

Co-management and Livelihood Enhancement Planning in Coastal Artisanal Fisheries

Final Project Report



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Final Project Report

**Co-management and Livelihood
Enhancement Planning
in Coastal Artisanal Fisheries**

Foundation for Ecological Research, Advocacy and Learning (FERAL)

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Executive Summary

A one and a half year action-research project entitled “Co-management and livelihood enhancement of coastal artisanal fisheries” was awarded to the Foundation for Ecological Research, Advocacy and Learning (FERAL) in May 2006. The primary objectives of the project were to develop micro-plans for fisheries livelihood enhancement and to explore options in fisheries co-management with the leaders of traditional fishing villages and the fisheries department at the district level. The project was supported by the Food and Agriculture Organisation of the United Nations as part of the Team for Recovery Support (FAO-UNTRS) and was successfully concluded in September 2008.

This project was based on extensive documentation of artisanal fishing settlements and fisheries which feed into micro-plans and co-management meetings. The project area extended from Villupuram district in the North to Cuddalore district in the South, including the Union Territory of Puducherry. A total of 62 artisanal fishing settlements were surveyed as part of the project. Among the studies that were taken up were a census of family composition, primary and secondary occupations and craft ownership covering 62 villages. This was followed by surveys of fish landing and craft/gear composition in a selection of 22 villages falling in three clusters that corresponded to the different districts. Simultaneously, an assessment of livelihood enhancement and diversification opportunities was made in the same 22 villages. Parallel to the surveys, regular meetings were held with representatives of traditional fishing panchayats in 62 settlements. These culminated in district level discussions between these representatives and officials from the district fisheries administration.

Our findings show that there is an over capacitation in artisanal fisheries in the surveyed villages. This is coupled with a disregard for the marine fisheries regulation act and appears to be resulting in resource over-exploitation. The use of banned nets and fine meshed nets was common among both artisanal and mechanised fishers as was the regular incursion of mechanised boats into artisanal fishing areas. Numerous instances of near shore and paired trawling and ring seine operations were observed. Catch composition indicated that a number of species are being harvested at pre-adult stages and there were many records of fingerlings of economically important species being caught. The gear/craft and catch surveys highlighted the urgency for fisheries management oriented reforms and interventions in the fisheries sector.

Minutes of co-management discussions in 62 artisanal fishing settlements resulted in a similar set of action points and demands from their representatives. These were shared with the relevant officers of the fisheries department and were an important first step in building a consensus on management of fisheries resources. Most of the representatives agreed that the artisanal fishing sector was facing a crisis. Recommendations included control or outright ban on ring seines, regulation of mesh sizes and the need to prevent incursions of mechanised boats into artisanal areas and marine craft into backwaters.

A compilation of these recommendations has been done for presenting to the Fisheries Commissioner in Tamil Nadu.

Diversification into alternative livelihoods does not appear to be an option the artisanal fishing community will embrace easily. The vast majority of fisherfolk are engaged in fishing and allied activities. Our census of over 10,500 households showed that this held true for both men and women. Results of the stakeholder analysis reflected this and livelihood alternatives were largely limited to enhancing fisheries and allied activities. The micro-plans developed during the project are a result of three separate exercises which included the census described above, historical mapping, stakeholder analysis and identification of gaps and coping strategies. The micro-planning exercise was based on a livelihoods diversification and enhancement framework developed earlier through a FAO supported project.

We conclude that artisanal fisheries is facing an acute crisis of resource depletion, limited options for livelihoods and, perhaps worse, a receding possibility for successful management and recovery of the resource. Recovering from this crisis would require efforts on multiple fronts. For the short term, a consensus on the resource management measures suggested during the co-management meetings needs to be built upon. It is imperative that all stakeholders are involved in this process, specifically the representatives of mechanised boats, artisanal fishers and fisheries department. The fisheries department's ability to enforce restrictions agreed to needs to be strengthened. This would require a transformation of the department from facilitating and enhancing fishing capacities to a resource manager. It is equally important that formal institutions are built which represent interests of the artisanal fishing communities both in the political and governance machinery and at the same time address some of the lacunae they presently have, such as the gender imbalance.

On a longer term, a scientific baseline on the status of fisheries itself needs to be built. Fundamental questions about the impact of gear, timing of the fishing ban and impact of modifications on backwater systems and fish nurseries need to be answered. Ultimately it is these studies that need to feed into resource management. Unless we build a comprehensive understanding of fisheries in the area, management interventions will remain a mix of guesswork and political niceties.

Part I

Main Report

Among the interventions made by the United Nations, post the December 2004 tsunami, were the setting up of an office at Chennai which housed multiple wings of the UN under the banner of Team for Recovery Support. Various sectors were addressed by this team, among which was livelihoods of coastal communities. The FAO-UNTRS project emerged from attempts and lessons learnt in the area of fisheries co-management and livelihood enhancement for coastal artisanal fisheries. The present project was a result of this work, and work done earlier by FERAL, in documenting the post tsunami changes in fishing capacities of artisanal fishers. The FERAL study clearly showed the need for interventions in fisheries management.

The resulting project explored opportunities in community based sustainable fisheries among artisanal fisher folk using a two pronged approach. Fishing practises were documented along the Coromandel coast and compared to traditional and government mandated fisheries management and regulation systems. This was translated into awareness and training materials as well as technical reports. An attempt was made to evolve a community based self regulatory system for the project villages. Simultaneously, the project documented the potential for community based organisations (CBOs) within artisanal fishing hamlets to diversify into allied sectors. Links between these CBOs, non-government organisations supporting them and various government and semi-governmental institutions providing credit and training for fisheries allied activities were facilitated. The project was based along the Coromandel coast limited to the Villupuram and Cuddalore districts and the union territory of Puducherry.

Three organisations who had participated in an initial “Partner’s planning workshop” subsequently extended their support to the project. They were (alphabetically), Centre for Rural Education and Economic Development (CREED), based in Chidambaram and the Pondicherry Social Service Society (PMSSS), based in Puducherry. The NGO partners continued to participate in the various discussions and meetings and supported this projet till its conclusion.¹

Area of work

The project was spread over the two districts of Cuddalore and Villupuram and include the Union Territory of Pondicherry. Four clusters were formed on the basis of proximity and administrative structures and were Mudasal Odai - near Chidambaram, Cuddalore - Old Town, Verampattinam - South of Pondicherry and Anichankuppam - North of Pondicherry in Villupuram District. The location of the settlements is provided in figure 1.1.

¹The third partner NGO (Dalit Mannurimai Kootamaipoo) was dissolved recently.

Socio-economic Background

Prior to sharing the results and conclusions of the project, it is necessary to provide a socio-economic and political context to the reader.

Artisanal fishing communities in the study can broadly be broken into two groups - marine fishers and backwater fishers. Those between Pondicherry and Cuddalore are largely from the “Pattinavar” caste, while those in the Cuddalore-Chidambaram stretch are from the “Paruvatharajakulam” caste. Both are distinct from agricultural castes further inland. Backwater fishers in the project area (around Killai) were from the “Irula” tribal group. Fishing habitations are often contiguous with non-fishers, the former typically residing in areas closer to the sea. The social divisions between the fishing and non-fishing castes are deep and often a source of communal tension and occasionally, violent conflict.

Artisanal fishing settlements along the Coromandel coast, typically comprise of a few hundred households, villages such as Verampattinam with over a thousand households, are few. As a result, their representation in local self governance (Gram Panchayats) is limited to a few ward members. Rarely do these villages elect a Panchayat President and hence their influence on the Panchayati Raj Institutions is limited. Representation of the fishing community to mainstream politics too remains limited or completely absent in the state or national assembly. This further limits the ability of the community to influence policy or lobby for development projects and schemes of their interest.

Traditional panchayats play an important role in artisanal fishing communities and typically are the interface between the community and the development or political sphere of influence. These are exclusively male institutions with a quasi-democratic/quasi-feudal setup². While the influence of the traditional panchayats is thought to be diminishing in recent years, they remain by far the most influential institution in artisanal fishing communities.

The role of non-governmental organisations in fishing communities is usually limited to micro-credit and livelihood related interventions. Barring a few notable exceptions³, NGOs have not entered the area of marketing or food processing technologies, both regarded as crucial lacunae in the sector.^{1,4} Perhaps the only truly influential organisation in the sector is the South Indian Federation of Fishermen Societies which has played an important role in federating artisanal fishers, supporting marketing, influencing policy and had some successes in fisheries co-management initiatives. However the major influence of SIFFS along the Coromandel coast is in the Nagapattinam district, their work further north being limited to an auction centre at Verampattinam.

²Bavinck² describes this in detail.

³Peoples Action for Development in the Palk Straights and Gulf of Mannar and the DHAN foundation in Cuddalore.

Goals and Objectives

The project had two primary goals, namely to explore:

- livelihood enhancement and diversification within the fisheries sector, in allied sectors and in other areas
- fisheries co-management, within existing institutions including traditional panchayats and with support from institutions such as the Fisheries dept.

The objectives following from these goals were:

- to develop participative village micro plans for sustainable livelihoods in at least 60 fishing hamlets in two coastal districts and at link it to mainstream development programmes,
- to understand the qualitative and quantitative status of the fisheries and fishing patterns along the coasts of two districts of Villupuram and Cuddalore, the traditional and current management systems, from the fishermen perspective, and review relevance of the existing fishing policy against realities and documented and
- to develop a common understanding among the fisher folk and other stake holders regarding issues of sustainable fishing practice, possibilities in setting up a community based fisheries management system building up towards fishery co-management initiatives made.

Activities and outputs

The activities and expected outputs of the project along with the actual deliverables have been summarised in the table in Annexure A. A narration follows:

Inception workshop

A preliminary survey in a sub-set of villages followed by an inception workshop was conducted in the initial period of the project. The main purpose of which was to identify the different stakeholders, both primary as well as institutional representing both governmental and non-governmental institutions.

The one day brainstorming was held between prospective partners of the project and explored possibilities of forming partnerships with participating agencies, identified possible roles of different partners and discussed a framework for taking the project forward. The workshop initially dealt with partners

perspectives on livelihood enhancement and diversification in artisanal fishing settlements along the Villupuram and Cuddalore districts. Partners reacted to the proposed project and provided insights into their work and strategies in these villages.

There was a fair amount of discussion on the use of micro-planning and participatory tools for data collection. Participants noted that while a lot of information had been collected by agencies in the region, little of it had been collated and shared back and recommended that this project fill this gap. The latter part of the workshop dealt with fisheries co-management in the artisanal fishing settlements. Here the discussants discussed on methodological issues in the proposed research, gaps in data in fisheries and the need for standardisation in methods for surveys across other projects. The concluding session comprised of a very brief summary of the proceedings. The list of participating organisations is provided in Annexure B.



Livelihood enhancement and diversification



Microplans were developed for the project area based on a number of different field surveys. These micro-plans were meant to identify areas where specific interventions could be made by concerned government agencies and the NGO partners. The NGO partners facilitated much of the initial data collection which went into these plans. They also participated in workshops and capacity building sessions held by experts on the tools and techniques required for building micro-plans withing the LED framework. This data was shared with these partners at regular intervals.

The kinds of information that were collected for the micro-plans included:

1. A census of 62 settlements, covering details of family composition, occupations and craft ownership for over 10,500 households.
2. Street mapping of these settlements using participatory GIS techniques and geo-referencing and digitising of their cadastral maps to serve as a baseline.
3. Historical mapping exercises for these settlements which covered size, caste and details of origin of the settlements.
4. Stakeholder analysis along the livelihoods enhancement and diversification framework⁴ for 23 of these settlements. These 23 settlements were representative of four clusters into which the 62 settlements were divided.

The resulting report (presented separately) provided a brief background of the four different clusters followed by details of its constituent villages. The plans were based on the identification of three primary

stakeholders of these settlements, specific problems, coping strategies adopted by them and gaps and action points arising from these strategies.

Among the major findings of these exercises was the universal concern regarding resource depletion and adoption of “back to the wall” or destructive fishing practises such as the use of the ring seine as a result. Other issues raised by the stakeholders included pricing and marketing, access to markets, food processing facilities, rising costs of operations, particularly in light of rising fuel prices, and access to subsidies and schemes.

In an attempt to link the project with various development initiatives of the government, a workshop was organised in Chidambaram which was inaugurated by the District Collector of Cuddalore. The workshop was attended by representatives of the fishing communities, government agencies, including the fisheries department, the Department of Tourism and the Tamil Nadu Corporation for Development of Women, the NGO partners of the project and experts and practitioners in the area of marine artisanal fisheries.



Among the issues discussed during the workshop were an overview of the crisis in the fisheries sector and the need for participatory resource management measures through means such as co-management. Other presentations covered the need for interventions in marketing and credit and the potentials available for diversification of artisanal fishers into other sectors, particularly tourism. The role of the non-government sector in identifying appropriate livelihood options in allied and other sectors was also

highlighted. Various activities undertaken and proposed during the project were also presented to the delegates.

Status of fisheries and fishing patterns

The ecological research component of this project focused on building a scientific understanding of marine fisheries along the project area. To do so we conducted a detailed literature review, studied the relevant sections of the marine fisheries regulation acts and undertook various kinds of field surveys that captured the relationships between use of gear and composition and abundance of catch. Seasonal surveys were taken up in four clusters comprising of Villupuram, Pondicherry and two areas in Cuddalore district (Old town and Killai). A total of 17 landing sites were surveyed and three rounds of data were collected across 11 months to capture seasonal variations in fisheries catch and gear use.

Field surveys undertaken during this component of the project involved :

- a ground assessment of assets, particularly craft and nets, and their use
- “sea surveys” undertaken seasonally, wherein artisanal fishing was observed at sea and recordings of location, depth and substratum were taken using a GPS/Sonar unit. A short questionnaire on targeted species, types of craft and gear used was also administered

- landing surveys wherein catch brought in was photographed for later identification and measurement and information about gear, craft, period of fishing and crew was noted on a structured schedule.

Details of this survey are presented as a separate report.

Major findings of the surveys were the significant increase in fishing capacities post tsunami in the project area which has resulted in redundancy of fishing craft and gear in most coastal villages. The shift to ring seining, particularly in the recent months and its consequences on labour or crew supply between villages which is reflected in the micro-planning sessions was also observed. Perhaps most alarming of our results is the size composition of fish which is pre-dominantly below the mature stages for the bulk of species landed. This is an ominous sign and may be a signal to the imminent collapse of fisheries in the region.



Exploring fisheries co-management

Fisheries co-management has been defined as “a sharing of responsibility and authority for resource management between the government and the local resource users/community”.³ Given the crisis in fisheries and the inability of enforcement of the MFRA in coastal states, the importance of participatory and self-regulatory approaches to resource conservation has grown. In spite of a bumpy ride, fisheries co-management has proven to be the most successful approach for marine fisheries resources management in southern India. Initial successes in Nagapattinam have driven the attempts at organising representatives of fishing communities in other parts of the Coromandel coast. This project used the experiences from Nagapattinam to take the initial steps to explore the possibility of co-management in the project area. Our experiences have been very encouraging and it is hoped that progress made during the past one and a half years is dove-tailed into other initiatives of the FAO in Tamil Nadu.



Our strategy to explore co-management among artisanal fishers comprised of a two step approach. Building upon contacts established during the various kind of surveys and studies, and using the support of the partner NGOs, we held initial discussions with representatives of the traditional fishing panchayats in 56 settlements. These discussions focused on resource constraints and management issues at a settlement level. All these meetings were minuted and minutes circulated amongst the leaders. The second step involved the collation of the minutes for each administrative unit, i.e. Villupuram, Puducherry and Cuddalore. These collated minutes served as an agenda for discussion for district level meetings held in the three areas. Representatives of the Fisheries Departments attended these district meetings. Discussions were held between the representatives attended the district level meetings and a short list of action points was evolved. These were presented to the government representative who responded accordingly. The collation of these minutes were cir-

culated amongst the representatives, Fisheries department representatives and a copy was forwarded to the commissioner of fisheries, Chennai.

Among the salient points of the various meetings were the urgency felt by the community in restricting destructive fisheries. Specific recommendations were made to ban or restrict ring seining operations, enforce the near shore trawling ban on mechanised boats and restrict use of pair trawling and drag nets in general. Issues of environmental degradation figured prominently in the discussions. The need for the government to intervene was felt almost universally. Most of the discussants felt that enforcement would need to be largely the governments responsibility and cannot be left to the communities themselves. There appears to be a general acceptance that the crisis in the sector will continue or get accentuated unless resource control measures are put in place. The collated recommendations for the three districts are presented as a separate report.

This action research project has built a substantial understanding of the artisanal fishing sector and the crisis faced by it on various fronts. While the overall picture of the sector is depressing, it is important to keep in mind that the artisanal fishing community is known for its versatility and ability to adapt to changes. Perhaps the recent shift to large scale pelagic shoaling species is a reflection of this, even though the use of the ring seine is considered the largest threats to fisheries resources.

We draw three basic conclusions from this project:

1. There is a desperate need for a building a scientific baseline on marine and coastal resources. The lack of micro-scale scientific data is perhaps the greatest hindrance to scientific planning and management of coastal and marine resources.
2. The immediate strategy for livelihoods will need to focus on enhancement within the fisheries sector. The pre-eminent dependence of artisanal fishing communities on marine fisheries also suggests that a long term strategy for education and technical support will be required to help the community diversify into other areas.
3. Co-management is clearly a possible route to resource management. However the role of the fisheries department needs to be enhanced and a re-orientation toward management rather than facilitation of fisheries through subsidies and schemes is required. In particular, the ability of the department in enforcing the MFRA needs to be strengthened.

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Part II
Annexure

Appendix A

Summary of achievements

Objective/purpose	Output	Status
All the stakeholders (community groups NGOs and others) to be part of the project identified, consensus and role clarity arrived at with all major NGO partners and CBOs identifying the project by April 2007	A stake holder profile, and status of background information already available prepared for the target areas in the two districts. Inception workshop with clear consensus decisions and plans	Completed Completed
Participative village micro plans developed for sustainable livelihoods in at least 60 fishing hamlets in two coastal districts by August 2007 and at linked to mainstream development programmes by end of 2007	PRAs done in all villages or built upon from PRAs done by NGOs CBOs Micro-plans for at least 60 hamlets by August 2008 Workshop of stakeholders on microplan linkage to credit ,technical and financial sources and schemes Some Livelihoods Interventions taken up in at least 30 villages as per the microplans by CBOs ,NGOs, INGOs and Govt. by project end. Process documented especially the adoption of LED framework	Social mapping completed. Data shared with all partner organisations. Plans for 23 settlements completed. Historical mapping and stakeholder analysis completed for 56 out of 62 settlements. Completed. Completed. Report presented in Annexure.
The qualitative and quantitative status of the fisheries and fishing patterns along the coasts of two districts of Villupuram and Cuddalore ,the traditional and current management systems understood from the fishermen perspective, and relevance of the existing fishing policy reviewed against realities and documented	Qualitative and quantitative profile of marine fishing in Cuddalore and Villupuram documented by June 2008. Review of the traditional and conventional management practices by December 2007. Provisions of MFRA and other relevant policies reviewed against ground level realities bottlenecks identified and policy recommendations developed.	Completed. Completed. Completed. Report presented in annexure.

Objective/purpose	Output	Status
<p>Common understanding reached among the fisher folk and other stake holders regarding issues of sustainable fishing practices, possibilities in setting up a community based fisheries management system building up towards fishery co-management explored and initiatives made</p>	<p>At least 10 cluster level consultation of Fisher folk with consensus and decisions on at least 2 community based fisheries management measures.</p> <p>Plat forms for discussing community based fisheries management established and regular cluster level meetings happening by June 2008.</p> <p>A workshop of stake holders taking stock of the community fishery management process and taking decisions and recommendations for advocate Fisheries co management at policy level. by March 2008.</p>	<p>Consultations completed. 56 settlements covered.</p> <p>Completed for Puducherry. and Villupuram Dt. Cuddalore meeting proposed in middle of September.</p> <p>All workshops for project completed.</p>

Appendix B

List of participant organisations in the inception workshop

1. Action Aid, India.
2. Agency for Technical Cooperation and Development (ACTED)
3. Ashoka trust for Environment and Education (ATREE).
4. Church Auxiliary for Social Action (CASA).
5. Centre for Rural Education and Economic Development (CREED)
6. District Rural Development Agency, Villupuram.
7. Food and Agriculture Organisation of the United Nations (FAO/UNTRS).
8. Foundation for Ecological Research, Advocacy and Learning (FERAL).
9. Pondicherry Social Service Society (PMSSS).
10. Dalit Mannurimai Kootamaipoo (DMK)
10. Nature Conservation Foundation (NCF).