order to raise finances to meet the new responsibilities thrust on them. All this backfires on the community and on livelihoods.

Moreover decentralization and the modernization programmes have also come along with new technocratic models of governance and management. Whereas crude party politics subvert participatory methods of democracy in traditional forms of governance, modern technocratic management models of governance, now being imposed through international consultants and regimes, not only alienate the people further from their rightful role in local participatory government but also camouflage the hidden agendas of macro policies. Efficiency is seen within very limited parameters of cost effectiveness when methods of assessing demand and supply are segmented. The water users committee and the jalanidhi programmes are a case in point. It is very important to analyse these processes /newly created institutions and to come up with evidence to call the bluff of these programmes, where costs are borne by the locals but the actual benefits actually accrue to the funding agencies, consultants and private companies that will eventually control the water sources.

The same will have to be done as regards micro credit and the SHG concept and the way state agencies like Kudambashree and others uphold them as 'women empowerment measures'. This programme should be studied from the point of financial markets per se and the role the banks and the corporate sectors play in drawing women as weak players into the market. This is in total disregard of the RBI policy instructing banks to provide credit without collateral to rural users. One will then have to assess the extent to which decentralization actually benefits the local people and women in particular in developing local infrastructure and asset creation, vis a vis the benefits that have accrued to financial institutions like NABARD and other corporate houses who find an easy marketing network in the SHGs. Exploiting 'women's nimble fingers' in the transition to the IT age in the 1970s and giving the impression of increased paid jobs for women has now moved to 'banking on women's thrift skills' in the transition to globally integrated financial markets highlighting women's ability to mobilize and use credit presumably for asset creation. What is even more unnerving is to see the most patriarchal of men spearheading this programme sidelining any women who emerge as efficient managers in the process. Interestingly such men even walk away with international awards for the great success achieved!!

9. Protecting people's rights and conserving resources through legislation

The legislative framework is the means of articulating the vision and role of the state in assigning rights and conserving resources. There are various legislations that have been put in place either as a result of a proactive stance of the state, demand of the people's organisations or other informed groups. To mention a few are the Marine Regulation Act, the Coastal Regulation Zone Notification, the Kerala Fishermen's Welfare Fund etc. There are other groups of legislations like the Rape Law, The Anti-trafficking Act, The inter-State Migrant Labour Act which have a direct relation to women as women, workers etc. It is important to understand the framework of these legislations as they favour customary and livelihood rights in one epoch and then individual rights in other. One would also have to see the extent to which the provisions have been utilized by communities and if not why. Most often it is because institutionalized arrangements for implementation do not exist. If so how can local bodies develop effective mechanisms to safeguard their rights through proper use of the enactments.

10. The role of the fishworkers' Movement in enhancing the lives of women in fisheries.

This brings us to the aspect of looking at the role of the fishworkers Movement in enhancing the lives of women in fisheries. While I myself have documented some aspects of this process, it would require more dispassionate analysis. The Fishworkers Movement grew as a non party political formation with the objective of focusing the issues of the artisanal fishery and sustaining the livelihoods of coastal people. In form and structure it sought to be different from the traditional party workers organizations essentially by aspiring to develop a democratic and participatory modus operandi while making demands to democratize the fisheries sector per se from a perspective of

sustainability. After the nation wide KanyaKumari Coastal March to protect water and life, the need to evolve a nurture perspective in fisheries – nurturing life both in water and land was highlighted. This was one aspect of the feminist perspective if sustainable fisheries was the goal of the struggle.

The aspect of nurture was spelt out in several ways and was linked both to how demands were raised through the movement on the one hand; and how participatory mechanisms within the movement would ensure a power structure that was more participatory and sustainable on the other. Studying the dynamics is therefore important– what were the issues actually proposed by women, what spaces did women have in decision making and how was the feminist perspective carried forward. As the need of the day is the organization of the informal sector which is growing in the country and as it becomes imperative for the sectors to establish their rights over resources, it is only in the forms of organization and new institutions that are created, that the rightful place of women and their access to resources can be established in the process. With 25 years of the history of the fishworkers movement – and here I include the fishworkers trade unions like the NFF and affiliates from the different states, together with the people’s organisations and NGOs that have played supporting roles in asserting the rights of the artisanal sector, - there is ample ground to evolve feminist theory on women’s agency in the larger paradigm of patriarchal development within a particular sector.

11. Natural disaster management.

Over the last 50 years we have witnessed disasters in the coastal region be it tidal waves of Andhra Pradesh in 1965, Orissa later on, several other disasters in between and finally the dastardly Tsunami at the end of 2004. The Tsunami disaster has demonstrated how aid of all kinds capitalizes even on human tragedies. Disaster opens avenues for high tech disaster management interventions, scope for elite disaster management personnel to find plum jobs as consultants and managers of trauma and a host of other avenues. Such interventions not only make people further victims of aid by destroying any community structure that might have existed to handle disaster through self help and community control but also alter dynamics in coastal economies further impacting on sustainable livelihoods. Over these decades there are different approaches that can be compared. Andhra and Orissa resorted to a green belt cover after the 1970s because it was cheap, effective and sustainable. Andhra also put in place a community warning system in which people in coastal communities were trained in disaster preparedness and where women in particular played an important role as trainees and community wardens. This was supported by the FAO. Interestingly I also know how the state bureaucrats attempted to sabotage this initiative since it meant, among other things, reaching out to coastal people in remote areas. It would be important to understand whether there were other reasons too. But looking at such efforts more intensely will help compare the different ways in which the state managed such disasters in the pre and post globalization periods and how and why natural disasters arouse the kind of response they do today. Is disaster immanent in the development of today thereby

necessitating the creation of new avenues of specialization in fields like disaster and conflict management? Who are the actual beneficiaries?

12. Escalating fundamentalism and its impact on women

Whereas there has been communal tensions in coastal areas for several decades now the inter and intra community conflicts seem to be escalating. The role of women either in abetting conflict, taking the brunt of it or reducing it has to be understood. Whatever advantages women may have gained through education, mobility or political participation seems to get curtailed by new community controls. It is crucial that the connections - the nexus if any between upper class short-term economic interests, the devious games of international capital and the fundamentalist macho protectors of community moral and religious "values" be made visible. The construction of new forms of religiosity reinforces the new expressions of masculinity that continue to hold women captive. The violent edge of capitalist production, on which the global economy increasingly survives, should be exposed if the marginalized masses and women at that are not to be made the scapegoats.

13. The gender bias in local community institutions and the manner in which they control women.

All fishing communities have their caste panchayats. They are male dominated institutions and mainly concern themselves with conserving caste purity by prescribing norms of behaviour. It is mainly women who are thus controlled and it may be interesting to not only document how these institutions operate but to look at them more intensely to understand with what logic individual cases are settled. Many of the communities have also been matrilineal and traditionally worshiped a female deity. Nevertheless over the years and with the connivance of the State, women have lost their inheritance rights, lost access to fish resources and gradually even the deities in the temples have become predominantly male. It would be important to understand how and when such changes occurred and what impact they have on women. Whether women have at any time reacted to them and if not, to understand why women accept to be so controlled.

14. The impact of coastal aquaculture

When fish catches from the wild began to fall in the late 1970s, the answer to the growing demand for sea food was seen in aquaculture. Here again the focus was on the increase of production for the export market promising greater profit to investors. Such a step implied the privatisation of land, water bodies and the use of ground water. It also resulted in complications like the pollution of commonly used water bodies and the introduction of a monoculture of artificially bred species thereby interfering with the biodiversity of the existing water bodies. The introduction and encouragement of modern intensive aquaculture introduced a new set of dynamics into the rural context and thus raised several issues in coastal communities.

Brackish water aquaculture has been traditionally undertaken in several areas along the west coast of India for several generations. These systems have evolved over time and were based on the natural cycles and attempted to maintain the bio diversity on the one hand and meet the food and work needs of growing coastal communities on the other. The 1990s witnessed an aggressive development of modern and intensive aquaculture on the east coast of India, a development that hit deep at the lives of coastal communities. As a result the communities and mainly women, raised a hue and cry and managed to draw the attention of the media and society at large and a PIL case was filed. The Supreme Court ruled in favour of the people and ordered the aquaculture farms to be closed and banned it in certain areas. Subsequently the Aquaculture Authority was created but this is more a development oriented institution rather than a conservation and people oriented one. Despite a favourable Supreme Court ruling, aquaculture still goes on and people's struggles against it still continue. It is also envisaged that post Tsunami assistance from the ADB will push for aquaculture as a means of livelihood in the coastal area – but whose livelihood and at what cost to the environment, is anybody's guess. This is an area that will require constant monitoring as intensive modern aquaculture seems to have some disasterous effects in other parts of the world.

15. The coasts are up for sale

In the context of both declining fish resources and neo liberal market dynamics, the coasts of the country are increasingly being targeted for their non living resources be they oil, minerals or the construction of commercial harbours, military bases and tourism. None of these developments provide livelihood to the communities that presently live along the coasts. Such developments also consider the sea more as a waste dump/sink rather than a source of life. This increasing pollution is a hazard not only to the environment but also to the lives of people living along the coasts. Several areas of the coast of the country are dangerously polluted and the Vapi to Tapi area along the Gujarat Coast is a much documented area with the Gujarat Ecological Commission cautioning the Government of Gujarat on the high levels of pollution even of heavy metals. Gujarat is the first state in the country that permitted the building of private harbours and like Maharashtra is parceling out the sea for oil drilling. Moreover, every state government has some dream project or the other like the Kalpasar project for the Gulf of Khambat in Gujarat and the Sethusamudram project in the Palk Straight in Tamil Nadu. These are massive engineering adventures that provide challenges to big engineering firms at extremely high costs but which will certainly be ecological disasters and points of no return. The lives and livelihoods of the coastal communities are just of no consequence in these developments.

To Conclude: I have tried to highlight the various areas that a research programme on livelihoods in coastal communities can cover. They are all interrelated and indeed the approach of the research should be to capture and highlight these interlinkages thereby evolving an agenda for feminist transformative politics. Chandrika will provide a

regional overview that will help you understand the macro context, which create these developments in local communities. I am glad that the ISST has taken this challenge and I am sure you will find it an extremely rewarding adventure from the learning point of view and hopefully your research will provide useful material for policy makers and activists in the field.

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Natural Resources Management and Its implications on Gender Equity in Karnataka

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Introduction

The coastal ecosystem of Karnataka is a 300 km mosaic of monsoon wetlands, beaches and mountains with up to 2000 meters. The coastal eco-region of the state is separated by Western Ghats connected by a number of rivers forming estuaries. Coastal wetlands provide enormous economic benefits; direct and indirect. This coastal region provides fishery and plant products, water supply to urban and rural population, flood control, erosion buffering, wild life habitat, recreation and tourism. The combined vast natural resources of both sea and estuaries generate millions of rupees worth sustainable output, which is significantly being eroded by over exploitation and ill concerned projects. This has led to serious loss of natural resources particularly affecting rural people.

West coast of India has a coast length of 3446 kms along 5 states and one union territory, Lakshadweep. The Karnataka state has a coastline of 300 km. The coastal region includes the inter-tidal (shore and beach), sub-tidal and offshore region. Mangroves of Karnataka cover over an area of about 6000 ha of which 1000 ha is in Uttara Kannada district (Rao, 2001). The mangroves are found along Kalinadi, Gangavali, Aghanashini estuaries and at the confluence of Chakranadi, Kollur and Haladi rivers. The mangrove forest of 100 hectares in Kundapura has been declared as a sanctuary.

The coastal population in Karnataka is likely to increase from 0.81 million (1991) to 1.60 million (2021) (Centre for Policy Research, 2001). With high density of population (400 sq. km and 1500 per sq. km in Mangalore) the coastal ecosystem tend to impact closely the livelihoods of local communities living around the area. During the last 15 years more than 17,000 hectares of area and 50,000 people were displaced in coastal region of Karnataka due to industrial projects such as harbour, refinery, naval base (sea bird) and hydro electricity projects (Central Water Commission, 1996). The local population both rural and urban is therefore an important stakeholder in the environmental conservation. The narrow stretch of 30-80 km land between the Western Ghats and Arabian Sea, which extends to 300 km of coastline, is the coastal ecosystem of the state. This area consists of 21 small and major rivers, 550 tanks, wetlands estuaries and mangrove forests, fallows etc. The mangrove forest of Gangolli is one of the 17 major mangrove forests. It has been documented that more than 310 different species of marine fish, 55 types of reptiles, 225 types of birds etc. are found in Dakshina Kannada district. In the coastal waters, estuaries more than 1.5 million tons of shells are collected annually which is used for producing lime. Annually, 151,000 tons of marine fish is landed in Karnataka.

The Table 1 lists out some of the species occurring in and around coastal Karnataka.

Table 1 Species of fauna and flora occurring in and around coastal Karnataka

Species	Types	Zones
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Estuarine vegetation		
Mangroves	9	Coastal saline
Shrubs	7	Coastal sand dune
Alga	3	Backwaters
Trees	4	Backshore
Birds	8	Mainly pelagic visiting coast
Birds	12	Breeding in estuaries, lagoons and coastal mudflats
Reptiles, turtles and sea snakes	8	Marine and estuarine
Marine mammals	7	Marine and estuarine
Land mammals	2	Mangroves, tidal marshes, creeks are becoming rare and uncommon
Marine vertebrates		
Sharks	60+	Deep sea and estuary
Skates	10	Muddy seafloor
Rays	18	Muddy seafloor
Marine fish and crustaceans of commercial value		
Finfish	200+	Deep sea, lagoon
Prawns	80	
Lobsters	6	
Crabs	8	
Marine and estuarine invertebrates		
Gastropods (Chunks and Turboes)		
Bivalves (Oysters and mussels)	15	Estuaries / mudflats / offshore
Holothurians (Sea cucumbers)	20	Estuaries / mudflats / offshore
Cephalopods	12	Estuaries / mudflats / offshore
	8	Estuaries

The Western Ghats of India is considered as one of the 25 global biodiversity hotspots owing to its concentration of endemism (Myers et. al, 2000). The Western Ghats are biologically more diverse and have been more extensively studied compared to Eastern Ghats. The biodiversity of the Western Ghats is under threat owing to deforestation, which not only contributes to loss of timber but also has a severe impact on soil and water quality and even climate (Repetto, 1990). From the Western Ghats originate 38 east-flowing rivers such as Cauvery, Tunga, Krishna and Godavari and 27 west-flowing rivers such as Kali, Sharavathi, seetha and Nethravathi. Data on fish fauna of the Western Ghats are limited. Dahanukar et. al (2001) predicted 345 species and a major contribution of it comes from the districts of Karnataka. The threat status of the fishes in the Western Ghats suggests that nearly 41 percent of the fish fauna is threatened and hence conservation measures are essential. The northern region of the Western Ghats contains various food fishes, aquarium fishes and larvivorous fishes. Sarkar and Yadav (1996) have suggested that many of these fishes are highly valuable for bio-control of malaria. However, various human impacts including pollution, heavy harvest, construction of dams and introduction of exotic fishes have threatened these fishes.

The coastal eco-region of Karnataka has been the subject of considerable studies. Most of the studies have concentrated on the diversity of flora and fauna. However, one of the major studies initiated by Centre for Ecological Sciences of the Indian Institute of Sciences, Bangalore is a break through in the research studies. A novel experiment to study the biodiversity was initiated in 1994 when 18 colleges and NGOs joined to form the Western

Ghats Biodiversity Network (Gadgil, 1996). During the 3 years period of 1996-1999 vast information on the biodiversity was collected. The studies have recorded ongoing changes in the landscape, its impact on the biodiversity and the socio economic forces behind these. It was observed that there has been an erosion of concern for the conservation of natural resources (Achar, 1997; Bhat, 1997) among younger generations. The preservation of natural resources as such does not generate returns and ensures little security. Further, several alternative economic options have opened up. The importance of fish in this particular ecosystem led to studies on their composition, population dynamics and community studies. It has been well documented that the composition of fish species has been changing over the years. Some of the species such as fishing cat, otter, and estuarine-crocodiles are now rarely found and are included in Schedule I (Endangered and highly protected species) of the Wild Life Protection Act (1972). Some of the grasses grown in tidal rivers of the district are recorded as extinct and induced in IUCN Red Data Book of Rare and Endangered Plants (Hussain, 1999).

Some of the important reasons for the degradation of the coastal biodiversity are, Increase in fishing operations, increase in pollution, foreign fishing, destructive fish harvesting practices, absence of alternative livelihood opportunities, increased exports and developmental projects.

Marine Fish production, Effort and Utilization

The share of Karnataka to the India's production declined from 10 percent in 1970 to 5 percent in 1998. The share of pelagic fishes declined from 75 percent in 1970 to 54 percent. The mackerel production declined from 46,000 to 27,000 tonnes and oil sardine from 33,000 tonnes to 8600 tonnes during 1970 to 1998. The marine fish production is stagnating around 165,000 tonnes which is much below the potential level of 425, 000 tonnes. During the last one decade (1990-98) the standardized fishing effort on demersal fishes has increased from 93, 000 actual fishing hours to 600,000 actual fishing hours. Similarly the standardized actual fishing hours on pelagic fishes has increased from 138,000 to 146,000 showing the sign of biological and socioeconomic un-sustainability. Realizing the possibility of overexploitation the state enacted the Marine Fisheries Regulation Act of 1986. The overall package seems to prescribe limited entry, protecting breeding grounds and period through compulsory registration and imposing restrictions on fishing in specified areas by specified gears. The Act is not vigorously implemented due to lack of exact quantitative information on biological and socioeconomic impact.

Changes in the fish Utilization have adversely affected the coastal poor. Due to the concentration of fish landings in fishing harbors the fisher women and small processors are facing the problems of non-accessibility of fish for local village households and small scale women processors. Competition from the fishmeal producers and exporters has increased as the fishmeal and oil is one of the major ingredients of aqua and shrimp feed. The percentage of production exported has increased from 6 percent in 1990 to 13 percent in 2000 in India. The share of finishes in the total marine export has increased from 26 percent in 1990 to 48 percent 2001 in India indicating less availability of such fishes for domestic consumption.

The destructive fishing practices by the deep sea fishing vessels of Indian and foreign companies are another cause of decline in the marine fish production. However, the Agreement on Technical Barriers to Trade (TBT) of WTO ensures that member countries do not use technical regulations (The process and production methods) as disguised measures to protect domestic industries and operate as a barrier to market access. It prohibits the adoption of any discrimination between domestic and foreign production methods for the production of like products (same physical characteristics). The GATT clearly states that the trade restrictions in the interest of environmental conservation are permissible if such measures are made effective in conjunction with restrictions on domestic production. Hence a blanket ban

on foreign trawling is not possible unless the Government of India takes steps to ban trawling by the domestic fishing companies.

Industrial pollution in Coastal Karnataka

It was reported by the Karnataka Pollution Control Board that the total industrial discharges per day from four mega industries in Mangalore is 28730 cubic meters. The discharges from other small-scale industries are not known since the Pollution Control Board does not monitor them. The development of the Mangalore port has led to an increase in the coastal shipping traffic from 7284 thousand tonnes to 13888 thousand tonnes in 1998. The transport of Petroleum, oil, and lubricants has increased from 612 thousand tonnes in 1991 to 8318 tonnes in 1998. The oil spill of the grounding of MV River Princess 26 metre long carrier at Goa last September has affected the marine life according to NIO and also tourism industry. The Coast Guard has expressed its helplessness with some 40 tonnes of oil left over with the grounded ship.

Table 2 Mega industries and their effluents in Mangalore

Name of the Industry	Year of Establishment	Raw materials used	End products	Source and quantity of water (m ³ /day)	Amount of effluent discharged (m ³ /day)	Effluent contents
MCF	1976	Naptha, Ammonia, Phosphoric acid	Urea, Ammonium bicarbonate, diammonium phosphate	Nethravathi river 15400	7200*	Ammonia, smaller quantities of chromium and venedium
KIOCL	1980	Iron ore	Iron ore concentrate, iron oxide pellets	Bhadra river 40000	15000	Non recovered particulate metals with high pH.
MRPL	1996	-	-	Nethravathi river 20016	2880	Non-recovered hydrocarbons with heavy metals and oil and grease
BASF, India Ltd.	1996	-	Dyes and dispersions	Nethravathi river 273	3650	Increase BOD, suspended solids, heavy metals such as chromium and cadmium

MCF-Mangalore Chemicals and Fertilizers, KIOCL-Kudremukh iron Ore Company Limited, MRPL-Mangalore Refinery & Petrochemicals Limited

Urban Waste and Infrastructure Development

Most coastal pollution in India arises from land-based sources –industrial, domestic wastes and agricultural run off. It is reported that in Gujarat, industries discharging over 200 MLD of effluents, which are acidic, oxygen depleted, and sediment laden. The total untreated sewage discharge into the sea is estimated to be 410,000 million liters (Elrich de sa, 1999). Though the rivers and estuaries are relatively clean with the pressure of the urban and industrial growth taking place the stress is increasing. The scientific underground system was introduced to the Mangalore city in 1965, to cater to the needs of a 1.5-lakh population. The total drinking water supply has increased from 5.5 MGD, catering to the needs of 1.80 lakh population in 1971 to 18 MGD in 1998 catering to the needs of 5 lakh population with an almost equal floating population. With a conservative estimate that 85 percent of the drinking water goes as sewage, there is a need to have sewerage system for 15 MGD. The existing drainage scheme was designed for a prospective population of 2.00 lakhs at 30 gallons per

capita per day. The underground drainage scheme was introduced to collect and treat the sewage before the effluents flows into the Nethravathi and Gurupur river. Basically it was designed to treat domestic sewage, which was organic in nature. The domestic sewage comprising of water carried waste generated from lavatory, urinals, bathroom, washing and kitchen. Under this system there were 8 wet wells networked through pipes and more than 1000 manholes. All sewage of one zone, generated from households and commercial establishments would reach 5 wet wells and be pumped to the treatment plant at Kavoor with 5 MGD capacity. The sewage collected by 3 wet wells of the other zone reach the treatment plant at Jeppinamogaru with 1 MGD capacity. The treatment of sewage water was meant only to segregate the semi solid wastes from the liquid wastes through the rotation process. The effluent was released to the river without further treatment. The solid part of the sewage was dumped into the drying yard, where the remaining part of the sewage water drains to the near by fields and small creeks which ultimately join the Gurupur estuary. Sewage treatment produces a toxic sludge that must be disposed of or recycled to the land as fertilizer, which improves soil structure. However this system was not functioning effectively for the last one decade.

Realizing the importance of urban infrastructure development, the state government started Karnataka Infrastructure Development Corporation and with financial support from the Asian Development Bank and implementing Karnataka Urban Development and Coastal Environmental Management Project with an investment of Rs.1056 crores. The project is being implemented in 10 coastal cities for the purposes such as capacity building, water supply, urban environment, roads bridges and coastal environmental management. Though the project has some positive impact on the improving the quality of sewage water and urban water supply, this would cover only a part of the cities and most of the suburban areas and nearby villages are left untouched. Normally, it is the coastal poor who will not get access to such improved infrastructure and also the open access sources of water and land also get reduced. Further, a majority of the poor will not be able to pay higher tax and price for such services. It is estimated that the interest burden of the amount at 13.5% would be huge which will be a burden on the poor and lower middle-income groups.

New Strategies for Coastal Industrial development

The state announced the policy for coastal regional development during the Second Coastal Investors Meet 2003 to encourage capital investment for utilizing coastal resources to generate economic growth and development. The Coastal investors meet was attended by a large number (800) of potential entrepreneurs including 53 foreign delegates representing areas such as tourism, biotechnology, infrastructure, information technology, ports, housing & urban development, etc. another class of stakeholders. The state government came out with many schemes to grant support and attract entrepreneurs to invest in three coastal districts. The policy makers highlighted the availability of vast resources available. The outcome of the Meet was the assurance of capital investment to the extent of Rs. 60,000 crores within a span of next 3 years, which could generate employment for 5000 persons. The state authorities issued final approval and letters of intent for a couple of tourism and entertainment industry. However, The public – private partnership model by the Government of Karnataka, for example Coastal Agenda Task Force makes recommendations on the coastal development without placing it for public debate. As the development of the urban areas and the region is necessary, the way in which these development projects are implemented is the concern. There is an immediate need to improve the efficiency and transparency in governance. The non-coordinated approach in the planning for environmental, industrial and urban segments by state government departments is the prime reason for the degradation of urban wetlands and trees. The pressures on the fragile coastal ecosystem were well predicted by Department of Forests and Ecology – Danida study as early as in 1993.

The Government of India has notified the policy for special economic zones (SEZs) under a government resolution, which will apply to all SEZs in the country. This includes the SEZ in Hasan and approved SEZ in coastal Karnataka at Baikampady, Mangalore subject to the framework for SEZ determined by the government of India (GOI) from time to time. As per the state policy, all SEZs in the state will be declared as 'Industrial Township' (Notified Area). The management of the SEZs will be under the designated development commissioner who will grant all the permissions as single-point clearance from his office. These will include registration of the unit, allocation of land, permission for construction of building and approval of building plan, power connection, environmental clearance, water requirement etc. The SEZ authority will ensure continuous and quality power supply to SEZ units. SEZ units will be granted automatic approval to set up captive power plant. All types of environmental clearances will be granted by the development commissioner, except for those falling under the purview of GOI. The SEZ developer will be granted approval for development of water supply and distribution system to ensure the provision of adequate water supply for SEZ units. Implementation of labour laws within SEZ will be simplified. A consolidated annual report (CAR) has been designed which will be filed by industrial units once in a year. The industrial units in SEZ will be declared as 'Public Utility Service' under the provisions of Industrial Dispute Act. There will be exemption on payment of stamp duty and registration fees on transaction of land as well as financial agreement, deeds etc. Sales tax and other state taxes will be exempted on transactions within SEZ. Inputs made to SEZ units from DTA units will also be exempted from sales tax. Exclusive arrangements will be made within SEZ for law and order. A committee headed by the chief secretary has been constituted to review promotion, development and function of SEZs in the state.

Coastal tourism

Beach and sea as a centre for tourism and recreation is a recent phenomenon in our country. It began with the Hippies during 60s with hand picked centres like Goa, Gokarna (Karnataka) and Kovalam in Kerala. In Karnataka, the Government has identified Mangalore, Someshwar, Ullal, Panambur, Suratkal, Malpe, Bhatkal, Karwar, Murdeshwara, Kundapur, Honnavar, Gokarna, Kumta and Mulki as coastal tourism centers. The adverse effects of mass tourism on coastal ecology have many facets: construction of resorts, highways, destruction of coastal habitats like sand dunes, coastal vegetation, mangroves for landscaping and recreation, contamination of water bodies from fertilizers and pesticides, disturbing coastal and marine life by mass human pressure could affect the livelihood of traditional communities.

Coastal Aquaculture

The state policy for encouraging the coastal shrimp farming was guided by the export promotion and foreign exchange earnings. According to Marine Products Export Development Authority (MPEDA, 2002) the quantum of export earnings from capture shrimp has been more or less around 50 –55 thousand tonnes, in spite of several fold increase in the fishing effort. Thus it is logically concluded that the only alternative for augmenting export earnings is to culture shrimp. However, while promoting the coastal shrimp culture it was assumed that no significant diversion of cropping pattern suitable for rice crop would take place; farmers would be able to realize the benefits of the new technology without any constraints; and income from other sources would be generated with the adoption of shrimp culture (Sampath, 1993). The state land leasing policy was amended to suit the capitalistic shrimp farming. The 1995 amendments to land reforms legislation accorded aquaculture the same status as other agricultural activities. Thus the croplands could now be leased for aquaculture for a period of not exceeding 20 years and also the purchase of land for aquaculture was made easier by raising the land ceiling to 40 units per person or 200 units per family equivalent to 427.53 hectares per family. The 1995 amendments also relaxed the category of those who were allowed to acquire agricultural land. The income limit of Rs.

50,000 annually was raised to Rs. 200,000 per year (Government of Karnataka, 1995). The subsidies provided by MPEDA included 25 percent capital subsidy for new farm development, and a subsidy of Rs. 450 for feed and Rs. 300 for seeds per hectare and Rs. 500,000 for hatcheries. During 1991-94 NABARD extended a total outlay of Rs. 1.20 crores in Karnataka out of the total of Rs. 240.50 crores in 8 coastal states (Kurien J, 1999). The share of cultured shrimp from the total export of shrimps from India increased from 33 percent (8300 metric tonnes) in 1988-89 to 52 percent (53,300 metric tonnes) in 1998-99 and in value terms it increased from 48.78 percent to 74.50 percent during the corresponding period (per. communication from MPEDA).

According to the ruling of Supreme Court in 1996 (Judgement on writ petition No.561) the modern shrimp farms should have been closed down by the end of March 1997. The Court also ordered that an authority be constituted to oversee the closure of shrimp farms, and that compensation was required from shrimp farms for the damage which they had caused in terms of soil erosion and depletion. Shrimp farms were required to pay compensation to people and workers who would lose income and jobs once farms were closed. However, in March 1997 based on the fresh batch of review petitions from the Central Government, MPEDA and four state governments, the Supreme Court gave an interim order on its own order of December 11, 1996. The Supreme Court extended the deadline for closing all farms to April 1997 and further extension was given. The review petitions were still being heard and the demolition order stayed indefinitely. The Government of India constituted the Aquaculture Authority of India in February 1997 with its headquarters in Chennai. The authority has developed packages of practices and guidelines for undertaking traditional improved shrimp farms. The licenses to start traditional improved shrimp farms were given by the Aquaculture Authority of India based on the recommendations of the district administration. However, the issues of monitoring the compliance of stocking density limits and determination of the number and hectarage of farms in an area are some of the problems. Further, imposing the limits on stocking density would counter the efficiency criteria, since the full production potentials are restricted. Hence it is suggested that instead of limiting the stocking density the government should have the right to impose standards on the waste discharges in the name of public health and safety (Yap, W G, 1999).

In Karnataka most of the shrimp farms are located in Uttara Kannada and Udupi districts. It was reported that nearly 30 percent of the total potential area of 8000 hectares has been under shrimp farming against the Indian average of 14 percent utilization. Table presents the details of the land available for shrimp culture in Uttara Kannada.

Table 3 Total land available for shrimp culture in Uttara Kannada (in ha)

Taluk	Estuary	Gov. land	Private land	Total land
Karwar	Kali	60.00	1006.90	1066.98
Ankola	Gangavali	4.25	100.91	105.16
Kumta	Aghanashini	2.00	2529.43	2531.43
Honnavar	Sharavati	1.34	127.08	128.42
Bhatkal	Venkatapur	-	36.46	36.46
Total		67.59	3800.86	3868.45

Most of the gazani land suitable for shrimp culture is under private ownership. Aghanashini estuary has the maximum potential area suitable for shrimp farming. Table 4 presents the details of the size of shrimp farms. The Table 4 shows that 50 percent of the farmers cultivate only 7-8 percent of the total water spread area indicating the dominance of big farmers.

Table 4 Break up details of area under shrimp production in Uttara Kannada.

Size of shrimp farm (ha)	Total area (ha)	Water spread area (ha)	No of farmers in shrimp farming
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0 – 2	193.00	113.00	178
2 – 5	310.00	173.00	94
5 – 10	255.00	131.00	48
Above 10	1342.00	1050.00	52
Total	2100.00	1467.00	372

Table 5 presents details of scientific shrimp farming during 2001-04 and reveal how the utilization of the coastal gazani land for shrimp farming is remained stagnant after the introduction of regulations for controlling the shrimp farms within the CRZ. The Table 5 shows that the area utilized has stagnated around 1100 hectares and the total production has declined from 1135 metric tonnes to 475 metric tonnes.

Table 5 Scientific shrimp farming in Uttar Kannada during (2001 – 2004)

Year	Potential area available for shrimp farming (ha)	Area developed for shrimp farming (ha)	Area utilized (ha)	Total production (MT)		
				I st crop	II nd crop	Total
2001 - 02	5500	1550	1100	835	300	1135
2002 – 03	5500	1650	1060	450	350	800
2003 - 04	5500	1560	1100	296	180	473

One issue where there ought to be no conflict between shrimp growers and non-shrimp growers is that of organic loading, pollution and enrichment. Aquaculture is unique in that unlike other industries it is also adversely and directly affected by the waste it generates. Effective waste treatment and pollution abatement can be considered the core of sustainability. It is as much to the interest of the shrimp culture industry to clean up its own wastes as it is to the community at large. This should now be increasingly clear to most growers. Some aquaculture systems also reduce wild supplies through excessive seed stock collection. The Salinization of coastal cropland owing to unregulated shrimp cultivation has generated its own crisis. There are ample evidences to believe that the common water bodies have been shrinking through degradation and encroachment and siltation etc., which is not properly reflected in the official data. Another threat to fisheries and aquaculture is found to be from industrial pollution. Both biological oxygen demand (BOD) and total coliform are found to be on upward trend in many rivers of Karnataka (Nadakarni 1999). As reported by the Central Pollution Control Board (1997) in Andhra Pradesh out of 2466 million liters per day discharged as wastewater 2116 million liters are from aquaculture where the growth of aquaculture has been maximum (CSO, 1997).

Environmental Concerns in Coastal Karnataka

During 1990s the threat to coastal environment came from outside the industry. Many mega industries such as ship breaking industry at Thaneerbhavi was opposed by the Fishermen's Action Committee by bringing pressure on legislators and later by filing a writ petition. Finally the government had withdrawn the permission given even before the court heard the case due strong public pressure. In 1995 the DK District Fishermen's Environmental Protection Committee was constituted to oppose the release of pollutants into the sea by the MRPL a joint venture of the Government of India and Birla Group. In 1995 a compulsory fishing holiday was declared through out the state and a big jatha was organized at Mangalore. When the Government did not respond to it the Environmental Protection Committee gave a notice to the Deputy Commissioner that the fishermen themselves would remove the pipeline carrying the pollutants to the sea. The matter ended with violence during the rasto rokho program and police firing. The government conceded to the demand and directed the company to install pollution abatement equipment at a cost of Rs. 15 crores within two years. But before the end of two years the company filed a writ in the High Court

explaining its inability to install, as it is the responsibility of the government, which collects tax. The Government has issued an order during 1995 that it will not establish any mega industry in Dakshina Kannada District without conducting carrying capacity study. The Government of Karnataka with support from the Danish government undertook an Environmental Master Plan Study (EMPS) between 1993-95. Dakshina Kannada was targeted because it was projected that industrial and urban growth in the region will increase substantially over the next decade. While these developments will lead to more employment opportunities and some welfare gains to citizens, there was concern about the long-term impact on the natural resources and ecological system. The EMPS team prepared the environment management plan, which consists of a framework and actions ensuring that the activities will take place with the bearing on environment. The Environmental Master Plan spells out specific interventions to be taken by local and state level organizations to ensure that the region will develop on a sustainable basis. The Government of Karnataka accepted the recommendations made by the EMPS team but was not implemented. The local self-government and affected people must have the final say in case of all establishments both developmental/industrial and tourism projects.

Coastal Zone Management in Karnataka

The coastal zone is considered as a unique ecosystem consisting of sea, estuaries, wetlands, mangrove forests, agriculture and fisheries, rivers and other resources. The Coastal Regulation Zone Notification of 1991 enacted under the provision of Environment (Protection) Act 1986 provides for the conservation of this ecosystem by prohibiting certain type of industrial and developmental activities. Under the provisions of CRZ notification the state governments were asked to prepare Coastal Zone Management Plan (CZMP) to clearly demarcate the coastal zones into CRZ I, CRZ II, CRZ III and CRZ IV and specifically provide survey numbers and map. However, due to inordinate delay in the preparation of the CZMP and its implementation by the state and district administration, many violations took place-taking advantage of the loopholes in the implementation process and also in the absence of awareness about the various provisions of the notification among the public. The Committee on CRZ Violations constituted by the High Court of Karnataka in 2001 in response to public interest litigation has reported that Tannir bhavi power company in DK and Murdeshwar complex in Uttara Kannada were among the 45 violations along the Karnataka coast. Though, the committee has categorically mentioned that such industrial projects such as thermal power plants should not have been allowed, in the absence of a clear information on the ecological impacts and the pressure of industrialization in the coastal regions, it is likely that there will be more demand for the utilization of coastal resources for developmental / industrial projects. Though, CZMP has been implemented by the state and district administration, many difficulties were experienced by the coastal communities particularly for the construction of dwelling houses by the local poor and middle income groups due to wrong classification of the CRZ areas particularly in the Udupi and Uttara Kannada districts. The district administration / Zilla Panchyats are not willing to give license for the construction / repair of houses by the local people under hesitation of CRZ violations. Though the state government has acted upon the directive of the High Court to constitute district committees for issue of licenses for construction activities, the local communities are not able to get license in the absence of information.

Important Issues in the Implementation of Coastal Zone Management

One problem that has been identified in the state of Karnataka is that private lands have come under the classification of CRZ –I. While prohibitions exist on construction of residential areas, there is no compensation to the owners to offset the losses that accrue from what in effect becomes a dead investment. This leads to considerable conflict and resentment towards conservation measures. The same goes for private lands within the No Development Zone. Fishing communities have petitioned State Governments to either compensate them for their

losses or to permit only bona fide fishing communities to build residential homes in the No Development Zones of the CRZ. For marine conservation as well, a system that ensures ground level monitoring and feedback would be beneficial.

The permission to establish non-polluting industries within the Special Economic Zone should be clearly defined. The definition and scope of non-polluting industries and the need for which has to be established within CRZ etc needs explanation. In the absence of such detailed explanations it should not be allowed. Further, all new Special Economic Zones should be established outside the CRZ area only. Declaring the coastal region, as a Special Economic Zone is contrary to the very Spirit of the Notification – which is the special protection of the coastal environment ensured by a system of specific prohibitions and detailed norms for development. Special Economic Zones seek to do away with all ‘restrictions’ to uncanalised development and exploitation of coastal resources. A large section of the population depends on coastal resources for their livelihoods.

The CRZ Notification was introduced with the objective of protecting the traditional coastal fishing and agricultural communities and their surrounding natural resources. The right over coastal resources and coastal spaces is the customary right of the fishing community and poor coastal communities. The Notification does not mention how the setting up of Special Economic Zones in coastal areas will protect or enhance the lives of the coastal communities. The rationale for permitting SEZ within CRZ areas, and certainly activities such as hotels, golf courses, and “non-polluting” industries do not have to be located within 200 metres of the HTL. The reasons for the same have been outlined above. The permission for the construction of schools and dispensaries within CRZ of the Special Economic Zone should be allowed only if no such facilities are available within the radius of 5 kilometers.

The removal of the public hearing clauses in the EIA Notification especially for the oil exploration and the rare earths mining in coastal areas can have negative impacts for marine conservation.

The objective of laying down environmental clearance procedures must be viewed as completely independent of other commercial and trade related procedures and restrictions.

Vision for the Sustainable Development of Coastal Areas

- There is a need to enrich knowledge on ecological enrichment capacity of the coastal biodiversity. In all developmental and conservation programmes consent of actual stakeholders should be taken.
- Formation of a Coastal Biodiversity Board to work as a nodal agency for the approval of all the developmental projects under the Ministry of Environment and Forests. It should also provide common forum for all the line departments.
- Pollution monitoring and control centre should be established and its service should be accessible to non-governmental organizations. Further entire responsibility of giving consent to industries may be transformed from the pollution control board to the local self-governments.
- The small-scale eco friendly fishing should be encouraged through linking of their products with separate marketing network of eco-labeling programme.
- The livelihood securities of village communities should be the top priority in undertaking any developmental projects.
- Information needs to be shared among and with all the stakeholders before informed decisions and actions can be taken.
- Development decisions within the mainland areas should take into consideration its impacts on the marine and coastal ecosystems as well. For example dam construction is known to decrease nutrition supply to estuarine rivers and seas etc. Such issues therefore become part of marine conservation as well.
- Integration of agro-climatic regional planning with infrastructure development.

- Planning to be linked with the ecological friendly poverty eradication process.
- Social development programmes of state, centre and local self-governments should provide basis for development.
- Develop political capability of NGOs under liberalization and involve them in the process of policy making.

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**Women of coastal fishing communities in the Asian region: An agenda
for research**

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International Collective in Support of Fishworkers

Seminar on
**Women's livelihoods in coastal communities: Management of the Environment and
Natural Resources**

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Introduction

Coastal areas have traditionally been occupied by communities that have engaged in fisheries as a full-time or part-time occupation, in Asia and elsewhere. Apart from fisheries, communities inhabiting the coast have also derived their livelihoods from farming, livestock breeding, extraction of salt etc.

This paper will focus on coastal communities that depend mainly on fisheries for a livelihood in Asia, with a specific focus on women of these communities. It will look at some of the developments in the fisheries and related sectors in Asia, as they impact on coastal fishing communities and women in these communities, and outline areas for research. It is structured as follows: (1) Background to the marine fisheries sector in Asia; (2) The role of women of coastal fishing communities; (3) Issues facing women of coastal fishing communities; and (4) Selected research priorities.

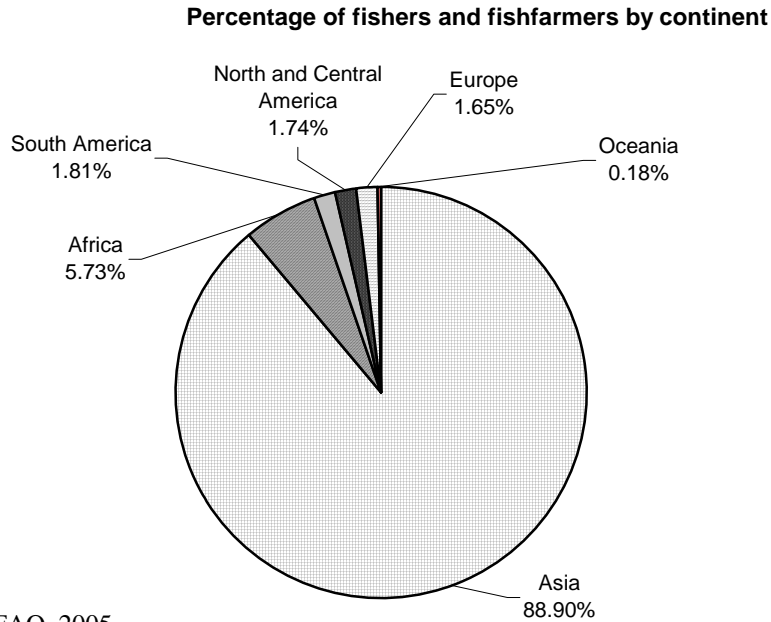
(1) Marine Fisheries in Asia: A Background

This section provides a broad overview of the changes taking place in the marine fisheries sector and in the coastal ecosystems in the Asian region.

(i) Fishers and fishworkers

Millions of people depend on fisheries for a living in the Asian region and undoubtedly, the sector is a major source, of employment, income and food security. According to the FAO (2005), of 47.6 million fishers worldwide engaged in fishing and fish farming as a full time, or more frequently as a part time occupation, as many as 42.3 million or 89 per cent are in Asia.

It is worth noting that according to the FAO the number of fishers and fish farmers worldwide is increasing. In 2000 FAO estimated that there were 35 million fishers and fish farmers worldwide (of which 29.5 million or 85 per cent were in Asia), while the estimate for 1990 was 28 million fishers and fish farmers (of which 84 per cent were in Asia). In Asia, China has the maximum number of fishers and fish farmers, followed by India, Vietnam, Indonesia, Bangladesh and the Philippines.



Source: FAO, 2005

Majority of fishers and fish farmers are small-scale, artisanal fishers eking out a living from coastal and inshore resources. It needs to be kept in mind that these figures are likely to be an underestimate. For example, a recent FAO study in Southeast Asia suggested that the figure reported to FAO for the number of inland capture fishers worldwide (4.5 million, full-time, part-time or occasional) is easily exceeded by those fishing in inland waters in just eight countries covered by the study, i.e. Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Viet Nam (FAO Regional Office for Asia-Pacific, 2002).

Further, these figure do not include those involved in other fisheries-related activities, such as marketing, processing, net-making, supplying ice, boat building etc. Significantly, women play an important role in several of these activities. A conservative estimate would, therefore, place the total number of people involved in fisheries-related activities in Asia at about 130m, assuming a ratio of about 1: 3, that is for every person that fishes there are three persons on shore engaged in fisheries-related activities.

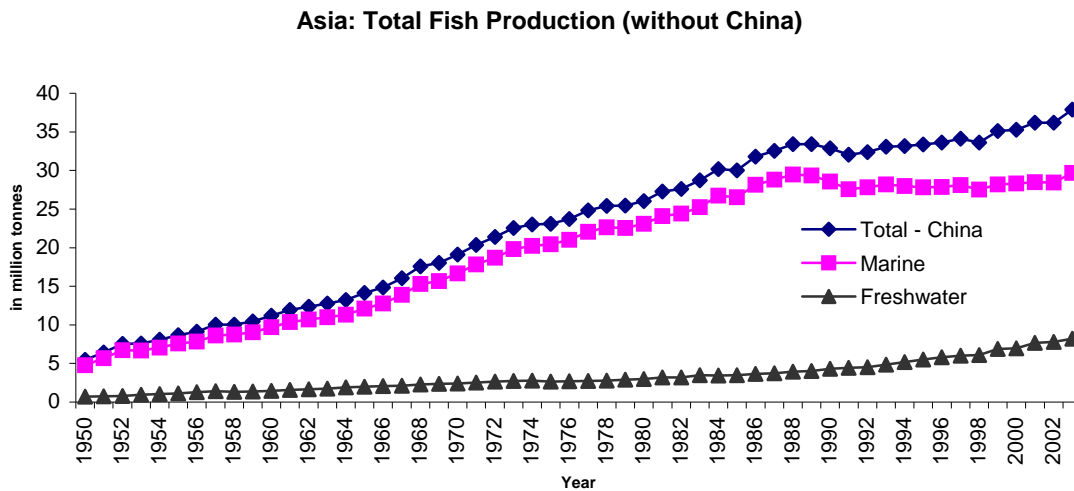
It is significant that 90 per cent of the catch from small-scale fisheries worldwide goes to human consumption. In Asia, artisanal fisheries are estimated to contribute at least 50 percent of total fisheries production, providing extensive rural employment (ADB, 1997). For artisanal fishing communities, fishing is a source of livelihood as well as a culture and way of life.

(ii) Fisheries and fisheries development

Important fish producing countries in the Asian region include China, Thailand, Indonesia, Korea, India, Philippines, Malaysia and Vietnam. In 2001, nine Asian countries were among the top 20 countries in terms of production from marine capture fisheries. The marine ecosystem in Asia is known to be highly diverse and fertile, comprising mangroves, sea grass beds, coral reefs, estuaries, bays, rivers, lakes, and

swamps—biologically the most productive aquatic environments. Shelf areas of southeast and South Asian countries are rich in demersal resources, including shrimp, and small pelagic resources while the oceanic waters of the Pacific and Indian Oceans have rich tuna resources.

The region has witnessed a rapid increase in fish production over the last few decades, as seen in the figure below:



Source: FAO, FISHSTAT, 2005

This has been fuelled by technological developments in harvesting, refrigeration and transportation and growth of markets. The 1960s and 1970s, for example, saw the development of the highly efficient trawl fisheries for shrimp in the entire region, to cater to the huge demand for shrimp in the world market. The focus of government fisheries development policies was on development and exploitation of fisheries resources, both for domestic consumption and export.

These policies were pursued more aggressively in the post-1980 period, when countries in the region, to a greater or lesser extent, went in for liberalization, privatization and deregulation, with an emphasis on increasing trade and foreign exchange earnings. Policies to attract foreign investment, including in the fisheries sector, were adopted. The Indonesian government, for example, encouraged joint ventures in fisheries, especially for the exploitation of offshore resources.

In several countries like Thailand, Philippines and parts of India and Indonesia, as a consequence of the overriding emphasis on increasing production with little attention to regulating technology and managing resource use, there is strong evidence of over-fishing in coastal waters. The implications for those dependent on coastal resources for a livelihood, the millions of small-scale fishers and fishworkers with little access to capital and skills to diversify or move out of the sector, is evident. Countries in the region are

now emphasizing the need to diversify into aquaculture and to offshore waters within and outside the country.

For example, the abundance of demersal fish stocks in the Gulf of Thailand in the early 1990's was only one tenth of the level in the 1960s when the trawl fisheries started. Coastal tuna resources in the Philippines have continued to decline, encouraging an expansion of tuna fishing in Indonesian waters through bilateral arrangements. In the Philippines, some estimates suggest that as much as 65 percent of the original 450,000 hectares of mangrove area has been converted to other uses, primarily brackish-water fishponds. The decline in wild shrimp catch due to overfishing, and the resulting shortfall in the demand has resulted in the development of shrimp culture since mid-1980s, with its own set of negative environmental and social consequences.

The emphasis has clearly been on economic growth, trade and revenue generation. While the importance of management is increasingly recognized to ensure sustainability of the fisheries resource, in practice, this is not a priority. In the latter half of the 1990s, in the aftermath of the economic crisis in East Asia, when the importance of the fisheries sector as a revenue earner increased, a World Bank report (March 2001) noted that "levels of environmental spending, which were relatively limited to begin with, declined in all East Asian economies aside from Malaysia."

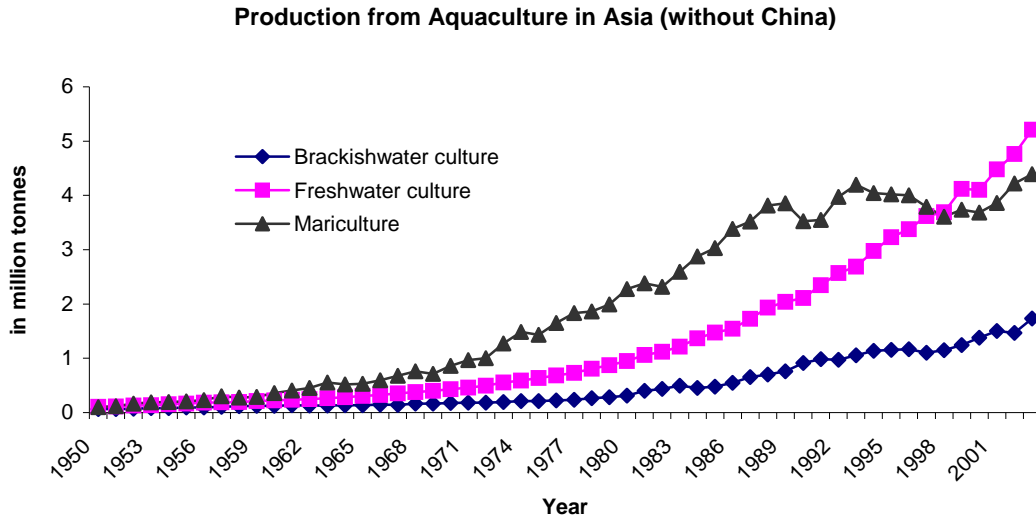
In Southeast Asian countries with relatively stronger economies, such as Thailand and Malaysia, a different trend is emerging. Alternative use of coastal resources, such as for tourism and aquaculture, are being seen as economically far more lucrative than small-scale fisheries. Controlling small-scale fisheries may be seen as a way of managing fisheries by reducing fishing pressure in coastal and inshore areas, even as expansion of industrial fisheries in offshore areas may continue to be supported. The future of small-scale fisheries in such a context remains to be seen.

(iii) Aquaculture

Attracted by the possibilities of higher foreign exchange earning, countries like Thailand, India, Bangladesh and Indonesia provided incentives to export-oriented intensive shrimp culture. This was also the period when catches of wild shrimp in these countries were either stagnating or declining, as a result of over-fishing. Thus, while Thailand harvested as much as 90 percent of its shrimp from natural resources before 1984, mainly from the Gulf of Thailand, by 1987 cultured shrimp production had taken off focusing mainly on black tiger prawns. Government initiatives, along with higher earnings potential, prompted numerous coastal farmers to shift their production from rice to shrimp. Cultured shrimp made up 70 percent of the total yield produced in 1999. In the case of India, the share of aquaculture shrimp in the total shrimp exports from the country has grown in quantity terms from 33 per cent in 1988-89 to 59 per cent in 2001-02 and in value terms from 49 per cent to 86 per cent (MPEDA 2002)

Enough has been written about the social and ecological impact of the rapid expansion of export-oriented and intensive forms of shrimp aquaculture, particularly in Bangladesh, Thailand, Philippines and India. There is a recognition that it is essential to minimize ecological and social impact and to move towards more sustainable forms of shrimp

culture, and reportedly some progress is being towards this. However, in many areas, problems continue to persist underlining the need for better management and enforcement.



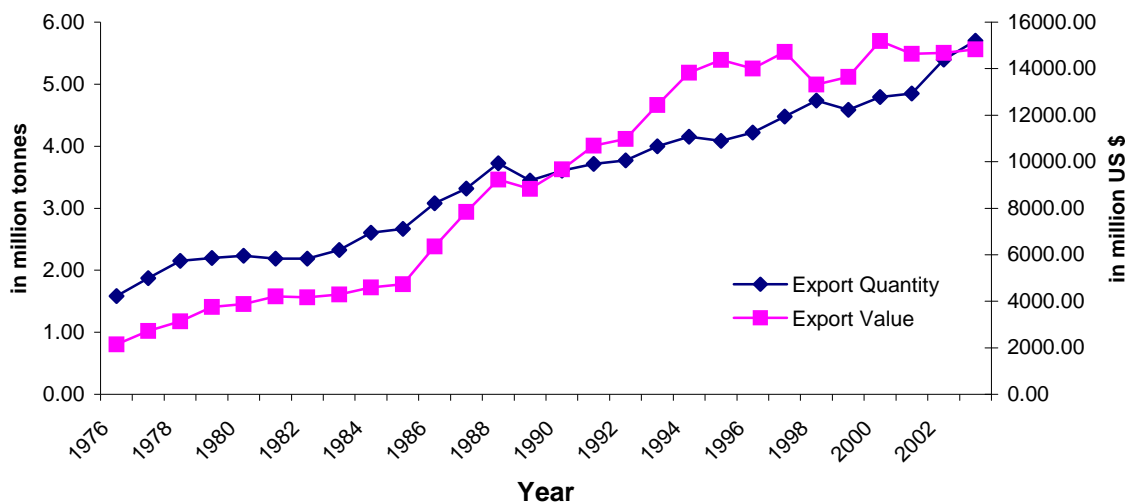
Source: FAO, FISHSTAT, 2005

It is significant that according to FAO statistics, aquaculture's contribution to global supplies of fish, crustaceans and molluscs continues to grow, increasing from 3.9 percent of total production by weight in 1970 to 29.9 percent in 2002. It is worth noting that a majority of production is from freshwater culture. Currently, two-thirds of the total food fish supply is obtained from fishing in marine and inland waters; the remaining one-third is derived from aquaculture, indicating the growing importance of aquaculture to food fish supplies.

(iv) Trade

Fish and fish products are an important export commodity in the Asian region and, in 2002, seven Asian countries were among the top 20 exporters. Important exporting countries include Thailand, China, Taiwan, Vietnam, Indonesia, India and Korea. Exports are mainly to markets in Japan, EU and the US. The figure below shows growth in exports from the Asian region, excluding China, both in quantity and value terms.

Quantity and Value of Fishery Products Exported - Asia (without China)



Source: FAO, FISHSTAT, 2005

Globally, fish has become a highly traded commodity, with more than one-third of total fisheries product being traded internationally in foreign markets. In 2002, total trade of fish and fishery products increased to an export value of US\$58.2 billion and fish imports reached a new record of US\$61 billion (FAO 2004). Developed countries accounted for more than 82 percent of the value of total fishery product imports. The net receipts of foreign exchange by developing countries (i.e. deducting their imports from the total value of their exports) increased from US\$3.7 billion in 1980 to US\$17.4 billion in 2002 (FAO, 2004). For developing countries in Asia and elsewhere, fish trade is clearly a significant source of foreign exchange, with shrimp being the most traded seafood product internationally.

In general, countries in Asia lay great emphasis on increasing trade and expanding exports of fish and fish products, and several initiatives have been undertaken towards this. In 1997, for example, the Asia Pacific Economic Community (APEC) leaders launched a comprehensive program to open markets in nine key industrial sectors, including fisheries. In 1998 APEC completed an agreement to "lower tariffs and other trade barriers" in these nine sectors.

Similarly Bangladesh, China, India, Republic of Korea, Lao People's Democratic Republic and Sri Lanka are signatories to the Bangkok agreement, an initiative of the Economic and Social Commission for Asia and the Pacific (ESCAP). This is a preferential tariff arrangement that aims at promoting intra-regional trade through exchange of mutually agreed concessions by member countries. Fish and fish products are listed under the preferential tariff arrangements in the case of India, China and Sri Lanka.

East Asian countries have created several sub-regional growth areas like IMT-GT (Indonesia, Malaysia and Thailand), and SGT (Singapore, Malaysia and Indonesia) and BIMP-EAGA (comprising Brunei Darussalam, the Indonesian provinces of Kalimantan, Sulawesi, Maluku, and Irian Jaya; Sabah, Sarawak and the Federal Territory Labuan in Malaysia; and Mindanao and Palawan in the Philippines). The BIMP-EAGA, a region in which fisheries is important, for example, was envisaged as a "production bloc" within which labor, capital and technology move freely and there is harmonization and co-ordination of micro-economic and industrial policies.

(v) Degradation and depletion of coastal resources

At the same time, the aggressive economic growth in other sectors being pursued over the last couple of decades has had consequences for the fisheries sector. For example, an ESCAP study in 1992 identified the following among the main marine environmental problems in the region: (i) pollution and/or siltation of coastal waters from industrial effluents, domestic sewage, and agricultural and surface runoff; (ii) pollution of some regional seas and straits from sea traffic operations, and from mining and oil exploration and exploitation; (iii) destruction of sensitive coastal ecosystems, such as mangroves and coral reefs, through cutting, reclamation, conversion, exploitation, and pollution. It is worth noting that coastal communities have been consistently highlighting these issues, as they are the first to feel the impact of these negative developments.

Despite the growing awareness and concern, coastal and other aquatic ecosystems continue to be degraded by pollution and unsound forms of utilization. These negatively impact on fisheries, as shallow-water fish habitats such as mangroves, sea grass beds, coral reefs, estuaries, bays, rivers, lakes, and swamp are important fish breeding and nursery grounds, where many species reproduce. The barriers on most major rivers in the region, such as dams, weirs, and hydropower structures, also have a major impact on migratory species that swim upriver to spawn.

Increasing population, urbanization, intensive agriculture, industrialization, shipping traffic, coastal settlements, and a range of other human activities including offshore mining exploration and exploitation, tourism, coastal reclamation, and loss of mangroves and wetlands are all exerting increasing pressures on the marine and coastal environments, threatening the livelihoods of those dependent on these resources for survival, and increasing the vulnerability of coastal populations to natural disasters, as witnessed during the recent tsunami.

(2) The Role of Women in Coastal Fishing Communities

This section looks the roles taken on by women within the fisheries and within coastal fishing communities, in Asia and elsewhere.

As workers within the fisheries (paid and unpaid)	Women coastal communities in Asia often work in fish marketing, in the preparation of bait, making and repairing nets, collecting crabs and shellfish, gathering and
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	<p>cultivating seaweed and algae, in processing (smoking, salting and drying fish), and, in rare case, fishing. They may also work in aquaculture farms.</p> <p>Women often take on `liaison work` on behalf of their fishermen husbands, such as dealing with financial institutions for credit for fisheries operations and for repayment, dealing with the governmental fisheries agencies, and so on. In India, it is reported that loans are often taken by women members of self-help groups for their fishermen husbands, implying that the onus for repayment is on them.</p>
As workers in processing plants	Women in countries such as Thailand, Indonesia, India, the Philippines and Sri Lanka are active in the processing sector, as either part-time or full-time workers in processing plants, or workers under sub-contracting systems, working on a piece rate basis.
As those responsible for the family and community	Women, as everywhere else, are almost entirely responsible for the care and nurture of the family. Where the men stay away fishing for long periods, women run the household in the absence of their husbands. They are important actors in the fishing community and are important in maintaining social networks and the culture of the community.
As workers outside the fisheries	Often, women of coastal fishing communities take on activities outside of the fishery, that give them some form of stable monetary income, since the income from the fishery is inherently unstable and unpredictable. In rural areas, women may be involved with agricultural work or in making and selling handicrafts made of locally available natural resources. In both urban and rural areas, women may start some work that generates income, such as running a small shop or a restaurant, either individually, or as part of groups, or take up employment as domestic workers etc.
As members of community organizations and fishworker movements	Women are sometimes active in community organizations such as religious groups, in local government structures and in fishworker organizations. Where women have organized, they have also been active in political struggles, as for example, against joint venture arrangements in India or against destructive fishing methods in several Asian countries. Women tend to be active particularly at the local level.

The roles women play differs by region, by religion and culture, by age, by levels of economic development, by proximity to urban centers etc. Thus, in the catholic

communities along the western coast of Sri Lanka, women play an active role in fish handling and marketing in the beach, while in the predominantly Buddhist southern coastal fishing communities, the presence of women in the beach is not socially accepted. A study from Bugtong Buto (Ibajay municipality in Aklan Province) in Central Philippines indicated the importance of age as a factor in fish trading activities. It was seen that fish trading is a major activity for middle-aged and older women, whose husbands may have become too old to earn an income from the physically demanding work of fishing, and who may be less burdened with reproductive and other domestic responsibilities (Pena and Marte, 2001).

In general, while the exact nature of the work of women differs vastly, the common factor is that it is rarely seen as 'productive'. It has low social value and is normally seen as an extension of the 'domestic' space. Little value is attached to the domestic and community tasks performed by women. Available data or information does not capture the complexity or the multidimensional nature of work undertaken by women of fishing communities, and, not surprisingly, few policies are formulated taking into account these realities.

It is as important to stress the dynamic and changing nature of women's roles in the fisheries and in fishing communities, in response to larger changes within and outside the fisheries sector, changes that, as discussed earlier, include the following:

- Modernization of the sector, including, *inter alia*, adoption of efficient technologies like trawling and purse seining, expansion of the industrial fleet and of harbour-based fisheries, and the rapid development of technologies related to refrigeration, transportation and processing;
- Increasing export-orientation as fisheries are seen as an important exchange earner by governments in the Asian region;
- Expansion of export-oriented monoculture of species like shrimp;
- Expansion of the modern fish processing sector and growing consumer demand for processed fish products, including ready-to-eat products;
- Growing competition for coastal resources for, among other things, urbanization, industrialization and tourism;
- Degradation and destruction of coastal resources not only to make way for the above activities, but also as a result of upstream activities including dam construction, and as a result of increased levels of land and sea based pollution;
- Adoption of policies by States to attract foreign investment, including tax incentives and policies facilitating joint venture agreements, and labour reforms;
- Adoption of policies linked to privatization and liberalization by States, reducing the role of the state in delivery of basic services such as health and education.

These developments have often shaped and changed women's roles in fisheries and fishing communities—thus women who were earlier self-employed as processors or traders may have since become wage labour in processing plants or shrimp peelers at harbours, or in cases, been displaced from the sector itself. Others may have become traders dealing in larger volumes of fish and earning higher incomes.

(3) Issues facing women of coastal fishing communities

Against the background provided in the earlier sections, this section will take a closer look at key trends and issues facing: women as workers in fisheries-related activities; women as workers in modern fish processing; women as care-givers in fishing families; women as members of coastal fishing communities; and women as members of organizations.

(i) Women as workers in fisheries-related activities

Women engaged in pre-harvest work such as net-making: Traditionally, nets were woven locally using cotton yarn or other natural fibre. The introduction of synthetic yarns and net-making machines has led to the displacement of thousands of people traditionally involved in these activities, many of whom were women. In Kanyakumari district of Tamil Nadu, India, for example, the introduction of these machines reportedly led to the displacement of 20,000 women employed in this work at one stroke. (ICSF, 1997). This has also been reported from Pakistan (Shah, 2002). Little documented information on trends in the work of women in the pre-harvest sector is available from other Asian countries.

Women engaged in fishing, gleaning and collection activities in inshore areas and intertidal zones: Thousands of women are working in intertidal areas, backwaters and inshore zones, collecting crabs, shrimp, shellfish, seaweed etc. for income and domestic consumption. Their work, health and incomes are rendered highly vulnerable by increasing levels of pollution (especially near urban and industrial areas) and destruction of coastal habitats, such as mangroves (among other things due to shrimp aquaculture). This has been reported from several Asian countries, including India and Thailand, though little documentation on this exists. It is also common that these lands are taken over by tourist and other interests, given the growing pressure on coastal resources and the fact that most fishing communities have no legally recognized 'customary' rights to coastal and intertidal lands, even though they have used these areas for generations.

Women engaged in fish processing and marketing activities: Women are most active in the post-harvest sector. Traditionally, women of fishing communities in many Asian countries have been playing important roles in marketing fresh fish, and processing surplus catch for sale at a later date. In many ways fishing was a family- and community-based enterprise. However, with modernization of the sector, the growth of the industrial fleet and the expansion of domestic and export markets, the situation has fast changed. Bigger players with capital have entered the sector as financiers, export agents, etc. and it is this chain that controls the trade in fish, especially higher value fish, as seen in India (Salagrama 2002). Women of fishing communities, with meager access to capital, information and technology, tend to handle low-value fish, or trash fish, for the domestic market, or to work as wage labour sorting and cleaning fish. They face increasing problems in getting access to fish catches. The fact that landing are more centralized and often at great distances from the fishing village, has not made the situation easier, as women are forced to travel longer distances, as in India and Sri Lanka (Amarasinghe and Kumara 2002). All this is not to deny that some women have managed to become

successful entrepreneurs, taking advantage of the new opportunities offered by the lucrative domestic and export market for fish.

Women are also feeling the impact of policies facilitating exports and trade pursued by States in the region. This is particularly the case when the species imported or exported are those that have a local market and provide local employment. In India, for example, the export of ribbonfish, a species that has a good local market, to China, has expanded with repercussions for the thousands of people in the chain employed in processing, transporting and selling the fish, often to distant markets within India. In the Philippines, imports that are entering the wet market through illegal channels, are depressing prices and thereby incomes of local producers and vendors of fish. In Sri Lanka, imports of dried tuna have reportedly depressed prices in the local market, reducing the income of local women processors.

Women workers on aquaculture farms: It is known that the growth of aquaculture (including mariculture and brackishwater aquaculture) is providing employments to thousands of people in the Asian region, including to women. Proponents of aquaculture often cite the important role of aquaculture in provide fish for food security and in generating employment. However, there is little or no information about the nature of employment that is generated, the conditions of work on farms, the wages given etc. The little information available is anecdotal. For example, it is known that shrimp aquaculture units in Thailand employ migrant labour from neighbouring countries such as Myanmar to minimize labour costs, and such aspects needs to be better understood. Shrimp aquaculture in many cases has been extremely lucrative in the initial period, till hit by disease or other problems, forcing many farms to shut down. The impact on workers in these farms is little studied.

(ii) Women as workers in processing plants

Export of fish and fish products is an important source of foreign exchange for countries in the Asian region, particularly for Thailand, China, Taiwan, Indonesia, Vietnam, India and Philippines. The processing sector is highly competitive and the Asian region, with cheap labour and relatively good access to resources, tends to enjoy a competitive edge.

At one level, fish processing plants provide employment to thousands of workers, particularly women. However, reports indicate that women tend to be employed in low-paid jobs with low levels of job security, often under poor conditions of work with long-term implications for their health, as has been reported in India (Nishchith 2001).

A study from Southern Thailand (SDF unpublished, 2004) traces the way in which resource degradation and the decline of coastal fisheries prompted women of fishing communities, who earlier were self-employed within the fishery, to move to wage labour. Women either took up formal employment in nearby factories, particularly in fish processing plants, or worked as informal labour working under various sub-contracting arrangements, processing species such as crab. The study found that though women have gained access to some form of stable income or minimum wage, women experience weakening of family and community links, higher levels of stress, occupational-health related problems etc. The study draws out the links between resource degradation, the

decline of community-based livelihoods and the shift to paid labour, often under conditions that leave much to be desired.

In several countries, including India, processing plants employ young women migrant workers (*Yemaya*, 2000), and there are reports of the difficult working and living conditions, low pay, and harassment of women workers. In Thailand and India, sub-contracting is also common, and some tasks take place outside the plant premises, as in peeling sheds (Nayak 2001), where workers are employed on low wages and often paid on a piecemeal basis.

While cost cutting, often at the expense of the labour employed, is one dimension, given the fiercely competitive nature of the sector there have also been cases where processing plants have been shut down, causing large-scale unemployment. In many Northern countries processing plants have either shifted to countries with cheaper labour and greater resource availability, or shifted to highly mechanized operations, causing large-scale displacement of labour. It is only a matter of time that countries in Asia also go in for such technology, perhaps in the name of complying with the high sanitary standards imposed by Northern countries, with severe implications for local employment. This is a trend that needs to be closely monitored.

(iii) Women as caregivers within the family

Women of fishing communities have crucial roles in the care and nurture of their families and communities. With men away at sea for considerable periods, women are responsible for many of the land-based roles, including handling and selling the fish, handling the family finances and making ends meet, cooking and housework, care of the children and elderly, maintaining community and social networks etc.

Developments at sea have had implications for all these roles of women. For example, the growth of trawling and the industrial fleet in Asian countries has been a constant source of conflict in the region. Small-scale and artisanal fishermen have had to face increasing competition for resources, often in the same fishing grounds. Many fishermen have lost their gears and nets, and even their lives, at sea as a result of indiscriminate trawling activities and conflict in inshore zones. Such conflicts have been witnessed in several Asian countries including Indonesia, India, Thailand and Malaysia. Artisanal and small-scale fishermen allege that such forms of non-selective fishing deplete and degrade resources and that large catches by these fleets depress market prices. For women of fishing communities, this has often meant a decline in the income available to run the family and household. It has also, in extreme cases, meant having to cope with the loss of their men in conflicts with trawlers, as in Indonesia (Sharma 2000)

It is also the case that as resources become scarce, the small-scale and artisanal fleet in the Asian region, for example in Sri Lanka, India, Philippines, is moving into deeper waters, even into international waters or into the Exclusive Economic Zones of neighbouring States. There are several cases where small-scale vessels have been confiscated and the crew arrested and even jailed, often for months and even years. The plight of the family of crew members back home is not difficult to imagine. The entire

burden of keeping the family intact falls on women. (See for example, Kumara, 2000, for a report on arrests of Sri Lankan fishermen).

In Sri Lanka a recent study on the wives of crew working in the multi-day fishing sector (Amarasinghe, 2004) indicated that though incomes of crew members on board multi-day vessels have increased, there is nevertheless a social cost being borne by wives and families of crew members. Wives of deep sea fishworkers, while experiencing some degree of autonomy in decision-making, are taking on greater responsibilities during the long absences of their men. With the change in family structure, women also have to cope with greater problems in bringing up their children, as children take to drugs, drop out of school etc. Apart from this, the arrest and detention of crew members in neighbouring countries, for periods that may last two years, imposes a big strain on women, as they have to manage their families in the absence of a regular income, while trying to secure the release of their men. The study clearly shows the changing roles of women in fishing communities, as many in the community shift to multi-day fisheries. In a coastal fishery context in contrast, women played far more active roles within the fishery itself, related to vending and processing the fish.

In addition, given the growing trend of withdrawal of States from service delivery functions, the costs of education and healthcare are increasingly passed on to families and communities, who can ill afford to take on this burden. Women, as care givers and nurturers, take on a much greater burden.

(iv) Women as members of coastal fishing communities

Degradation, destruction and pollution of coastal habitats are increasingly common in the coastal belt of Asian countries. These negative developments have affected women and coastal communities in several ways. For example, the destruction of coastal habitats such as mangroves, coral reefs, sand dunes and other coastal vegetation has sharply increased the vulnerability of communities to natural disasters such as typhoons, cyclones and the recent tsunami.

Tasks of daily survival, such as bringing water and fuelwood are becoming increasingly onerous with the salinization of ground water and destruction of coastal vegetation. A little discussed problem is that faced by women as a result of decline in tree cover, as several coastal villages, especially in Asia, lack toilets and sanitation facilities (Salagrama 2002). There is a clear decline in the quality of life as linked to environmental degradation, an aspect that is little reflected in data or statistics.

There are, at the same time, many cases where fishing communities have been uprooted and displaced, or face displacement, to make way for 'development' (industry, urban growth, tourism...). Ironically, even as fishing communities are victims of environmental degradation, they are now increasingly victims of conservation efforts. Blind ill-conceived environmentalism is leading to the displacement of communities from their fishing grounds. The growth and power of such environmentalism, with a middle-class, urban and Western understanding of environmental issues, is yet another disturbing trend.

It would be important to document comprehensively these developments and their impact on coastal fishing communities in general, and on women of these communities in particular. It would be as important to outline an action agenda to restore coastal ecosystems, drawing on views, concerns and suggestions of coastal fishing communities, recognizing communities as key players with in-depth knowledge of their ecosystem and changes within it. A detailed documentation and analysis of the institutional capacity in place, including at the community level and in local government, to carry forward the action plan, would also be essential.

Case study on impact of pollution from the gold mining industry on fishing communities in Buyat, North Sulawesi, Indonesia, presented at the *Asian regional consultation on women in fisheries*, 11 to 14 August 2004, Medan, Indonesia

Fishing communities in Buyat, North Sulawesi, have been at the receiving end of the pollution caused by gold mining operations of the mining company, PT. Newmont Minahasa Raya (NMR), a subsidiary of Newmont Mining Corporation, based in Denver, Colorado, USA, one of the largest mining company in the world. Buyat village comprises about 60 families, all of them dependent on fisheries for a livelihood. The community shifted here in 1968 as the village they were in earlier was taken over for setting up the gold mines.

Mining activity, in general, has had severe environmental implications, polluting the air and the water, destroying the soil structure, and causing erosion and sedimentation. The use of water in large quantities has drained the marshland, causing decline in soil fertility and depletion of groundwater. The impact of tailing wastes (mercury, arsenic and cyanide) on marine areas has also been observed. Content of arsenic found in some fish species was found to far above the range considered safe for human consumption. Other research showed that phytoplankton, *polychaeta*, shrimp, and crabs, between certain depth ranges, contained cyanide and mercury in high concentration, over the safety limit.

For women of the community, the pollution and destruction of their resources has had severe implications. Fish catches, particularly in nearshore waters where fish were earlier abundant, have declined. Studies have also indicated a decline in the species diversity of their catch. Not surprisingly local incomes from the fisheries are also reported to have declined. Out of desperation people have even resorted to criminal acts such as stealing coconuts from gardens of other people or taking diesel fuel from the company.

The disposal of tailings in the Buyat bay has also led to greater incidence of illness. Buyat bay villagers are reported to suffer from a variety of health problems including tumours and swellings on their bodies, skin irritation, stiffness, temporary paralysis, severe headaches and birth defects, and blood samples taken have been seen to contain arsenic and mercury over the reference range. There is the possibility of the long-term impact of heavy metal poisoning of people from Buyat bay, as in the cases from Minamata gulf in Japan in 1925.

Data showed that women were more affected. Women reported constant headaches, pain in the joints, tremors, brain damage, lumps spread on the body and itchiness. Many women reported reproductive problems, such as frequent miscarriages. It was also observed that the highest number of problems was reported by those in the age group 21 to 30 years old—the economically productive years.

These developments have had implications for the already skewed gender relations within the family and community. For women, apart from the impact on their health, these developments have meant a doubling of the work burden. Even in the face of illness they have little alternative to looking around for any work that gets them an income. As illness increases within families, the work of care giving always falls on the women. Women adopt various strategies to survive in the

face of these problems: from going to sea, to stealing coconuts, to making cookies to sell, and to becoming hostesses/prostitutes in the other areas to pay their family debt.

They now go, for example, for fishing trips with their husbands and other men. They find it hard work but consider that they have no choice—they are willing to do anything for survival, even if it is a crime and is illegal. In a society that tends to favour the male child, during times of economic hardships, girl's education is often neglected as she is expected to be only a housewife. It is the boys who get preference even in terms of nutrition and food, with implications for the health of girls and women.

(v) Women as members of organizations

Women's role in community organizations and in decision-making processes varies, based on the limited research and anecdotal information available. In Thailand women of several Muslim fishing communities report that they play important roles with the community and within decision-making structures. However, reports indicate that, in general, women's representation within traditional community decision-making structures is weak. In the caste *panchayats* of fishing communities along the Coromandel coast of India, for example, women are not represented within the community decision-making structures, as was more than evident in the post-tsunami period. It is important to note, however, that due to the typical division of labour within small-scale fishing communities, where men fish and women process/ market the fish, women of the community interact more with the outside world and have greater control over the finances, than say, women of farming and other rural households.

On the issue of women's representation in fishworker organizations, the picture, not surprisingly, remains more or less the same. At a meeting of fishworker organizations (FWOs) and NGOs in the Asian region held in Thailand in 2001 (Sharma 2002), it was noted that in most countries of the region, efforts at developing fishworker organizations are relatively recent. It was further noted that even where fisherfolk have organized, women are often not part of such organizations. Organizations present shared the problems they faced in organizing women. It was reported that women themselves tend to undervalue their own work and contribution, and are hesitant to take on more active roles within organizations. To help women recognize their own self-worth and their own identity as fishworkers and as important members of the family and community was in itself seen as a challenge. It was evident that women of fishing communities in the Asian region have a long way to go in terms of seeking better representation within organizations and within decision-making processes.

It has been observed that women tend to be more active with organizations at the community and local level. This has been the case in several countries and women have been active in various struggles, for example, against trawling activities in Indonesia and India, against the gas pipeline project in Thailand, against joint ventures in India, against arrest of Sri Lankan fishermen in third countries in Sri Lanka, and against activities that degrade the coastal environment in the Philippines and Sri Lanka. They have been very much a part of community initiatives towards resource management, as in Thailand and the Philippines.

In some cases, where women have organized and have been given the space to represent their interests within FWOs, the participation of women has strengthened the larger organization and broadened its agenda. Women have been able to raise issues that concern women as fishworkers even as they have actively supported the struggles of the fishermen. Most significantly, they have raised issues that concern the quality of life within fishing communities—issues such as access to health, sanitation and education. *They have brought in a community perspective to the fisheries debate.* Their ability to do so stems from the fact of the multi-faceted roles they perform, roles that straddle the home, the family, the community and the workplace.

It is worth noting that even when the importance of women's participation is emphasized by fishworker organizations, little is in fact done to make this possible and women continue to be marginal players. In other cases, the attitude towards women's participation has been patronizing, and little space has been provided for women to bring forth issues that are of concern to them. At most, women are seen as actors supporting the agenda of their men. Where women have organized and have become a force, this has even been perceived as a threat, and has become a divisive issue, as an issue of men versus women.

In general, a better understanding of women's participation in organizations (traditional and modern) at the community level, in local governments and within fishworker organizations, the constraints they face in participation, the different perspectives they have brought in, and ways in which their meaningful participation can be strengthened, would be highly relevant.

(4) Selected research priorities

Section 3 identified some key trends and issues facing women of fishing communities, while identifying some areas on which further study would be needed. The paper being presented at this seminar by Nalini Nayak also identifies relevant research issues. This section will, therefore, limit itself to proposing selected issues impacting on coastal fishing communities and their livelihoods at the local level that would benefit from monitoring and analysis at a macro-level.

Trade in fish and fish products

Women, in the multifaceted roles they play in the sector, particularly in processing and marketing fish, and in running the household, are impacted by macro-level trade policies. Mention has already been made in earlier sections of the impact of imported fish and fish products on livelihoods of fish traders in the Philippines and Sri Lanka. There is clearly a need to closely monitor and analyze trade-related developments, both at the international level and at the regional level, given the growing importance of regional and preferential trading arrangements in the Asian region. It is important to monitor the impact of increased trade in fish and fish products on: (i) small-scale fishers, traders and processors of fish, workers in fish processing plants, (ii) on food security of local consumers, and, (iii) as important, on the fish resource base. It would also be useful to monitor, for example, whether small-scale fishers are in any way able to benefit from export trade, or whether non-tariff barriers such as stringent food safety standards effectively debar them

from accessing export markets. Research undertaken should be in a position to propose appropriate policy options that defend and support the interests of the small-scale fisheries sector and of poor consumers, and that enhance the sustainability of the resource base.

In the Doha round (2001) WTO members agreed to commence negotiations to clarify the relationship between WTO rules and Multilateral Environmental Agreements (MEAs), with respect to those MEAs which contain “specific trade obligations” (STOs). These would include the 1972 Wetland Convention called the Ramsar Convention; the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), the 1992 Convention on Biological Diversity (CBD) and the 1995 UN Fish Stocks Agreement. The implications of such negotiations for the small-scale sector in developing countries will need to be closely monitored, particularly in view of the recent shrimp-turtle dispute at the World Trade Organization (WTO) between the United States and several Asian countries, one of the first cases involving an MEA. The US made it mandatory for shrimp to be harvested with turtle excluder devices (TEDs) to be eligible to export to the US market. The Indian government, in response, declared Gahirmatha, the largest known olive ridley turtle rookery in the world, as a Marine (Wildlife) Sanctuary in 1997, under the Wildlife Protection Act of India, 1972. All fishing, including artisanal fishing, was banned in closed areas, affecting livelihoods of thousands of traditional fishermen and their families.

Another important area for research would be on trade between regions (within the country and with neighbouring countries) in artisanally processed fish and fish products. Little is known about this form of trade or bottlenecks to it, and policy support has been minimal. There is a need to document such forms of trade and to propose policy options for support.

Fish processing industry

The importance of the fish processing industry in Asia is growing, given especially the availability of cheap and relatively skilled labour and lower costs of production. Country-level studies of the sector in the Asian region on aspects such as: conditions of work in the sector; occupational health and related issues; wages and gender-based differentials in wages; use of migrant labour, the changing nature of employment (increasing casualization of labour for example); the impact of changes in technology used in the industry; health and sanitary standards imposed by fish importing countries and their impact nature of employment, would be useful in developing a comparative picture of the sector.

It would be useful, if not necessary, to situate these studies in a global context, and to track the manner in which capital constantly moves in search of cheaper raw material (fish) and labour costs. It will also be important to monitor advances in technology used by fish processing plants, given that it is now common for plants in the North to go in for mechanization of many operations, reducing considerably the need for human labour. It may be a matter of time that countries in Asia also go in for such technology, perhaps in a bid to comply with the high sanitary standards imposed by Northern countries, leading to

large-scale displacement of labour. Research should be in a position to highlight the larger picture *vis a vis* the fish processing industry and to identify areas for policy interventions that ensure protection of core labour standards in the sector as a whole.

Aquaculture

As discussed in the first section, currently one-third of the total food fish supply derives from aquaculture, a quantum leap from a situation just a couple of decades ago. Proponents of aquaculture see it as the future of fisheries in the wild. Clearly this is a sector to closely monitor. Critics have pointed to the detrimental social and environmental effect of intensive and export-oriented forms of aquaculture, the unsustainable use of fishmeal as feed for culturing carnivorous species, the excessive use of chemicals and antibiotics, the use of non-native species etc. They have also pointed to the nexus between industrial fisheries and aquaculture, given that it is industrial fleets that catch fish for fishmeal for the aquaculture industry.

Apart from the above aspects, and their impact on coastal fishing communities, it would be essential to study aspects that would include: ownership and size of farms, marketing arrangements such as the emergence of sub-contracting arrangements, the level of employment and conditions of work in aquaculture units in the region. The latter is an area about which little or no information exists. The effort should be to propose appropriate policy towards ensuring sustainable and equitable development of aquaculture, learning from the experience in other countries.

In conclusion, this paper has provided a broad overview of the marine fisheries sector in Asia, the roles played by women within the sector and in coastal communities and key changes and trends affecting coastal fishing communities. It has identified selected issues impacting on coastal fishing communities and their livelihoods at the local level that would benefit from research and analysis at a macro-level. There can be no doubt that the right kind of action- and policy-oriented research can play an important role in making visible the work of women, in improving their economic and social well-being and quality of life, and in reducing their vulnerability to economic and environmental shocks and disasters.

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