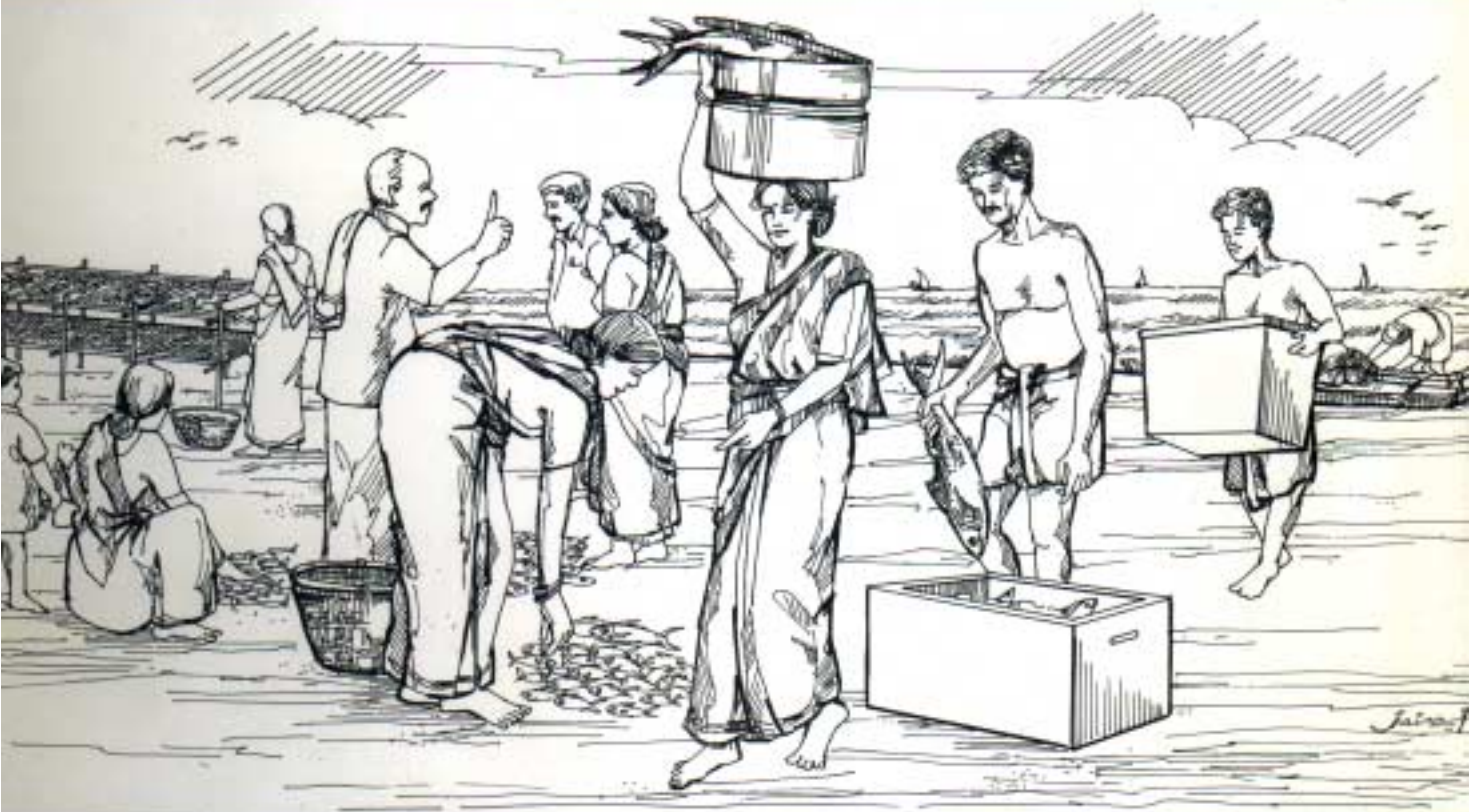


## IMPACT ASSESSMENT

# Study on the impact of the DFID Post-Harvest Fisheries Project



# **IMPACT ASSESSMENT STUDY**

**Prepared by**  
**Local consultants and staff of the**  
**Department for International Development**  
**Bay of Bengal Post-Harvest Fisheries Project**

**Feb.-May 1997**

The Department of International Development's (DFID) Bay of Bengal Post Harvest Fisheries Project works with small-scale artisanal fishing communities in reducing post-harvest losses of fish; develops low-cost improvements in handling, processing and marketing fish; and provides technical support, advice and training to government and non-government organizations, fisherfolk associations and women's groups.

In 1996 the Mid-Term Review Mission recommended that the project should give attention to examining the project's impact using an impact assessment framework as the basis for conducting surveys during the first quarter of 1997.

The main body of this report contains the comprehensive and up-to-date study on this impact assessment study which was carried out over several months, involved two local consultant companies\*\*, three workshops (in November 1996, January 1997 and May 1997) several field trips and five impact assessment teams consisting of four or five members.

The teams covered 16 of the project's 60 locations. They spent about a week in each location. Every team held discussions with key informants, the project's partner organisation (government agencies and non-government organisations), and target group beneficiaries from the project's activities and general members of the fisherfolk community at each location.

One team focused on Sri Lanka, one on Bangladesh and three on India. Every team consisted of at least one project member, consultants and resource persons. Every team had at least one woman member experienced in working with fishing communities.

This report also contains a background on the development of the project since 1987, the approaches taken by the project and the evolutionary process that has been used in working with artisanal fishing communities. There is also a short account of the lessons learnt from project interventions. Finally, the report looks at the future options of the project and the issues which need to be considered if DFID is going to support a fourth phase.

The project is funded by the Government of the United Kingdom. It is based in Chennai, India, and operates in three countries of the Bay of Bengal region, namely India, Bangladesh and Sri Lanka. The project started in 1987 and is presently in its third Phase which is due to end in March 1998.

This report is addressed primarily to those in the DFID concerned with decisions regarding the future of the project. It is an internal document for circulation within the DFID.

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## EXECUTIVE SUMMARY

1. The project has gone through an evolutionary process over the last ten years and has progressively shifted from a technology-centred to a people-centred approach.
2. The project has moved from addressing *post-harvest* issues of national importance, to focusing on improving the living standards of post-harvest workers in the artisanal fisheries subsector using an integrated approach to post-harvest issues and concerns of institutional development.
3. This shift in emphasis has led to greater ownership by the fishing communities of the processes of change and has contributed to the substantial increase in the uptake of improved post-harvest processes in the third phase.
4. The project has made significant improvements in its impact on the fishing communities of the three countries since it began. The overall impact of the project has so far been small but it has created the conditions for very large impact in the future if the lessons learnt at the micro-level can be replicated on a large enough scale in a sustainable manner.
5. The project has learnt a number of lessons that reflect the cross-cutting nature of the approach used in working with fishing communities. The project has clearly demonstrated that post-harvest approaches should not focus on technology alone but must take into account broader related issues and use a multi-disciplinary approach in bringing technology down to the field level.
6. The project will need to continue to refine and reconsider possible lessons learned as part of the process towards finalising and disseminating its intervention package. The key challenge is in getting the benefits across to a much wider audience on a sustainable basis.
7. The demand for support using the project's interventions is increasing from fishing communities, non-government and government staff and a fourth phase is being considered which would focus more on livelihood and food security options.
8. There is clear evidence of a supportive policy environment within the respective governments and these policies are moving in the direction of conserving their resources and away from the production-orientated policies of the past. This creates a more positive enabling environment in which a future project could work but the extent and depth of this needs to be determined.
9. There are various issues which will need to be discussed when considering a future phase. These relate to the project's operational and management arrangements, geographical focus, organisational capacity and level of intermediate clients and whether the project should take a wider focus in addressing livelihood and food security options.

**The main findings of the impact assessment study conducted during February - May 1997 are given below:**

10. In India and Bangladesh the project has a strong focus on **women**. Almost all community based organisations it works with are composed entirely of women. However, the effects of the project and its potential impact are visible at the households level. not distinctly on women or gender issues.
11. The **poverty focus** of the project is highest in Bangladesh, where about 95% of target household are below or just at subsistence levels. In India the proportion of poor varies from 20 to 50% of project target household, and in Sri Lanka it is around 30%<sup>1</sup>.

## INDIA

12. The effects of the project on its target households (i.e. those the project is directly working with) are significant and apparent at the output level in all areas listed in the logframe - identification and transfer of appropriate technologies, strengthening the capacity of institutions to support post-harvest fisheries, enhancing access to markets and credit. disseminating information on post-harvest fisheries and building effective linkages between community based organisations, government organisations and non-government organisations.
13. These effects go well beyond the target population. (Proportions of target households accessing formal credit have increased by 12 to 100% in different locations; adoption of post harvest fisheries technologies is high where it is locally appropriate and combined with market linkages and/or credit; adoption of post harvest fisheries technologies by non target households is also high.)
14. At the project purpose level however, the impact is only **beginning** to be felt; some more time and work is necessary for it to assume appreciable proportions. (Only about 5% of target households credit needs are currently met by formal credit; informal credit remains very costly at rates of interest which is 40% per annum and more. Post-harvest fisheries technologies promoted by the project are in themselves usually sound and effective. but adoption by target households is low although adoption by non-target households is generally higher.)

## BANGLADESH

15. The effects of the project on its target household (set bag net fishing communities) are clearly significant and apparent at the output level. mainly in the areas of income generating activities and credit. (About 43% of target household in the locations studied have been covered by income generating activities. and 50% of them have access to formal credit.)
16. Barring serious disruptions due to natural calamities. and provided community based organisations and non-government organisations consolidate their achievements, a significant impact at the purpose level by end of project is likely: (as income generating activities yield increased incomes, and access to formal credit expands.)

<sup>1</sup> the meaning of poor also varies across countries, especially in Sri Lanka with its relatively high standard of living

17. The effects of the project on its target households are at the output level, and are felt mainly in the areas of credit and awareness of post-harvest fisheries technologies. Effects in the area of awareness go well beyond the target population (artisanal fishing community and petty fish trader).
18. The project has increased access to formal credit - banks to community based organisations. (A seven-fold increase in numbers of target households accessing formal credit, and a 5% reduction in weighted average cost of credit to target households, over three years is reported in one location).
19. At the project purpose level, the impact is **beginning** to be felt; some more time and work is necessary for it to assume appreciable proportions. (Only about 12% of credit needs of target households which have access are currently met by formal credit; informal credit remains very costly at 15-20% p.m.. Post harvest fisheries technologies promoted by the project are in themselves usually sound and effective. but adoption by target household is low.)

## SECTION 2

# BACKGROUND

## 2.1 INTRODUCTION

The DFID Post harvest Fisheries Project (DFID-PHFP) is almost completing its third phase of implementation. It has been operational for ten years and has undergone considerable evolution in that time. This section brings together key elements of the history of the project and the constraints to implementation and looks at the problems still faced by the fisherfolk.

## 2.2 INSTITUTIONAL ARRANGEMENTS

The DFID-PHFP became operational in August 1987. For administrative and effectiveness reasons the project was technically integrated with the Bay of Bengal Programme (BOBP) although it has remained very much an independently funded and managed project.

### **The Bay of Bengal Programme for regional co-operation**

The BOBP was established as a mechanism for regional co-operation under which a series of projects operate and through which a range of donors direct funds to achieve specific objectives using similar approaches. The DFID-PHFP was started as a post-harvest fisheries technology project which was seen as complementary to the predominantly pre-harvest focus of other projects under BOBP. BOBP had a catalytic approach: developing, demonstrating and promoting new techniques, technologies or ideas to help improve the condition of small-scale fisherfolk communities in member countries. The planned approach for the DFID-PHFP accorded well with this and it was considered appropriate to work in parallel with the other projects under BOBP.

The BOBP covers seven countries in the Bay of Bengal. These were initially Bangladesh, India, Malaysia, Sri Lanka and Thailand, later-joined by Indonesia, and Maldives. The programme began in 1979 and developed to become a mechanism for co-operation across donors, governments and a series of projects, most of which were implemented by Food and Agriculture Organisation (FAO). Initially the core FAO implemented project was the SIDA funded *Development of Small-Scale Fisheries in the Bay of Bengal*. The first phase of the BOBP ended in 1986 and the core project was succeeded by the Danish International Development Agency (DANIDA)/Swedish International Development Agency (SIDA) funded *Small Scale Fisherfolk Communities in the Bay of Bengal*.

From the beginning the DFID-PHFP was operated within the co-operation mechanism of BOBP from offices in Madras shared with the other FAO implemented projects including:

- 1 The United Nations Fund for Population Activities (UNFPA) funded *Improvement of Living Conditions of Women and their Families in Fishing Communities*
- 1 The United Nations Development Programme (UNDP) funded *Bio-economics of Small-Scale Fisheries in the Bay of Bengal* project
- 1 The Swedmar/SIDA funded *Assessment of Pollution Hazards in Fisheries*.
- 1 The International Maritime Organisation (IMO) funded *Cleaner Fishery Harbours in the Bay of Bengal*

The second phase of the BOBP ended in 1992 and the third phase of the BOBP co-operation began in 1994. A new core project was started called *Coastal Fisheries Management*, this was funded by DANIDA and the Ministry of Foreign Affairs, Japan. Other projects under the BOBP umbrella were reduced to two: the DFID-PHFP and the *Cleaner Fishing Harbour* project. The latter project closed early in the third phase leaving only the DFID-PHFP and the *Coastal Fisheries Management Project*.

### **Project management**

Although BOBP has a wider remit, the DFID-PHFP limited its field work to the areas where post-harvest were considered particular priorities by the member states at that time i.e. to India, Bangladesh and Sri Lanka. In India only the east coast states were involved. This smaller focus has allowed for more effective use of the limited budget of the project but has provided other countries in the wider region with relevant information about post-harvest issues.

The project operates under three of DFID's national programmes with distinct country budgets operated through DFID's offices in Delhi, Dhaka and Bangkok. The implementation of the DFID-PHFP has been carried out by the Natural Resources Institute (NRI) with a team of foreign and local consultants operating under a Project Field Manager. The main office is based in the BOBP offices in Madras and operates through satellite offices in Dhaka, Kakinada and Bhubaneswar.

### **Links with other projects, non-government organisations and government agencies**

The project has operated on a small budget over a large geographical area trying to address a wide diversity of development problems. An important part of the project has been the strong linkages between the project, other projects, government departments and non-government organisations in the three countries. The relationship between DFID-PHFP and other projects under the BOBP has traditionally been one of close co-operation and co-ordination. The project has also worked in an informal way with other DFID projects in Bangladesh and with the Asian Development Bank (ADB) fisheries sector community development project in Sri Lanka.

The key development agencies in all the areas where the DFID-PHFP operates are the government departments of the three countries. The project works very closely with these departments and is supported by them. Government staff have played a vital role in identifying key problem areas to be addressed and in facilitating the evolution of solutions.

The relationship with NGOs has been crucial to the projects success. Given the limited resources of the project, NGOs have provided a vital mechanism for close interaction with the communities, especially those NGOs which have their origins in the fishing communities themselves.

The project has placed considerable emphasis in recent years on forging links between NGOs and government and this is seen as an important function of the project in the remaining period of phase three.

## 2.3 APPROACH, AIMS AND ACTIVITIES OF THE PROJECT

### Approach

The approach adopted by the project followed that established by the donors through the BOBP i.e. a flexible, reactive and catalytic approach. Flexible in the sense that it was very openly defined at the design stage allowing the project to adopt a process approach to activity planning. The project had the scope to identify, design and appraise a series of sub-projects within a broad project framework. Reactive in that its function was to respond to the needs of member states or to the needs expressed by other sections within BOBP as and when post-harvest problems became apparent. Catalytic in that, in line with the BOBP, the project aimed to find solutions to problems, develop methodologies for resolving them, and then to mobilise local institutions to carry out the implementation and dissemination of ideas. The project then took the essential lessons and methodologies from the localised situation and made them regionally available. In that way the benefits from project activities could reach a wider audience across the region.

The project has had three phases so far. phase one was from 1987 to 1989, phase two from 1989 to 1992, and phase three from 1993 to 1998. The aims and activities of the project under each of those phases is discussed below.

### Phase one aims and activities

The original aim of the project was:

*Improvement to handling and marketing of fish in the Bay of Bengal (BOB) region. The resultant objective is to reduce losses which occur through ignorance, poor techniques and absence of handling facilities and equipment and to increase the value added<sup>2</sup>.*

The emphasis of the project in the first two years was on identifying losses in the quality and quantity of fish landed and finding solutions to these losses. It was essentially a production-oriented approach which tried to identify losses primarily from a national-level perspective. It thus tried to define the type and extent of the problem regionally and to start to explore possible technical solutions.

The plan of action of phase 1 of the project were broadly defined by member countries of the regional co-operation at the 12th meeting of the Advisory Committee of the BOBP in January 1988. These were:

- Improvement of traditional drying and curing techniques such as sun drying and salting including introduction of solar drying technology as appropriate
- Use of ice and related methods for preservation of fish on board vessels to improve quality at the point of marketing
- Marketing of fish products made by utilising trawler by-catch
- Improvement of marketing infrastructure for increasing the incomes of fisherfolk and fish processors
- Co-ordination of post-harvest inputs and reduction of under-utilisation in the Maldives.
- Conversion of low-value fish into value-added products and shrimp feed.

Sub-projects in most of these areas were identified and preliminary information gathering was carried out at the field level.

<sup>2</sup> Blake, B.F. (1987). Bay of Bengal Project Post-Harvest TCO TOR. British Council, Madras, India, quoted in the IMM impact assessment report of 1991.

### **Phase two aims and activities**

The aims of the second phase became more focused on the needs of the fisherfolk which it saw as primary stakeholders along with the consumer:

*To reduce post-harvest losses and improve utilisation of fish in order to enhance incomes of those involved in fish handling and marketing and to improve flows of fish to the consumer.*

A wide range of activities were carried out during the second phase of the project. Some of these continued those of the first phase such as work with seaweed, prawn feeds, shrimp trawl by-catches, use of ice at sea, the women's fish marketing container, anchovy drying, and shark utilisation. Others were new areas of work such as flying fish marketing, insect infestation control and tuna processing. The geographical focus of the project was India with a few activities taking place in Bangladesh and Sri Lanka.

The project identified post-harvest problems at both the macro and community levels and then identified technical solutions to overcome them. They worked with NGOs and government departments to encourage and support the transfer of these technologies.

### **Phase three aims and activities**

Phase two of the project ended in early 1992 and there was an inter-phase period where the project maintained activities at a low level until the start of the third phase in July 1993.

The project purpose in the project logframe is defined as:

*To enhance the income and savings of artisanal fishing communities and petty traders*

The project goal, as defined by the logframe, is:

*To raise the living standards of target beneficiaries through increasing the diversity of fish available for consumption*

The third phase changed considerably from the previous two phases with the dropping of some activities which were considered unsustainable. The radical restructuring of others and the involvement of new areas of work. Fish marketing, anchovy drying and the use of ice have continued from previous phases but have expanded into new locations along the Indian coast. Fish smoking in Andhra Pradesh has proved an important new area of operation.

The geographical focus of the work has expanded to include new projects in both Sri Lanka and Bangladesh. In Sri Lanka, work with cycle traders using ice has expanded from its base in St John's market to wider use of ice boxes along the coast. The use of drying racks has also taken off following an exchange visit by Sri Lankan fisheries staff to the coast of India.

In Bangladesh the focus of the project has been with poor coastal communities in areas where inshore resources are threatened from over-exploitation. The project aims to increase post-harvest income from landed catch and to assist fisherfolk to diversify into income generating activities outside the sector.

There has also been a far greater emphasis placed on building the institutional capacity of local partner development agencies in the NGO and public sectors, and of designing methodologies to address the needs and capacities of these agencies as well as those of the fisherfolk. The production of post-harvest overviews for each east coast state in India and for Bangladesh and Sri Lanka has started to increase awareness of post-harvest issues at the policy level.

## 2.4 THE CURRENT POSITION OF THE PROJECT

### **An evolving project design**

The project has gone through an evolutionary process over the last ten years. Initially it was predominantly production-focused, trying to identify micro-level technical solutions for problems with national-level significance and regional-level transferability.

In the second phase the emphasis was on attempting to promote such technical solutions at the community level. Fisherfolk were encouraged to adopt technical innovations from the project which were designed to benefit their lives. The purpose of the project assumed a high priority of post-harvest issues in the lives of the fisherfolk which was not always seen in practice.

The success and failures of the second phase led to a change of emphasis in the third phase towards a closer partnership with fisherfolk involved in post-harvest activities. This partnership jointly identified problems which were important to the fisherfolk, and developed solutions to those problems which had direct relevance to the needs, experience and capacities of the fisherfolk. Greater emphasis was placed on assessing the appropriateness of project interventions to the needs and priorities of the fisherfolk and less on the efficiency of technical interventions. Whilst retaining the environmental concern, there was a shift in perspective from mainly technical and economic sustainability, towards greater concern for social and cultural sustainability.

The project has progressively shifted from a technology-centred, to a people-centred approach. It has moved from addressing *post-harvest* issues of national importance, to focusing on improving the living standards of post-harvest workers in the artisanal fisheries by whatever means available. This has meant that, whilst post-harvest interventions are still the main focus of the project, other issues often have to be addressed in parallel if a positive impact is to be achieved. This reinforces the realisation that fisherfolk are involved in a wide range of inter-linked and inter-dependent activities, only some of which are directly related to the post-harvest sub-sector.

This shift in emphasis has led to greater ownership by the fisherfolk of the processes of change and has contributed to the substantial increase in the uptake of improved post-harvest processes in the third phase.

### **Constraints to implementation**

The process nature of the project has been both an advantage and a disadvantage. It has given a considerable degree of flexibility in implementation which has allowed the project to address issues as they appeared and to allocate resources according to the perceived priorities. It has, however, meant that the project has tried to cover a wide diversity of post-harvest issues across a large number of communities. Over fifty locations have received project support and given the small number of staff and the limited project funding, this has meant that the efforts in each place have been restricted.

The work with NGOs and government agencies has overcome this problem to a limited extent but in some cases the critical mass of change required to stimulate spontaneous uptake of an intervention was a very long time in coming. In many cases the work with the NGOs was of limited effect at the beginning as they too had to be developed in order to act as effective intermediaries at the local level.

Credit has been a major issue for low income fisherfolk and this affects their uptake of new approaches and technologies. The project has not had the facility to provide credit directly and the development of credit linkages between fisherfolk and credit providers has been a slow process.

In many cases the evolution of new approaches to post-harvest issues requires intervention in the market. Financial constraints have limited the role of the project in this important area to the provision of basic market information<sup>3</sup>. The lack of proven market acceptability to improved products has been a significant risk factor for fisherfolk which has also affected the speed of uptake.

These difficulties have meant that some issues facing localised uptake remain. Some of the partner agencies are still weak and unable to continue without project support. Credit linkages in many places remain weak. Information on the market for improved products remains poor.

### **The impact to date**

In spite of these constraints the project has made significant improvements in its impact on the fishing communities of the three countries since it began. This is partly because the change of emphasis in the third phase of the project but it is also because the momentum of the project has been built up over a long period and the efforts of previous phases are bearing fruit. In addition the economic and environmental conditions under which fisherfolk work in the region have significantly changed over recent years to favour the uptake of improved post-harvest interventions.

The overall impact of the project has so far been small but it has created the conditions for very large impact in the future if the lessons learnt at the micro-level can be replicated on a large enough scale in a sustainable manner.

The project, based on the lessons which have been learnt from the previous phases, has now evolved a thorough understanding of the issues facing the workers in the post-harvest sub-sector and how to address them. These lessons are outlined below.

### **Remaining problems to be addressed**

In spite of the improved impact, the project is still a long way from positively affecting the lives of the *majority* of the coastal artisanal communities in the region.

The project has now developed (although refining is still required) a package of post-harvest support and innovation which can work with communities to identify their problems, needs, capacities and aspirations; to develop specific institutional and organisational changes to facilitate the uptake of improved techniques and skills; and to innovate post-harvest changes in practices or technology which will bring about positive benefits. Some areas such as the market for new products, credit linkages, partner agency effectiveness, and community organisation building need to be further developed at the community level.

Even when the package of interventions is fully refined, the project will still not have the physical capacity to implement this package throughout all the communities in the region who may need its support. Likewise neither the governments nor the NGOs currently have that capacity. They do have the coverage and contacts but they may lack the necessary attitudes, knowledge, skills and policy frameworks.

The key challenge facing the project for the future is getting the benefits provided by the first three phases reach out to a much wider audience on a sustainable basis.

3 The project has been working closely with the DFIDs Post Harvest Fisheries Research programme that is working in the areas of market information and marketing channels

## IMPACT ASSESSMENT STUDY

### 3.1 INTRODUCTION

The project covers three countries in the Bay of Bengal region; India, Bangladesh and Sri Lanka. Since it started, the project has gone through three phases (covered in Section 2).

The third phase saw interventions in different locations across the three countries, under a wide variety of conditions. The project developed diverse approaches and appropriate ‘mixes’ of strategies for each situation. The result : project interventions in 54 locations each unique in its own way.

A pre-review) impact assessment of the project in May 1996 by an external consultant” indicated that the project had begun to move towards achieving its purpose, but that it had some distance to go before any significant impact was made. A reformulation of the project logframe was recommended. A mid term review of the project in July 1996<sup>5</sup> agreed with the recommendation, and also found a need for an Impact Assessment Study (IAS), which led to the present study.

*The study aims at providing a basis for making informed decisions with regard to the future of the project.*

As work preparatory to the study progressed, the implications of diversity across locations became more and more apparent. For example, in one location it could be the quality of a particular NGO that predominated and influenced results. in another it could be access to markets, while in the third it could be government policy. and in the fourth some special ability or degree of involvement of a particular individual (project staff, NGO or government). It was not easy to compare achievements in one location with those in another. An acceptable methodology was therefore evolved (by the project with external consultants) through a series of discussions, field visits, and workshops, one that would give the best results in the time available. (See Section 3.3)

Sections 3-6 contain much information and insights useful to staff of the project, its partners and associates, for use at the operational level, i.e. for planning, implementation, monitoring, and review. They constitute the secondary audience (of the report) when it is cleared for wider dissemination outside of DFID.

Some familiarity with the history of the project, its logic, and the operating environment is assumed on the part of the reader of these sections.

### 3.2 NOTE ON TERMS OF REFERENCE

The evolution of terms of reference (TOR) for the study is outlined below.

The project reviewed and revised its logframe between November 1996 and 27 January 1997. Simultaneously, TORs for the IAS were evolved by project staff, partner agencies, and consultants through workshops, field visits, and discussions during the period August 1996 - January 1997. The present study was defined as an ‘output to purpose’ review, leading to an assessment of impact, actual and potential.

<sup>4</sup> Pre-Review Impact Assessment by Jock Campbell, Integrated Marine Management, May 1996

<sup>5</sup> Bay of Bengal Post-Harvest Fisheries Project, Phase III Mid-term Review Report, July 1996

It was decided that the study would be executed by composite teams of key project staff and independent consultants, assisted by local guides, facilitators, and interpreters as necessary. The time horizon to be covered by the study - 1993 to February/March 1997 (i.e. Phase III of the project). A purposive sample of 16 of 54 total project locations was chosen, to represent a good cross-section of project interventions and levels of achievement.

- | The IAS team was to complete its work and submit a draft report by 5 May 1997.
- | The TOR (given in Annex 1), assumed its present form on 27 January 1997.
- | The composition of teams, their responsibilities and itineraries are listed in Annex 3.

### 3.3 METHODOLOGY

Flowing from the TOR, the (revised) logframe (See Appendix 4) objective verifiable indicators (OVIs) led to a set of questions that needed to be answered. (See Appendix 2)

Techniques for obtaining the necessary answers were field-tested near Chennai between 27 and 30 January 1997. Flexibility (of technique) was necessary, given the diversity of conditions in locations across three countries. Focus group discussions, individual interviews, discussions with key informants (in partner agencies, government, etc.), and direct observation by IAS teams, using their judgment and imagination was the most meaningful way of obtaining information.

As the study progressed, it became clear that the revised logframe OVIs, although rigorous and clear, had some limitations.

- | information generated in the field was often not sufficient or qualitatively good enough to arrive at the kind of quantitative result demanded by logframe OVIs
- | some OVIs were not relevant to local situations, or for the kind of intervention attempted in a particular location
- | a simple aggregation of OVIs across locations did not present a meaningful picture of a region or country as a whole
- | there were issues not covered by OVIs but relevant to project impact
- | there were assumptions behind OVIs that were sometimes not valid for particular locations
- | the linkage between project intervention and OVIs varied from the strong to weak to non-existent

It was therefore decided that.

- | OVI results would be accompanied by qualifying comments where necessary
- | aggregation of results of OVIs across locations would not be made: ranges of achievement across locations would be presented
- | OVIs not found relevant to a particular situation would be left blank, and alternative relevant information included wherever possible
- | OVI findings would be supplemented by other information and insights available

As the study progressed, two broad patterns of project intervention emerged - the first is referred to in this report as the 'broad spectrum' approach, and the other as the '*technology focused* (approach)<sup>6</sup>.

<sup>6</sup> These are names or labels given by the IAS team; the project itself has, at least until now, used no such classification

### **The broad spectrum approach**

- seeks to address a relatively wide range of issues that concern target communities. In the main these issues are credit, income generation (including improved post-harvest fisheries technologies), women, literacy, social awareness, and community leadership building. The key feature of this approach is that it uses ‘Community Based Organizations’ (CBOs) as the institutional base and vehicle for all programmes. [CBO members (and their families) are by definition the project’s target households (h/h) in a given location]. CBOs typically ‘start up’ with savings and credit and then go on to other activities - improvement of h/h incomes, literacy, leadership building, and the occasional social issue. Improvement of PHF practices and technologies is but one of many ways of improving incomes. The project provides support for CBO development, training, field staff salaries, and for development, trial and extension of improved PHF technologies. Focus on poverty is an important feature of this approach, although the degree of emphasis and meaning of poverty varies with locations. Except in a very few locations in Bangladesh where it works directly with CBOs. the project - where it follows this approach - always works through local NGO partners who are the promoters and mentors of CBOs. This is a brief and general description of the broad spectrum approach. There is however no such thing as a typical broad spectrum approach. Indeed, there is no such thing as the typical NGO or CBO either. Very material differences exist, especially across countries.

### **The technology-focused approach**

- mainly seeks to extend and establish improved PI-IF technologies for artisanal fisherfolk and petty fish traders. In ‘marketing’ such socially and economically useful technologies to target communities, the project co-opts other agencies who could help in developing and field testing technologies, fabricating prototypes, in facilitating access and communication with target communities, in disseminating information and creating awareness, in providing finance and credit to adopters of improved technologies. and in marketing the produce of such adopters. Government fisheries departments, fisheries training and research institutions, marketing agencies dealing in fish products, and manufacturers of fishing craft and related equipment, are all natural allies. In different project locations, one encounters different combinations of such allies. In the future there may be others that include banks, private entrepreneurs, even NGOs.

Given the differences in focus of the two approaches, it is not meaningful to compare achievements of one with the other, although there is much they can learn from each other. Even for a comparison of interventions based on the same approach. great care and sensitivity is necessary; allowances must be made for differences in length of time of intervention, in local conditions (markets, finance. transport. other infrastructure), in communities (social and economic), in NGOs (internal priorities, capacities, beliefs. staff synergy). and in amounts and quality of external support available (from the project and other sources).

### **3.4 THE WIDER IMPACT**

The impact assessment study in the following section provides a very detailed and comprehensive insight into the level of impact at the 16 locations which were studied. The hypotheses at the workshops was that if sufficient locations were selected then these would be representative of the broader picture. However, the project is working in a variety of locations in three different countries (and four states in India), through different partner organisations using distinct interventions sometimes over a dissimilar time continuity. Therefore. the team did

not feel confident enough to aggregate and extrapolate the results from individual locations for the three countries as a whole. This is, of course, a very subjective analysis but the project has attempted to provide a brief overview of the wider perception of the impact the project is having in India, Bangladesh and Sri Lanka, where it has been operational.

## INDIA

In India, a total of 2606 households are involved in the artisanal fishery sector who have been directly accessed by the project. These households have benefitted either from the technologies promoted by the project or from the institutional strengthening measures undertaken by the project through partner agencies. The choice of approach adopted for accessing these households depends on the kind of institutional structures that are found in a local area and these are discussed in the IAS sections. At the village level the project works through NGOs often through women's self-help groups. Women often require support in the form of credit, organisational skills, awareness raising and training and these have led to established credit and saving schemes and empowering the women to take a more bigger role in the community. However, in certain states where the Department of Fisheries (DOF) has been more receptive, the project works in collaboration with its field-based functionaries. The project also works with small businesses whose entrepreneurial skill is used to extend the adoption of post-harvest practices promoted by the project.

Interventions are predominantly pilot-scale activities undertaken by the project at the village level. These activities are usually in the form of introduction of a new technology or practice developed participatively, based on the needs of the local community in association with social, economic and institutional considerations. The activities are evaluated and those found acceptable by the community are actively promoted by interacting with, and involving the cooperation of other development agencies.

The project plays a key role in facilitating and coordinating the activities of the DOF with other developmental agencies who are working with coastal fishing communities. This is usually done through workshops aimed at raising the awareness of the participants on post-harvest issues and also provides an opportunity for officials from the concerned departments to interact with each other. The effectiveness of such a strategy is illustrated in the DOFs, and associated development agencies of Andhra Pradesh, Tamilnadu and Orissa allocating funds for post-harvest technologies. More importantly, some government agencies have started using the participative methodology adopted by the project in formulating its own intervention. Similarly the project has created interest among private entrepreneurs in taking up improved post-harvest practices and this has resulted in entrepreneurs in Paradeep in Orissa and Kovalam in Tamilnadu actively promoting the adoption of drying racks amongst processors. The purchase of ice boxes by fishermen directly from the private sector without a subsidy is another strong indication of the sustainability of these activities.

Linkages have also been established between NGOs and Government Organisations (GOs) through the formation of an informal marketing network and a NGO based network in southern Tamil Nadu. Such linkages have helped to bring about greater understanding and mutual respect between NGOs and GOs. The growing enthusiasm within the government and NGOs for improved post-harvest practices, the increased demands from fishing communities, the exchange of ideas and information through the project newsletter, workshops and post-harvest forums means that the project is able to extend its potential over a large area and it is estimated the project has been able to access over 25,000 households. However, it is often the provision of subsidies which leads to large-scale adoption and this can make it very difficult to judge the actual extent and coverage of the impact although it is an indication of the interest by government.

## SRI LANKA

The project is working in partnership with a local NGO and has been involved in organising cycle traders who operate in and around the city of Colombo, and Negombo, into an association. The association currently has a membership of 600 individuals with another 600 associate members. The primary purpose for starting such an association was to extend the use of ice boxes amongst the members. A total of 21 boxes were distributed by the project and 10 more boxes were directly purchased by the traders on their own. However, the biggest impact of the project has been that the members are able to access formal sources of credit from commercial banks and government schemes.

The project's experience in extending the use of ice boxes amongst cycle traders has also been extended to cycle traders who are members of other government-recognised co-operatives along the coast of Sri Lanka. This has made it possible for the project to extend the use of ice boxes into provincial areas of the country. Trials have been conducted in several locations along the coast and the results have been very encouraging. The results of these trials have made it possible for the project to secure the assistance of the ADB Fisheries Sector Community Development Project which has agreed to extend its remit to include the needs of cycle traders into its wider project aims.

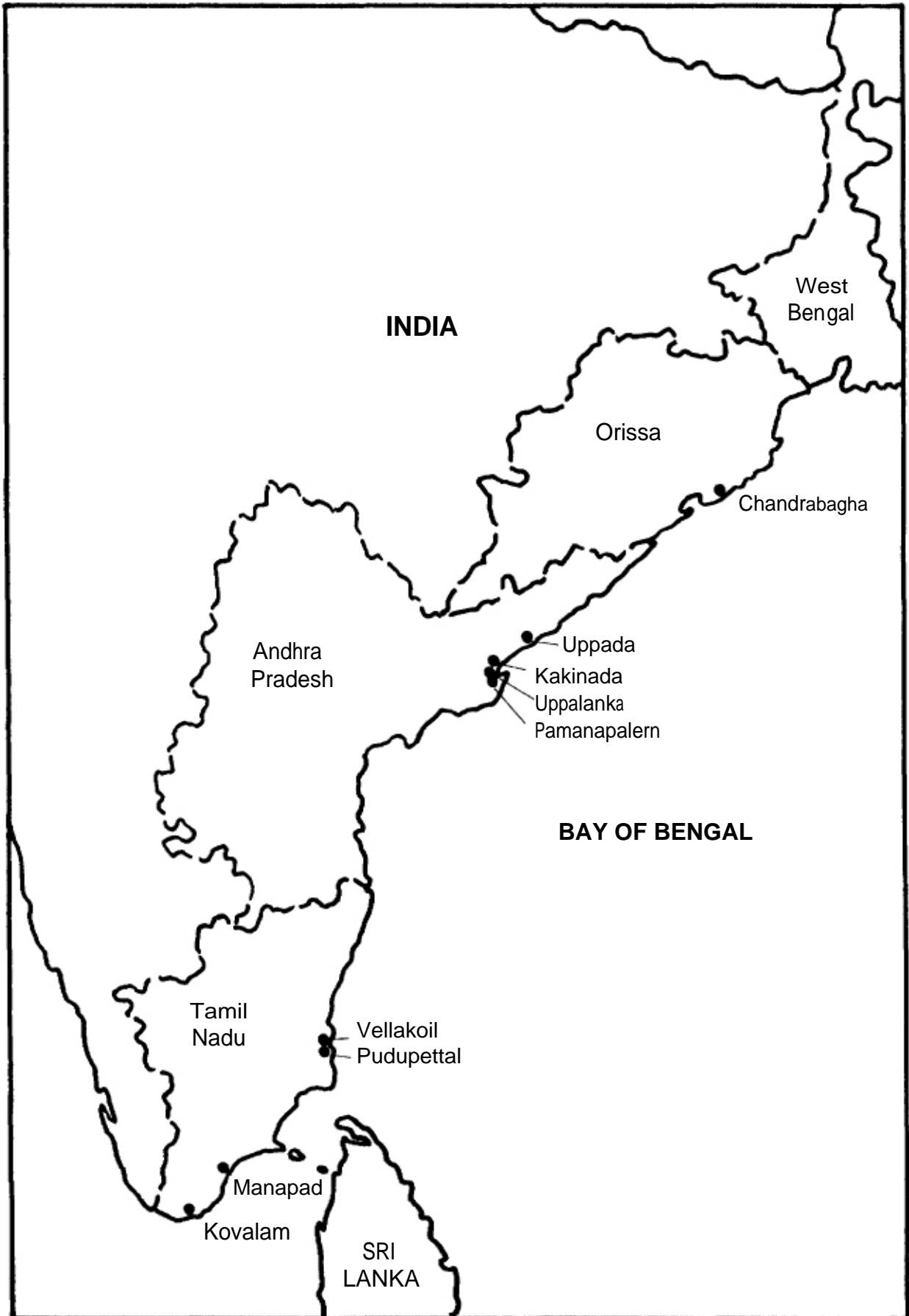
The need for an ice box onboard 22-foot craft is another post-harvest need addressed by the project in Sri Lanka as a result of the suggestion by the Director of Fisheries. The depletion of inshore waters resulted in the boats having to go further offshore in order to access fishing grounds. The onboard ice box was designed participatively in collaboration with the craft operators, these were fabricated and field-tested at several locations along the coast. The results of these tests indicate that a premium is being paid for fish stored in such boxes with a reduction in the amount of ice used and quantity of fish being spoiled. Over 50 members from various co-operative societies have come forward for purchasing the boxes. There is an estimated 5000 craft operators and 2000 itinerant traders (cycle and motor cycle) who are members of the government-sponsored cooperatives. The potential impact could be extended considerably through government cooperatives and fisherfolk associations.

## BANGLADESH

The project has been working among Set bagnet (SBN) communities in Bangladesh for the past few years. One of the problems faced is the destructive nature of the fishery and the likelihood that the government will eventually place a ban on the fishery. Also, the income from the fishery is generally not sufficient to meet their subsistence requirements. The project has sought to develop alternate sources of income through other activities that can be taken up by these communities. The project, in partnership with NGOs, has organised the womenfolk into savings and credit groups and started initiating training programmes, aimed at transferring skills for managing Alternative Income Generating Activities (AIGAs). These training programmes are accompanied by provision of assistance for starting AIGAs

A total of 955 households located in 8 villages have currently taken up AIGAs. The project now seeking to extend this opportunity of providing alternative income for fishing communities in the post-harvest area or in other activities through the formation of linkages between NGOs involved in the development of coastal communities and the DOF. A coastal community network has recently been formed with 33 NGOs working with coastal communities. Therefore, the capacity to replicate this type of intervention, and the potential impact, is considerable and there is also scope for extending this to NGOs working inland. However, the formation of these links still has to mature, and success will also be dependent on NGOs being able to access funds for undertaking these interventions.

# IMPACT ASSESSMENT STUDY LOCATIONS - INDIA



## SECTION : 4

### **FINDINGS : INDIA**

Where it follows the broad spectrum approach, an impact (mostly as a result of intervention in credit) is beginning to be felt. Proportions of target h/h with access to formal credit (from banks and CBOs) have increased (in different locations) by 12 - 100% over three years. Linkages of CBOs with banks are developing (3 of 7 CBOs in locations covered). There has been some limited effect in the area of adoption of technologies (rate of adoption in various locations 0 to 20%) and in terms of access to markets and institutional linkages. The cumulative impact of all this at the purpose level is only beginning to be felt. The proportion of credit needs of target h/h (who have access) met by formal credit is still in the region of 5%, while credit needs are increasing substantially (by 41 to 596% in different locations). PHF technologies, where adopted, are profitable, but have yet to yield incomes large enough to make an impact at the purpose level.

The potential impact in the future is substantial. For it to become sustainable and clearly visible the following areas need attention:

- 1 institutional strengthening of CBOs, mainly through training/ awareness building, improvements in monitoring, management, and development of the ability to function independently of external support (i.e. the project and NGO partner)
- 1 developing and expanding linkages with banks and government agencies for credit
- 1 ensuring a high rate of repayment of loans by CBO members, and efficient use of its available capital
- 1 development and expansion of market access and linkages
- 1 exploration of alternative sources of income for target h/h

Where the project follows the technology-focused approach, its well-integrated strategy for promotion of locally appropriate technologies and developing linkages for credit and marketing has been highly successful. This is reflected in the very high rate of adoption of improved PHF technologies - (by over 93% of those targeted) - and the potential for demand (for such technologies) created both in the target community and beyond.

As of now, the effect of project intervention using the technology-focused approach is mainly evident at the output level. (Increments in profits through use of improved PHF technologies range from 30 to 105%, in different locations, for different technologies.) The potential impact at the purpose level is certainly large. For this to translate to actuality, it is necessary to:

- 1 focus the intervention more intensively on the target community as defined by the project
- 1 expand and strengthen innovative credit and market linkages, such as those already developed by the project

## 4.1 BACKGROUND

The project has attempted both approaches described earlier in Section 3.3.

### **The Broad Spectrum Approach:**

There are 26 locations covering a total of about 223.3 h/h in India where the project works (since 1993) through the NGO partners - SANTHIDAN, ROSA, COPDANET, VJNNS.

4 of these locations were covered by this study - Kovalam (Tamil Nadu) in partnership with SANTHIDAN (covering 90 h/h), Vellakoil and Pudupcttai (Tamil Nadu) in partnership with ROSA (covering 50 h/h in each location), and Subbampeta (Andhra Pradesh) in partnership with VJNNS (covering 28 h/h).

Target h/h are mainly from traditional fishing communities (mostly Hindus, except in Kovalam where they are Roman Catholics). Among them are fishermen, petty fish traders, and processors. The last two categories composed almost exclusively of women. CBOs promoted and supported by partner NGOs provide the organizational base and vehicle for project intervention. Membership of CBOs in all locations covered by the study is open only to women. (Men in fishing communities often disdain to join such activities, and the NGOs prefer in any case to work with women.) About 20% of all h/h in the villages studied are members of CBOs. About 20 - 50% of CBO members are from poor h/h (incomes below about Rs<sup>7</sup>. 1 0,000/- p.a.). Men of such h/h are mostly fishing labourers working on craft owned by others for wages or a share of the catch. Many poor h/h have no working male member, are poor for that reason, and are headed by women. Women of poor h/h are very often petty fish traders and processors, on a full-time, part-time, or casual basis, sometimes also seasonal agricultural labourers; earnings of women are low compared to those of fishermen. It is the poor h/h that are most adversely affected by any decline in fish landings, market price fluctuations, spoilage, and lack of access to markets and credit.

Savings and credit form an important component of CBO activity. This includes, in most cases, development of linkages with banks, government and other institutions. The project has also tried to promote improved PHF practices, with the purpose of increasing incomes of target h/h, made efforts to improve access to markets, to build linkages with multiple institutions, and to improve prices realized by fish traders and processors.

Project support (through the partner NGO) includes finance for costs of field and administrative staff, training, exposures, PHF technologies, grants to CBOs for seed capital, technical advice, and planning, monitoring, training and management support through project staff and consultants.

The project's NGO partners have access to other resources and funds mobilized independently of the project; they are involved in a number of programmes and activities not connected with the project.

### **The Technology-Focused Approach:**

There are 12 locations in India where the project follows this approach. The partners are mainly GOs (Departments of Fisheries of respective State Governments), who are interested in (among their many other concerns) promotion of improved PHF technologies (ice hoses, smoking bins, drying racks, etc.). Four such locations were covered by this study - Manapad (Tamil Nadu), Ramanapalem and Uppalanka (Andhra Pradesh), and Chandrabhaga (Orissa).

<sup>7</sup> Indian Rupees, currently, about Rs. 36 = US\$

A total of 275 ice boxes, 68 smoking bins, and 30 fish containers have been promoted by the project in these locations, many of them for trials.

The general approach of the project is to first identify suitable target communities and their needs, then identify and develop appropriate technologies, carry out field trials, effect necessary modifications, and finally promote such technologies with government support and collaboration.

To make its interventions sustainable, the project has (in many cases) facilitated linkages between target communities and diverse government agencies, and even with commercial organizations. This improves access to credit and markets, facilitating adoption,

## 4.2 LOGFRAME OUTPUTS:

### Appropriate technologies identified and transferred to beneficiaries:

The Broad Spectrum Approach:

In the locations covered by the study:

. 21 beneficiary h/h out of 218 (about 10%) adopt through the project improved PHF technologies

. 5 (about 2%) target h/h in project locations independently access improved PHF technologies

Drying racks – 12 adopted in Kovalam through project, 5 more independently accessed by target h/h (women fish traders/ processors). Further, 50 non-target h/h independently accessed/ adopted the same technology. Main reason for adoption: higher prices for the improved product (30% premium for rack dried over sand dried anchovies) and an assured ‘offtake’ of produce by local traders. In other project locations covered by the study, adoption was nil. Reason : local markets perceive improved fish handling practices (associated with rack drying) like gutting and degilling as a way of disguising spoilt fish, and actually pay less for the improved product. Market prices do not even compensate for weight losses due to gutting and degilling. Net loss to producer is Rs. 5 - 10/- per kg. Adoption rate of drying racks in such locations is therefore nil.

Fish containers--- 4 out of 70 (about 5%) fish containers promoted by the project accepted for intended use by target h/h. The main reasons for non-acceptance were technical features of containers -- lack of drainage and circulation of air, resulting in poor preservation of fish according to users. The size is also (reportedly) too small for quantities handled by the users (women fish vendors). Those who did accept containers for the intended use did so mainly for convenience afforded in transportation by bus. (Following promotion of containers by the project, another NGO distributed free of cost 25 fish containers within the same community, the adoption/ usage of which is not clear.)

Tricycles - These were provided by the project to improve access of fish vendors to markets. Currently, 5 women use one tricycle for the intended purpose. Tricycle also used for other purposes.

To summarize – the broad spectrum approach has had limited success in promotion of improved PHF technologies, mainly because these technologies are not usually suitable or economically viable for the poorest. Absence of remunerative prices for improved product, and inappropriate technical features, are some reasons cited for non-acceptance.

### **The Technology-Focused Approach:**

In the 12 locations where the project follows this approach, it has promoted 275 ice boxes, 68 smoking bins, and 30 fish containers.

In locations covered by the study:

*-128 cases of adaptation of PHF technologies out of 137 (about 93%) persons covered during promotion/trials.*

*. 3 | drying racks independently accessed by target h/h*

Adopters of these technologies are mainly owners of craft and the bigger fish traders. few are poor.

Ice boxes - 1 OS out of 114 offered adopted for on-board and on-shore use. Main factor in favour of acceptance is the net gain of up to 30% due to reduction in spoilage and consumption of ice, and ability to preserve fish for longer durations. The latter enables fishermen to stay out at sea longer to catch more fish, and shore-based traders to hold on to fish overnight or move to further markets to obtain better prices.

Smoking bins - All 33 promoted by the project were adopted by women fish processors. Main reasons -- reduction in fuel consumption (about 50% in a fuel-scarce area), improved quality of product and prices (about 10% premium over prices realized for traditionally smoked fish), reduction in processing losses, reduction in labour of women, and relief from prolonged exposure of women to smoke. Net gain to producer about 1 OS\*? over traditional smoking practices.

Drying racks - 3 | independently accessed by target h/h. Main reason for adoption - remunerative market prices, and linkages with private traders willing to buy the produce.

Two commercial agencies, including the large manufacturer of High Density Polyethylene tanks, Sintex... have been co-opted by the project to commercialize ice box technology. Their involvement is as yet at an early stage, but is indicative of the large potential demand for such technologies along the entire coastline. The fact that there is at least one case of a manufacturer offering ice boxes to target h/h on credit is indicative of its commercial viability.

To summarize - The high adoption rate of over 90% in the technology-focused approach is attributable to the appropriateness of project strategy. It systematically identifies needs of target h/h, then develops suitable technologies/ processes, and often goes on to combine this with access to credit and market linkages. The potential impact of this kind of intervention is very large. With government and commercial organizations recognizing the possibilities and joining in, any impact can only increase with time, and spread over wide areas beyond project locations and beyond target communities.

For the moment, the impact is localized and limited.

### **Capacity of institutions (local, NGO, GO) to support post-harvest fisheries strengthened:**

*.19 GOs and NGOs integrate improved PHF technologies into their action plans*

*. Skill and knowledge base of 393 staff/members of GOs, NGOs and CBOs (in project locations covered by the study) enhanced to tackle PHF issues*

SANTHIDAN, Centre for Applied Technology, Kottar Social Services Society. Kanyakumari District Fishermen Sangams Federation, ROSA, DANIDA, NABARD. State Resources Centre (Tamil Nadu), VJNNS, Department of Fisheries (Tamil Nadu, Andhra Pradesh and Orissa), AFCCS, FTI, AFFPRO, BCS, DRDA, Project SWARAJYA, SIFFS.

The programmes of all these agencies, in various ways, now include promotion of fish containers, smoking bins, ice boxes and drying racks, sometimes with subsidies and access to credit.

Of those whose skill and knowledge base to tackle PHF issues has been enhanced, about 80% are CBO members, the rest NGO staff. Training imparted to CBO members mainly relates to use and handling of technologies introduced by the project. NGO staff are usually trained as trainers, in PHF technologies, in community organization, development of community leadership, communication and accounting.

Project intervention has significantly increased the knowledge base and capacity of government organizations, NUOs and local communities to reduce post-harvest losses and to promote hygienic practices in fish handling. The effect of this set of outputs is felt both within and outside project locations, as these organizations begin to recognize new possibilities, and take up similar programmes in wider areas.

### **Access of AFC and PFT h/h to markets enhanced:**

In the locations covered by the study:

*Reliable data is not forthcoming on increase in average annual sales turnover (fish and fish products) of target h/h and incomes due to adoption of improved PHF technologies*

As stated under Output 1 above, improved PHF technologies result in substantial percentage increases in profits of target h/h, in the range 30 - 105% depending on location and nature of technology. This does contribute to increase in target h/h incomes. However, reliable information on actual amounts of increase is not forthcoming, probably because they are yet to assume proportions large enough to be seen as significant by beneficiaries. As market linkages are widened and strengthened, appreciable increases may be expected in the future. Thus it may be said that the impact is in its early stages, and though small, is significant and potentially sustainable.

### **Access of AFC and PFT h/h to credit enhanced:**

In the locations covered by the study:

12% to 100% increase in proportion of target h/h enjoying access to formal credit

(Changes in weighted average cost of formal and informal credit to target h/h range from a 1% decrease (in Kovalam), to an increase of about 9.78% (in Pudukottai))

Percentage increase in average annual amount of formal and informal credit used by target h/h range from 41% to 596%

The cost of informal credit (from moneylenders) is in the region of 40% p.a. The cost of short-term credit for daily working capital is even higher, between 2 and 8% per week. The cost of formal credit (from banks and CBOs) is much lower (banks - 18% p.a. and CBOs - 13 to 24% p.a.). Access to formal credit therefore represents an important and substantial relief for target h/h.

(Project intervention in credit helps the poorest most, who are seen as the least credit-worthy. Total volumes of credit to the poorest however remain low because of eligibility conditions that CBOs/ NGOs often impose.)

The project has had significant effects by way of access to credit.

Credit needs of target h/h have however increased substantially, by 41 to 596% in different locations. This is still mostly met by loans from (costly) informal sources. (Most of the increased credit is used for investment in craft and gear, housing, and other productive purposes. and these should be financed by formal credit.) The proportion of total credit needs met by formal sources even when a h/h has access to such credit is still very small (about 5%). The project has had no effect on reduction in cost of credit to target h/h; its scale of intervention is too small; impact remains low.

Thus, though the project has increased *numberers* of people accessing formal credit, its impact at the purpose level is as yet negligible. This is partly due to the inherently slow progress of formation of CBOs, helping them to collect a pool of 'loanable' capital, improving credit-worthiness, mutual trust and management skills, and building linkages with banks.

For significant and sustainable impact at the purpose level, CBOs will have to be strengthened financially and organizationally, access to bank credit improved, repayment rates of loans maintained at high levels, and available capital employed efficiently. As of now, the financial picture of CBOs is not clear enough to enable any comment on the current status of these aspects.

Some positive aspects are : 3 out of 7 CBOs in locations covered by the study have developed direct access to bank credit and one is functioning independently of the NGO that promoted it.

In some locations where the project follows the technology-focused approach, it has facilitated access to credit from government agencies, and in one case from a manufacturer of ice boxes. Such innovations have excellent potential.

The project has made a good beginning, probably as much as can be expected, given the duration and scale of its intervention. For the impact to assume appreciable proportions and to be felt at the purpose level, some more time and work is needed, mainly in the following areas:

- 1 Institutional strengthening of CBOs - through training, development of monitoring and management skills, and the ability to function independently of the NGO
- 1 Developing and expanding linkages with banks and government agencies for credit
- 1 Ensuring a high rate of repayment of loans, and efficient *use* of available capital

### **Dissemination strategy planned and implemented:**

- 1 3.5 GO and NGO *users* report increased awareness *Of* PHF issues
- 1 22 I enquires to project. 72% converted to activities

As stated before, project interventions have significantly increased the knowledge base and capacity of government organizations, NGOs and local communities to reduce post-harvest losses and to promote hygienic practices in fish handling. The effect of this set of outputs is beginning to be felt both within and outside project locations, as these organizations recognize new possibilities and take *up* similar programmes in wider areas. The potential impact in the future is large.

### **Effective linkages among CBOs, GOs, and NGOs facilitated:**

*NGOs and GOs undertake 2 new and joint action plans to address PHF issues*

*3 target CBOs able to independently access support from financing and development agencies  
CBOs, NGOs, GOs, interact with increased frequency and consistency, and exchange among them resources, knowledge, experience and skills.*

AFCCS, Kakinada & AFCOF, Hyderabad collaborate for marketing dried fish: and AFCCS, Kakinada and IFP, Vizag do the same.

Proposed for the future – a collaboration between ROSA and NABARD, for credit assistance to CBOs, currently at a discussion stage

The project has also developed multiple linkages for marketing and credit through collaborations between commercial organizations and target h/h. Examples -

AFCCS (a CBO) ties up with Oriental Dry Fish Traders, Orissa (a commercial organization). for marketing dried fish

Oriental Dry Fish Traders (Orissa) does the same with local fish processors in Orissa

Sintex (a manufacturer of ice boxes) offers target h/h in Uppalanka and Boddu Chinna Venkaya Palem (Andhra Pradesh) ice boxes on credit.

Some other effects of project interventions are:

Development of mutual respect between NGOs and GOs, recognition of complementarity of their roles, and better understanding of each others' strengths and limitations.

Increasing acceptance of participative approaches by government officials.

All this contributes significantly to enhancement of effects of the project in other areas like credit and access to markets.

### **4.3 PROGRESS AT THE PURPOSE LEVEL:**

#### **The Broad Spectrum Approach:**

Interventions through this approach have had positive effects in the areas of credit, and to a limited extent in areas of adoption of technologies, access to markets, and institutional linkages. Given the time (3-4 years of work through this approach), the large geographical extent of the project, and the relatively limited scale of intervention, these effects are significant, but not yet large enough to be perceived as impact at the purpose level – i.e. in the form of increased incomes in target h/h. The potential for future impact is large and should not be underestimated. To make such potential real and sustainable, it is necessary to strengthen CBOs and their linkages with banks and markets (including private agencies). *Exploration of alternative livelihoods for target h/h is an opportunity yet to be exploited by the project.*

#### **The Technology-Focused Approach:**

Interventions through this approach have had substantial and noteworthy effects at the output level. The integrated strategy developed by the project for promotion of locally appropriate technologies, which includes linkages for credit and marketing, has been very successful. as is reflected in the very high rate of adoption of improved PHF technologies, and the scale of potential demand created both in target h/h and beyond. Significant numbers of adopters (of

technologies promoted by the project) belong to target h/h, but their proportion is not very large; and increases in their incomes are only beginning to occur. Furthermore, although demand for certain technologies has been created. hardware is still available only on a small scale in a few locations, and many potential users lack access to credit for investment in hardware. The supply now needs to catch up with the demand created. Project impact at the purpose level is therefore yet to become evident. The potential impact is however large.

**Comments on logframe assumptions (output to purpose):**

The 1996 cyclone in the Kakinada area (Andhra Pradesh) has seriously disrupted project intervention (in the area). (Assumption 2)

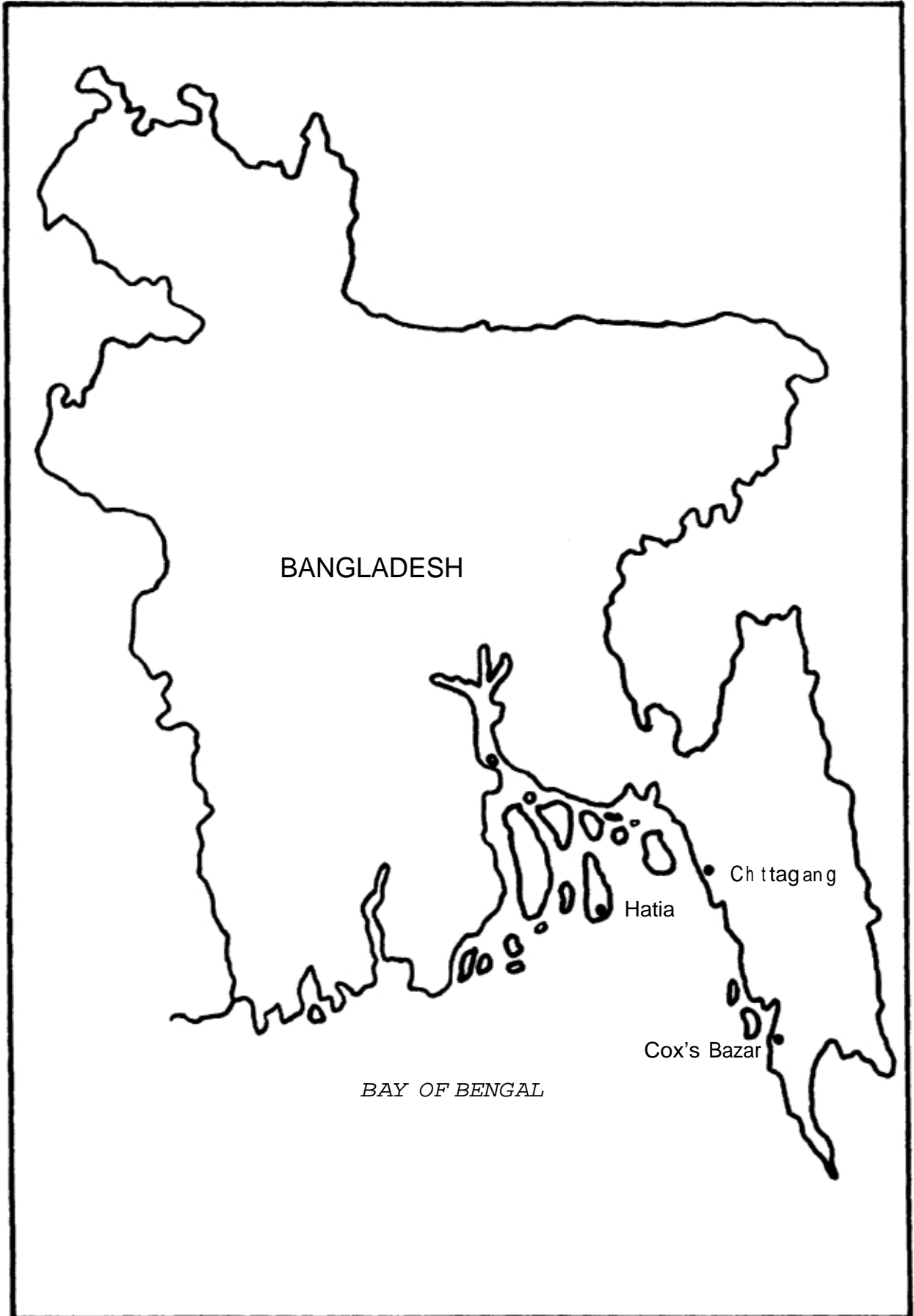
Fish supplies are dwindling in most project locations and seasonality patterns are undergoing unpredictable changes. Fishing practices are also becoming increasingly intensive and destructive, while the range of mechanized craft is constantly increasing. (Assumption 4)

The overall power supply situation continues to deteriorate. (Assumption 5)

Damage by trawlers/ larger crafts to fishing gear of small and unmechanized craft reported in most locations. (Assumption 6)

Incomes of many h/h, particularly those relatively better off, are constantly diversifying and increasing. Example.... through overseas employment and petty business. (Assumption 8)

IMPACT ASSESSMENT STUDY LOCATIONS . BANGLADESH



## SECTION : 5

### FINDINGS : BANGLADESH

The effect (of the project) is more evident in locations where it works directly with the community, as distinct from its work through NGOs.

The main contributor to potential project impact is the integrated Income Generating Activities (IGA) and credit programme. The proportion of target h/h benefited is of the order of 43%, and more than 50% of target h/h now have access to formal credit, in locations studied.

Given that the large majority of IGAs are likely to turn out to be viable, substantial increases may be expected in target h/h incomes by end of project, making possible significant achievement at the purpose level. The potential impact beyond end of project is very large, and real. This is subject to :

- 1 consolidation and strengthening of achievements by CBOs and NGOs
- 1 no effect of natural calamities or similar events

A major factor influencing level of achievement is the quality of partner organisations. The project has had to redefine its own role and its relationships with partners in the last three years on this account. For any future intervention, this aspect will require close attention.

#### 5.1 BACKGROUND

The focus in Bangladesh has been on development of alternative sustainable livelihoods for coastal fishing communities engaged in set bag net practices<sup>8</sup>, which are destructive and banned by a law implemented since about 1994.

The project follows the broad spectrum approach earlier described in Section 3.3.

Interventions in Bangladesh began in 1994, after a year of preparatory work<sup>9</sup>.

For the first 18 months the project followed a strategy that it describes as 'Capacity Building'. Since 1995, this was abandoned and it adopted another strategy it describes as 'Institution Building'. Both are explained below.

#### **Capacity Building:**

Aimed primarily at strengthening the capacity of NGOs, and through them CBOs of set bag net fishing communities, to develop and replicate sustainable and alternative (non-fisheries related) livelihoods. (Understanding the nature of set bag net communities was a part of the process.)

The project worked through 7 NGOs in this phase.

#### **Institution Building:**

This followed abandonment of 'Capacity Building'. It began as a trial of three kinds of partnerships, the first with a 'medium' NGO (CODEC, Chittagong), the second with a 'grassroots level' NGO (AZAD, Cox's Bazar), and the third, direct action by the project with target communities. Very soon, the project found it necessary to take over more direct responsibility for activities in the field where it worked through AZAD, with the result that the project was effectively left with just two kinds of partnerships – with CODEC, and direct action by the

<sup>8</sup> using mesh 30mm and below at COD end

<sup>9</sup> Caught in their own nets, Blowfield .M et. al: NRI R 2199 (C): (March. 1995)

project. (A separate part of the project's objectives was to develop a network of community representatives including NGOs.)

The project currently seeks to promote and strengthen CBOs mostly composed of women, to act as a sustainable institutional base for integrated development of the community. Thrift and credit, IGAs (including development of skills), 'women in development' training, literacy, leadership development and social awareness training, are some of the main activities of the project.

Project inputs include support for CBO 'seed capital', training, staff and consultancy support.

One NGO partner (CODEC) has sources of funds independently of the project. Programmes in partnership with the project are only some of its many activities.

The project now works in three geographical areas, all covered by the Institution Building strategy:

- Hatia (direct action by project), pop. mainly Muslims
- Chittagong (with CODEC), pop. mainly Hindus
- Cox's Bazar (direct action by project, earlier with AZAD), pop. mainly Rakhain Buddhist

The project works in a total of 8 locations covering 1150 households, of which 409 households in 5 of these locations were covered by this study. The locations are - Kurushkul, Cox's Bazar (52 h/h), Shitahundu, Banskali and Sandwip in Chittagong (covering 269 h/h) and Noakhali, Hatia (covering 88 h/h). All these h/h are members of CBOs, and are mainly engaged in fishing, fish trade, and diverse IGAs, some on a full time, others on a part time and occasional basis.

Of the h/h covered, almost all are poor (about 65% below subsistence level - less than 3 meals a day; about 30% at subsistence level - 3 meals a day, and about 5% above subsistence level - 3 meals with a little surplus). Men of such h/h are mostly bonded/ contract seasonal fishing wage labourers working on craft owned by others. Sometimes, a share of the catch is given in lieu of wages. There are a few female headed h/h in the target group. Most h/h, including many women, are engaged in traditional fishery related activities. Other activities of women are net making, mat making, petty trading and reed craft as secondary sources of income.

## **5.2 LOGFRAME OUTPUTS:**

### **Appropriate IGAs identified and adopted by beneficiaries:**

In the 5 locations covered by the study,

- *178 beneficiary h/h adopt non-PHF IGAs.*
- *2 target beneficiary h/h independently adopted non-PHF IGAs.*

The study covered 409 of a total of 755 target h/h in the 5 locations selected for the IAS. All 178 IGAs were financed through credit from NGOs and CBOs. Thus 43% of the h/h covered by the study have taken up new IGAs as a result of project intervention. IGAs generally relate to weaving, petty trading, poultry, fish trading, trading in agricultural products, bamboo and reed craft, poultry vaccination service, cattle farming, vegetable gardening, fish drying and salting (traditional methods). Shortage of credit is the main factor inhibiting spread of IGAs. In Hatia, one group has financed IGAs out of its own savings which has yielded the beneficiaries a return of about 25% on their investment. In Cox's Bazar and Hatia, men have followed the example of women's initiatives with IGAs.

The high rate of growth of IGAs indicates that significant impact is taking place at the purpose level, with the potential for an even greater impact in the future. Sustainability is potential<sup>11</sup> built into the programme because the intervention uses CBOs as the base for activities.

### **Capacity of Institutions (GO, NGO and CBO) to support Post-harvest fisheries strengthened :**

Some training was actually carried out in the early stages of the project, then stopped because it was not a priority for the target community. New requests for PHF training have now been received; they may be met in the future.

### **Access of AFC and PFT h/h to markets enhanced**

In the 5 locations covered by the study

- 1 *Reliable data not forthcoming on increases in average annual scales turnover of non-fish products or on increases in incomes of target h/h*

Respondents unable to recall or give adequate information on the subject. It was decided to estimate changes in income through case studies. In Cox's Bazar, with the adoption of IGAs, about 20 members operating handlooms report 100% increase in daily earnings (Tk<sup>10</sup>. 20/- to Tk 40/- per day). In Hatia. an increase in income (in 2 cases) of Tk. 200 - 250/- per week through petty trade and trading in agricultural products reported.

Some negative income trends reported in Chittagong by fish traders, due to decline in landings. The general trend however, is an expansion of IGAs.

As an example of the qualitative impact of the project, there is a case of one woman who improved her status from beggar to petty trader, and to member of the CBO. This transformed her position in the community, filling her with self-confidence.

### **Access of AFC and PFT h/h to credit enhanced**

In the 5 locations covered by the study,

- 1 *The number of target h/h having access to formal credit increased from 150 to 215 (over 43%) in 18 months.*
- 1 *No reliable data forthcoming on change in weighted average cost of credit to target h/h.*
- 1 *Average annual amount of formal and informal credit used by target h/h remains roughly static.*

Formal credit (mainly from NGOs. CBOs) currently meets less than 20% of the total needs of h/h.

Prior to project intervention the target community was entirely dependent on private informal sources of credit (moneylenders), the cost of which was in the region of 15-20% per month about a year ago. This is now down to 12-15% per month due to interventions by the project and the partner NGO, among others. Bank rates of interest are in the region of 13-15% per annum. and NGO rates of interest vary from 21-30% per annum. Bank credit is however difficult to access. particularly by the poor.

<sup>10</sup> Bangladesh Taka: currently, about Tk 43 = US\$1

Credit interventions of the project have succeeded in reaching the poorest.

Access to formal credit represents a major relief from the interest burden, and is an important effect of the project. However, formal credit currently meets less than 20% of the credit needs of even those target h/h that have access to it. The need is in the region of Tk 20,000/- to 50,000/- for a person who takes up an IGA. Project staff and the NGO prescribe limits (Tk 2,000-8,000/-) on the amount of credit a target h/h may access through formal sources, often with very good reason. [There have been cases where credit for IGAs has not been utilised in part or full because of other urgent needs like health, house repairs, survival consumption, etc.]

Non-repayment of earlier loans, irregular savings, and inability to reach levels of savings required to obtain credit are the main reasons for lack of access to credit by some h/h.

The growth of impact is therefore slow.

The project has contributed significantly to building the base for impact at the purpose level. Assessment of the magnitude is not possible for want of sufficient information. In 3 of the 5 locations covered by the study, the intervention is only about a year old, and it is premature to expect impact at the purpose level.

The potential exists.

Some issues that require attention are:

- 1 Expansion of credit for IGAs must be accompanied by good recovery of loans.
- 1 Training in skills for different IGAs needs to be expanded
- 1 Participation by members in CBO activities needs to be improved
- 1 Financial and administrative management of CBOs and NGOs requires attention and improvement

### **Dissemination strategy planned and implemented**

- 1 *About 20 enquiries received from NGOs by project, but not found feasible for action.*

As earlier mentioned, the project has made efforts at raising awareness levels of NGOs and CBOs on PHF issues. This has not however led to any significant numbers of requests for PHF activities.

### **Effective linkage among CBOs, GOs, and NGOs facilitated**

With project facilitation, a network of 33 NGOs has been established to address fisheries and social issues (including PHF) concerning coastal communities. The involvement of GOs in joint action to address PHF issues is currently at the discussion stage.

In Cox's Bazar, two CBOs have established linkages with UBINIG (an NGO) for training in development of skills in weaving and marketing. In Hatia, a CBO is managing its own bank account, with project staff support.

Given this early stage of development of CBOs, it is premature to expect linkages to develop on a larger scale.

## Other issues

The project has created awareness of issues regarding health, hygiene, use of safe drinking water and sanitation. Affordability is the main constraint to improvements in these areas. A beginning has been made in adult literacy, improving awareness of the importance of education, and providing women physical access to markets, new skills, and awareness/ knowledge on a wide range of other issues.

### 5.3 PROGRESS AT THE PURPOSE LEVEL:

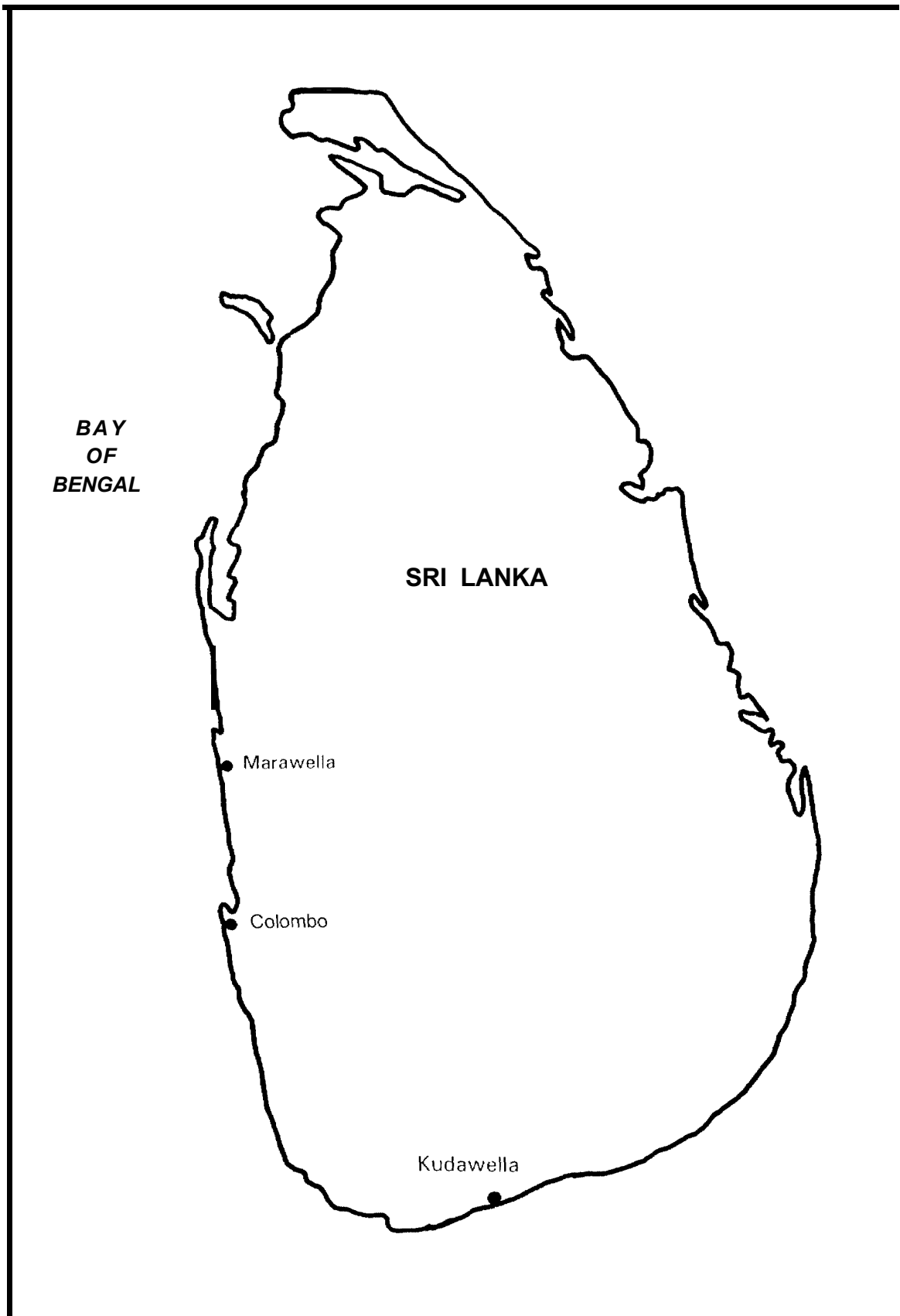
There are clear indications that incomes and savings of target h/h could be beginning to increase sustainably, mainly as a result of IGAs and credit interventions by the project. It is premature to expect appreciable increases in income, or substantial changes in quality of the life at this point. The potential impact by end of project at the purpose level is clearly significant and sustainable, provided the CBOs are suitably supported and strengthened.

### Comments on assumptions

Cyclones and natural disasters frequently disrupt interventions in all locations of the project area. (Assumption 2)

Fish catches are declining in Cox's Bazar, Chittagong and Banskhali. Fishing practices are becoming intensive and destructive. (Assumption 4)

**IMPACT ASSESSMENT STUDY LOCATIONS - SRI LANKA**



**FINDING : SRI LANKA**

The effects are particularly noteworthy where the project follows the broad spectrum approach. Access to credit and linkages with banks and government are its main achievements. In the location studied, there is an increase in numbers of target h/h accessing formal credit (from banks and co-operatives) of the order of 700%, and a reduction in weighted average cost of credit to target h/h by about 5% p.a. in three years. This is a good beginning. Formal credit however still meets only about 12% of the total credit needs of a target h/h which has access to it, and the cost of informal credit (from moneylenders) remains very high at 15-20% per month. There is still some way to go therefore, before the magnitude of impact is large enough to be perceived at the purpose level. For this to happen, it is necessary to address issues related to viability and management of the CBOs which are used as the vehicle of intervention. and to further expand access to formal credit. There is much to learn from project experience in Sri Lanka and to replicate elsewhere.

The project has also attempted introduction of improved PHF technologies (ice hoses). Their utility is clear; they reduce post-harvest losses (by 5 to 10%), improve market prices (by about 10 to 15%), and cut ice consumption by half in locations studied. The potential demand for such technologies is very high along the entire coastline of Sri Lanka, but difficult to quantify in numbers. However, such technologies are generally acceptable to non-target h/h, mainly because the cost of these boxes is high for the PFT, the small trader with low turnover who is the target of the project; (15 to 20 kg per day is the usual quantity handled by a push cycle trader). Thus, though the impact of the project on the community in general is significant, this does not constitute achievement of impact at the project purpose level. A more focused targeting of appropriately priced technology is therefore necessary.

Effects of dissemination of information and awareness building (in the community, NGOs, GOs) with regard to improved PHF technologies (ice boxes) are also substantial. GOs and NGOs are beginning to independently integrate such technologies in their programmes. Private entrepreneurs have also shown some interest in commercialising the technology.

## 6.1 BACKGROUND

The project has attempted both approaches described earlier in Section 3.3

### The Broad Spectrum Approach

There are two locations in Sri Lanka where the project follows this approach. one of which was covered by this study – St John’s Market, Colombo.

In 1992, the project identified a target community of push cycle and motor cycle (fresh fish) traders in St John’s Market. IRED (now transformed to INASIA) was the NGO partner. Of about 800 traders in the market, 21 were organised into a co-operative society (CBO). with thrift and credit as the main activity. There are 150 full fledged members. and 150 associate (probationary) members. (Of these, about 30% are poor, income less than Rs<sup>11</sup>.3000/- p.m. approx.) Their life style is urban, their aspirations relatively high, and they have multiple sources of income. Women in many h/h earn independent incomes.

<sup>11</sup> Sri Lanka Rupees : currently , about Rs 56 = US\$1

The project introduced superior quality ice boxes to the traders for trial.

Linkages with banks and government were also developed.

Project support to the NGO partner includes finance – for costs of field and administrative staff, training, exposures, ice boxes, grants to the co-operative for ‘seed capital’ (revolving credit funds); technical advice; plus staff and consultant time and expertise for planning, monitoring, training and management.

[The NGO has access to other resources and funds mobilised independently of the project. It is involved in a number of programmes and interventions which are not connected with the project.]

Success in St. John’s Market, Colombo, has led to a similar initiative by the same NGO in Negombo with support from the project.

### **The Technology Focused Approach**

There are 12 locations in Sri Lanka where the project has followed this approach (between 1996 and 97), to promote improved PHF technologies (ice boxes), in collaboration with GOs (Ministry of Fisheries and Aquatic Resources, Asian Development Bank, National Aquatic Resources Agency, the Dept. of Co-op. Development, the “SAMURDHI” Authority.) Two such locations were covered by this study - Kudawella (Tangalle DFEO District) and Marawila (Chilaw DFEO District).

A total of 38 ice boxes in all were deployed for trials with a wide cross section of users – craft owners, push cycle and motor cycle traders, van based traders, and so on, who were generally selected by MFAR officials, 2-3 individuals in each location. Poverty or affluence was not a criterion for selection of these individuals; most are not poor.

The project also co-opted a few private entrepreneurs willing to explore fabrication of boxes on a commercial basis.

The project supports field staff and other costs of trials (including ice boxes), demonstrations, training and exposures; and provides consultant and project staff time.

## **6.2 LOGFRAME OUTPUTS**

### **Appropriate technologies identified and transferred to beneficiaries:**

#### **The Broad Spectrum Approach:**

The project has distributed a total of 23 ice boxes to push cycle and motor cycle traders through its NGO partner in 2 locations

In the location covered by the study,

- **31 target h/h out of 150** - (about 20%) - adopt through the project improved PHF technologies.
- 1 target group h/h independently accesses improved PHF technology.

The target community had a history of use of ice for preservation. Improved ice boxes constituted a step forward in the same direction. Initially, 21 boxes were provided free of cost by the project for demonstration, following the success of which 10 more were provided by the co-operative on payment to members. The latter being deficient in quality, inhibited further adoption. Ice boxes are not a high priority for either the traders or NGO mainly because most traders dispose of their fish within 8-12 hours of buying from the wholesale market, travelling only short distances. They feel that their purpose is adequately served by existing low-cost boxes; (Ks. 1000 to 1500/- per box with a life of 12-18 months as against Rs. 5000/- per box promoted by the project with a life of 5-7 years).

short distances. They feel that their purpose is adequately served by existing low-cost boxes; (Rs. 1000 to 1500/- per box with a life of 12-18 months as against Rs. 5000/- per box promoted by the project with a life of 5-7 years).

It is acknowledged by the traders that ice boxes promoted by the project are of high quality- and that it reduces ice consumption by half. However, given the cost, they expect a subsidy of 40 to 60%. Cost-benefit analysis from the users' stand-point does not favour acceptance.

The situation in Negombo (where a similar intervention has been tried under similar conditions) is probably very similar to the one just described.

#### **The Technology-Focused Approach:**

In the 12 locations where the project follows this approach, it has distributed 38 ice boxes of various sizes for on-board and on-shore use for trials.

Initial results have shown that the technology has been well received. 50% savings on ice consumption, reduction of 5-10% losses (due to spoilage), better preservation of quality, improved prices for well preserved fish (10-15% premium), better hygiene and convenience are some of the perceived benefits of these boxes. Acceptability of the ice box for these advantages is therefore very high in communities where it has been demonstrated.

Project trials and demonstrations have generated much demand in the market for ice boxes. It is however mainly motor cycle traders and craft owners – i.e. those in the middle and upper income segments of the community – who find the boxes attractive. Despite the relatively high cost of these boxes, an investor can recover his<sup>12</sup> money in a few months. For the small trader however (like the push cycle vendor), who handles relatively small quantities of fish (15 - 20 kg. a day) and sells at markets fairly close by (12 - 15 km.) within a short time (8 - 12 hours), the gains are not significant and acceptance of the box is negligible.

Acceptance is also somewhat inhibited by expectations of subsidies from government, as well as high cost of informal credit (moneylenders)/low access to formal credit (banks and CBOs).

#### **Capacity of institutions (local, NGO, GO) to support post-harvest fisheries strengthened**

- . 4 GOs and NGOs integrate PHF technologies into their action plans in Sri Lanka,*
- . Skill and knowledge base of 34 staffs of GOs, NGOs and members of CBOs enhanced to tackle PHF issues.*

The MFAR, the NARA, the ADB (Fisheries Sector Community Development Project), Dept. of Co-op Development, the Samurdhi Authority, and TNASIA directly influenced by project interventions, are now beginning to include ice boxes in their various programmes, an indication of the wider effect of the project.

90% of the 34 trained in PHF issues are target beneficiaries, the rest are partner NGO staff.

Project intervention has thus increased the knowledge base and capacity of government organisations, NGOs and local communities to reduce post-harvest losses and to promote hygienic practices in fish handling.

<sup>12</sup> There are no women in the trade

## **Access of AFC and PFT h/h to markets enhanced**

This is part of the project's agenda only in locations where it follows the broad spectrum approach.

In the location covered by the study, there was :

- . *46% increase in average annual sales turnover of fish and fish products of target h/h*
- . *No reliable data forthcoming on share of net increase in incomes of target h/h accounted for by improved PHF products*

The main cause of increase in turnover was a general rise in prices of fish, particularly in Colombo. Actual quantities handled by push cycle traders (15 - 20 kg a day) have not changed significantly, nor has the mix of species handled. Use of improved ice boxes has had no significant improvement (on prices related by traders or on spoilage), because traders already use ice for preservation and the distances they travel to sell fish are small. The marginal benefit of improved ice-boxes is therefore negligible except for a 50% reduction in consumption of ice.

## **Access of AFC and PFT h/h to credit enhanced**

This is on the project's agenda only in locations where it follows the broad spectrum approach.

In the locations covered by this study,

- . *Numbers of h/h having access to formal credit increased from 21 to 150, i.e., by over 700% in 3 years*
- . *Weighted average cost of formal and informal credit to target h/h decreased by 5% in same period*
- . *Average annual amount of formal and informal credit used by target h/h remains roughly static over the period*

It is in the area of credit that the project has had the most significant effect, which could potentially translate into impact at the purpose level. Indeed, there may already be some impact, but not large enough to be clearly perceived.

Before project intervention, the target community was entirely dependent on informal sources of credit (money lenders), the cost of which is in the region of 15 - 20% p.m. or more; (when compounded every month and annualised, this comes to 500 - 800%,). Formal credit (from banks and co-operatives) is substantially cheaper - bank rates are about 21% p.a. and CBO rates 2 - 4% p.m., i.e., about 140% p.a.(compounded monthly and annualised).

Access to formal credit therefore represents a substantial relief for target h/h. But this still meets only about 12% of the total credit needs of a h/h which has such access; (credit needs per h/h Rs. 10,000 - 30,000/- including Rs. 1500 - 2000/- per day as working capital for fish trading).

Although the intervention has benefited all full-time members of the co-operative, it is the poorest (about 30% of members, all push cycle traders) who have obtained most relief. There is growing demand for membership of the co-operative, mainly for access to credit. Of some significance is the fact that out of 5 money lenders operating in St. John's Market, 2 have closed business since the intervention began.

The project has thus had an effect on target h/h in two ways - it has increased access to credit and reduced its cost: a beginning which is sustainable. However, more time is needed for the effect to reach levels where increases in income and improvements in quality of life become evident, and there is impact at the purpose level.

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Some issues that need to be addressed in order to make the intervention sustainable, and the potential impact real, before the end of the project are:

improvement in recovery of loans by the CRO, on which accurate information is not available

measures to improve participation and ownership of the CBO by all its members

better financial and administrative management of the CRO

A similar overall situation probably prevails in Negombo, where conditions and the pattern of intervention are very similar.

### **Dissemination strategy planned and implemented**

*4 GO and NGO users reporting increased awareness of PHF issues*

*30 diverse enquiries received by project, none found feasible for action.*

The project has been successful in raising awareness levels of GOs and NGOs, particularly MFAR, with whom it has been working directly on PHF issues. This is reflected in the adoption of PHF issues in their programmes and action plans.

### **Effective linkages among CBOs, GOs, and NGOs facilitated**

*1 NGO and GO undertake a new and joint action plan to address PHF issues*

*1 target CBO able to independently access support from financing and development agencies*

*GOs, NGOs and CBOs interact with increased frequency and consistency and exchange among them resources, knowledge, experience and skills.*

INASIA, supported by the project, is now collaborating with the Negombo South Fishermen's Co-operative to replicate its Colombo experience in Negombo. In another development, the CBO in St. John's Market, Colombo, has developed direct access to bank credit.

Both these are a result of project facilitation and evidence of its effects beyond project locations. Another important effect is the opening up of government officials to participative methods for project planning and management.

## **6.3 PROGRESS AT THE PURPOSE LEVEL:**

### **The Broad Spectrum Approach:**

There are clear indications that incomes and savings of target h/h are beginning to increase sustainably, mainly as a result of savings and credit interventions through CBOs. It is premature to expect substantial changes in quality of life, or appreciable increases in incomes, given the time usually taken for such interventions to mature. (The intervention in St John's Market is about 3 years old). The potential impact at the purpose level is however clearly significant and sustainable, provided the CBOs are suitably supported and strengthened.

The contribution of improved PHF technologies to achievement of the project purpose is yet to be proved. A better cost-benefit ratio from the point of view of the intended user would facilitate adoption. The potential exists.

### **The Technology-Focused Approach:**

Fifteen months of trials/prototype development and testing of the three types of boxes have seen the generation of demand for improved PHF technologies (ice boxes) in a wide cross section of fishing communities and fish traders. The ice box technology is economically attractive for larger craft owners and motor cycle traders. Future large-scale adoption as a result of project intervention is very likely, particularly in the context of growing support from GOs and private entrepreneurs. The potential benefit to the community as a whole by way of reduced spoilage and ice consumption, improved prices for fish, and better hygiene, is evident. However, there are very few among target h/h who find such technologies acceptable: their scale of operation or trade is too small to support the cost of high-quality ice boxes. In terms of achievement of project purpose therefore, the impact of this approach is negligible. As just mentioned, this is due to the cost; it has nothing to do with the quality of partnership with GOs or the promotion strategy of the project in the field, both of which are effective.

### **Comments on logframe assumptions (output to purpose) :**

Fish supplies are dwindling in most project locations. Fishing practices are becoming increasingly intensive and destructive, as mechanisation increases. The assumption that fish supplies will remain constant may not be valid (Assumption 4).

The overall power situation is not encouraging. Production of ice in particular is likely to be affected. The assumption that power supplies continue to be effective is therefore in question (Assumption 5).

Incomes of many h/h, particularly those relatively better off, are constantly diversifying and increasing. Example... overseas employment. petty business. The assumption that incomes of target groups from non-fishing activities remains at current levels is not valid (Assumption 8).

## LESSONS LEARNT

**“Bottom-Up” Approach:** A flexible, needs-based, community-oriented, process approach has a greater opportunity for success than an elaborately planned project rigidly implemented. Solutions to post harvest problems should be evolved jointly by the development agents and the community to what is sustainable and within the needs, aspirations and capacity of the fisherfolk.

**Integrated approach to development:** A technological intervention alone is a poor approach to developing communities: It needs to be taken up in a more holistic way, integrating social, economic and environmental issues into the design, Post-harvest problems are often symptomatic of wider social and economic problems and these often have to be addressed before the post harvest interventions can be introduced.

**Time frames required for maturity of an intervention:** That working with low-income individuals and groups, within complex social, economic and cultural structures is a gradual process which must be carried out over a long time period if sustainable impact is to be achieved. There is often a critical mass of development effort required within a particular community in order to stimulate uptake of new approaches on a level which leads to sustainability.

**Synergy and Institutional capacity:** The problem to be addressed should reflect the priorities of the fisherfolk and not just those of the development agents, but the needs, aims and capacities of the partner development agencies are important factors in the design of intervention methodologies. Post-harvest intervention is best carried out as a balanced partnership between the fisherfolk, local support agencies (NGO and government) and the project rather than in a prescriptive and top-down manner.

**Good management practices:** Often changing minor aspects of post-harvest processes can have a profound effect. This can often be a lower risk and higher impact strategy than introducing a completely new technology, which may be expensive and fraught with uncertainties.

**Negative implications of post-harvest interventions and AIGOs:** Not all post-harvest interventions are benign. In some cases post-harvest intervention may lead to improved incomes being re-invested in productive capacity in over-exploited resources. In such cases, the most appropriate intervention for post-harvest operators is alternative income generating opportunities outside of the sector.

**Documentation and dissemination:** The cost of defining problems, evolving solutions, developing support and change methodologies can be high. The benefits are maximised when the interventions are recorded in ways which have relevance to a wide audience and are effectively disseminated.

**Participatory planning and monitoring:** The impact of development efforts should be measured in a participatory way. All the key stakeholders should contribute to defining the indicators of success, deciding the means by which their achievement should be verified, and implementing the monitoring.

**Policy:** Whilst the solution to post-harvest problems may start at the community-level, the ultimate success of these solutions requires changes in the way NGOs and government departments support the uptake and transfer of these solutions through direct assistance and policies.

## FUTURE OPTIONS AND ISSUES

### 8.1 BACKGROUND

DFID has funded a post-harvest fisheries project in the Bay of Bengal region since 1987 (See Section 2). Phase I (1987-1990) focussed on identifying post-harvest problems, Phase II (1990-1992) developed and adapted low cost technological interventions to address these problems based on the needs of fisherfolk. Phase III (1993-1998) has focused on the uptake of technological solutions based on the needs, experiences and capacities of the fisherfolk. in order to maximise catch value and enhance the incomes of poor fisherfolk and petty fish traders.

The project is regional covering India, Bangladesh and Sri Lanka but, as is usual for DFID, the individual country components are covered by separate inter-government bilateral aid agreements. There is a central project management unit at Madras operated by a Project Field Manager with management support provided by NRI who are currently contracted by DFID as project managers.

Phase III will end in March 1998 and a concept note was recently drawn-up by the British Development Cooperation Office: Delhi for comment. This was discussed at the recent workshop in May<sup>13</sup> where a number of options and issues were raised. It was suggested that these should be highlighted in the report in order to give some guidance to the design team if the Phase IV concept note is agreed.

### 8.2 THE FUTURE OF THE PROJECT

The project has gradually evolved a methodology for addressing the needs of post-harvest fish workers in the coastal zone of the region. It has also begun to develop the institutional mechanisms to take this methodology to a much wider audience. Of key importance for the future must be the continued relevance of this work to the countries concerned.

#### **Continued relevance of post-harvest support to the fisherfolk**

The enthusiasm which the fisherfolk have shown to the project interventions over the last phase continues to grow and the demand for support is increasing in all areas. The falling catches from inshore resources in India have played a significant role in raising the profile and relevance of improved post-harvest activities. In Bangladesh, inshore resource shortages have increased demand for income generating opportunities for all fisherfolk outside of the sector. In Sri Lanka, the improved well being of the fish traders, as a result of better use of ice and increased access to a range of other services through better organisation, have prompted an expansion in demand for the project's services along the coast.

#### **Continued relevance of the project to the policies of partner governments**

The demand for support from the project's services amongst the government staff with whom project staff regularly work is increasing in all areas. This support is less well reflected at the policy level. There are signs that the Government of India's (GoI) draft National Policy recognises the need to preserve resources (and, by implication, maximise catch value by reducing post-harvest losses). If this strategy is implemented on a significant scale, it will be a

<sup>13</sup> Impact Assessment workshop held at Chennai 4-10 May 1997.

major evolution away from the previous production orientated approach. The draft National Policy is not currently available but GoI has informally advised us on that it will focus on the following objectives:

- 1 enhancement of production and productivity of fishermen
- 1 development of fish farming
- 1 generation of employment for the rural poor
- 1 improved socio-economic conditions for traditional fishermen
- 1 conservation of aquatic resources and diversity
- 1 augmenting exports of marine products.

The fifth objective hints at a possible change in GoI's policy and there is evidence of this policy, direction also occurring in the fisheries components of the Ninth Five year plans for some of the other states (Orissa, Andhra Pradesh and Tamil Nadu being three such examples).

The fisheries sector is predominantly a state function within the government system of India. The emphasis on post-harvest issues varies through these different administrations. In the past the emphasis of state policy has universally been on production with post-harvest being a less important concern. A growing understanding of resource related problems have led to a gradual shift in emphasis towards post-harvest issues". This is particularly so in the case of Andhra Pradesh where post-harvest problems have become a key government concern<sup>15</sup>. This change has been influenced by changes in the resource base and increased awareness of the potential of post-harvest interventions through the efforts of the project.

In Bangladesh the marine sector is a small but significant contributor to national development. The Government of Bangladesh (GOB) does not currently have a fisheries policy although the DOF has been requested to develop a policy paper on the management of coastal marine resources to present before the parliament in June 1997. <sup>16</sup> Within this, post-harvest issues are recognised as of growing importance but the policy basis for action in this area is fairly limited.

In Sri Lanka the relevance of post-harvest processes is increasing<sup>17</sup> and the ADB fisheries project has been elaborated to incorporate post-harvest activities initiated by the DFID-PHFP<sup>18</sup>. Again, in spite of support for post-harvest activities at the central government level, the policies related to post-harvest issues are still some way short of the felt demand.

This lack of policy support for post-harvest in the region is believed to be more of a consequence of weak and outdated policy frameworks generally within fisheries and a poor understanding of the interconnections between pre-harvest and post-harvest issues. There is, however, a more positive environment and governments are incorporating post-harvest issues into recent policy pronouncements.

### **Continued relevance of the project to DFID policies**

DFID's purpose is to improve the quality of life of people in poorer countries by contributing to sustainable development and reducing poverty and suffering

- 1 It aims to encourage sound development policies, efficient markets and good government.

<sup>14</sup> DFID Bay of Bengal Post Harvest Fisheries Project .Phase III Mid-Term Review report. July 1996

<sup>15</sup> Government of Andhra Pradesh Fisheries Department 9th Five Year Plan

<sup>16</sup> Personnal communication by Mr.Satish Chandra Roy, Ministry of Fisheries & Livestock, April 3 1997

<sup>17</sup> National Fisheries Development Plan of Ministry of Fisheries and Aquatic Resources (1995-2000)

<sup>18</sup> Letter from ADB Director to DFID-PHFP dated September 22 1995.

- It aims to help people achieve better education and health to widen opportunities, particularly for women.
- It aims to enhance productive capacity and to conserve the environment.
- It aims to promote international policies for sustainable development and enhance the effectiveness of multilateral development institutions.

The DFID-PHFP promotes sound post-harvest policies and closer ties between government, NGOs and the fishing communities. A small but significant part of the work over the life of the project has been improving the efficiency of markets through market research and improved dissemination of market information<sup>19</sup>. This is an area where considerable demand for further support exists. The benefits which have accrued to the poorer populations, as a result of project activities, have led to improvements in the quality of the lives of the fisherfolk. Women, whilst not singled out as a specific target of the project, have been the main recipient of project support.

The post-harvest focus of the project has the benefit of reducing the need to increase pressure on threatened fish resources and to increase the value and quality of production reaching the market. The improved fish smoking ovens have also reduced the demand for fuelwood in areas where deforestation has been a significant problem.

The regional focus of the project and the sharing of experiences between projects, NGOs and governments has promoted increased international co-operation and the institutional linkages formed have contributed to a more efficient and effective use of the project's limited financial resources.

The project also supports DFID's country natural resources strategy for India which focuses on improved techniques and approaches to reduce rural poverty, develop off-farm employment opportunities and improve the rural environment, based on a participatory approach.

In Bangladesh the project supports DFID's renewable natural resources strategy which has moved from the introduction of technology towards increasing institutional capacities in the public and private sectors. DFID's specific fisheries strategy within Bangladesh has as its purpose:

- To increase fish production by poor people through the sustainable use of Bangladesh's aquatic resources<sup>20</sup>

In Sri Lanka DFID's Country Strategy paper is concerned with

- helping tackle environmental problems;
- improving the quality of education;
- promoting good government and,
- undertaking direct poverty reduction measures.

The DFID-PIIFP has contributed to three of these aspects through its small but important programme of activities<sup>21</sup>. There is also a coastal zone management project focused on the west and south coasts which is working at institutionally strengthening the Coast Conservation Department of the MFAR. Any future project would need to interact and have synergy with the coastal zone management project.

<sup>19</sup> This is in collaboration with DFID's Post Harvest Fisheries Research Programme

<sup>20</sup> Bangladesh; Strategy and Programme for The fisheries Sector 1995-2000. Aid Management Office, DFID, Dhaka

<sup>21</sup> Fax to Project Field Manager from SEADD dated 1 August 1996.

## Other donor activities

Other donor-funded activities in the region in coastal fisheries include

### INDIA

UNDP	Brackishwater shrimp farming
Germany	Cage fish culture project in Kerala
Japan	Fishing vessels for Integrated Fisheries Project. Cochin
DFID	Support to Central Institute Fisheries of Technology (extension until August 1997)
DANIDA/Japan <sup>22</sup>	Coastal Fisheries Management executed through FAO.
DFID	Integrated Coastal Zone Management training project through links with Newcastle University and British council (in pipeline)

### BANGLADESH

JICA	Fish processing, inspection and quality control
DANIDA	Support to coastal fishing communities through NGO support
UNDP	Support to Fisheries Research Institute
DANIDA/Japan	Coastal Fisheries Management executed through FAO

### SRI LANKA

ADB	Fisheries Sector Development Project
DFID	Coastal Zone Management institutional strengthening through Coast Conservation Department (in pipeline)
DANIDA/Japan	Coastal Fisheries Management executed through FAO
UNDP	Fisheries Management Project
NORAD	Hambantota Integrated Rural Development Project

## Options For The Future

The project has made considerable progress over its life. The impact of the project has increased significantly in recent years. There are, however, still some areas of work with the communities which need to be developed and refined over the next few months.

The project is now nearing a position where it can start to take the local-level successes to a much wider audience and to have a major impact across the region. The growing enthusiasm within government and NGOs for post-harvest change, combined with both the demand from the fisherfolk communities. and the increasing ability of the project to transfer sustainable packages of support, makes the potential for future positive impact considerable, especially given that only a small percentage of the potential beneficiaries have been affected by the project so far.

<sup>22</sup> Through the Ministry of Foreign Affairs, Japan

This cannot be done by the project directly. It will need to be done by transferring the attitudes, knowledge and skills to extension agencies in the public and NGO sectors<sup>23</sup>.

To achieve this the project needs to consolidate its successes so far, generalise lessons learnt from it, disseminate information to the widest audience in the region, finalise its package of support and innovation, and redirect its attention fully to building the capacity of the NGOs and governments. This would need to be done at both the policy level, to ensure the commitment of the organisations in the long-term, and at the institutional level to allow practical implementation. Ideally there would also need to be a greater focus on bringing about changes in the fisheries training/education institutions in the countries.

A number of points were raised at the workshop in May 1997 that will need to be addressed by a future design team when preparing a project memorandum for a fourth phase. These relate to the approach that the project should undertake, its operational base, geographical focus and implementational strategy. It has been recognised that fisherfolk have many problems related to their immediate social and economic wellbeing. Greater attention to these issues is often required in the first context of working with these groups to be part of an integral part of an overall strategy to address their needs more effectively. The project has tried to address this in a pragmatic manner and it is important to underline, and understand, the approach that the project takes towards this with its definition of post-harvest as this is an important area for considering any fourth phase.

### **Definition of post-harvest**

*Post harvest fisheries concerns those factors affecting the activities from the time fish is landed at (the point of capture, or harvested, to the time the fish reaches the customer and is consumed. It is not simply concerned with production-oriented technologies. It embraces socio-cultural, environmental, economic, institutional, social, technical and marketing aspects of the supply demand, preservation, processing and distribution of fish and fish products.*

### **Project Objectives**

The goal and purpose of a possible fourth phase were discussed at the workshop and are given below. However, it is essential that all the project's actual, and immediate, clients are involved in the formulation of the logical framework using the participatory approach fostered by the project and encouraged by DFID.

#### **Goal**

*Quality of life of petty fish traders and coastal artisanal fishing communities in Bangladesh, India and Sri Lanka improved on a sustainable basis.*

#### **Purpose**

*Private/public sector and development agencies institutionally strengthened to address post-harvest concerns and implement livelihood strategies PET and AFC on a sustainable basis*

The central objective of the Programme in India is to strengthen Indian capacity (both private/public sector) to reduce poverty in a sustainable way over the medium term. India Country Sector Strategy Paper 1995.

### **Issues for consideration**

The main points which resulted from the workshop are highlighted before and the relative strengths and weaknesses are given where they are appropriate. The main consideration will obviously be the level of funding and it is crucial that a ball-park figure is provided. The concept note drawn-up by British Development Cooperation Office, Delhi talks of £2 million over three years. (for the Indian component, not including Bangladesh/Sri Lanka)

### **Target groups**

If the project is going to work through intermediate clients to build-up the capacity of development agencies to support fisherfolk communities then the project design has to address issues of targeting the disadvantaged. Women, in particular, have an important role in the subsector and should continue to be incorporated into any design.

The whole question of poverty and the use of purely economic indicators to measure this will need careful analysis. In line with the Indian Country Strategy paper it may be appropriate to simply target the poorer districts and fishing communities within the states.

The question of defining the target group to include post-harvest fishworkers was raised which would include people who worked in fish processing factories. The current focus on artisanal fishing communities and petty fish traders was considered to still be appropriate.

### **Geographical focus**

As this project is bilaterally funded each project directors will have to make an *in principle* decision on whether to proceed with a fourth phase. DFID will need to decide whether any future project should continue with the same geographical focus or perhaps concentrate its resources on one or two key districts/states in the countries.

### **Coastal versus inland fisheries**

In India there remains good potential for the development of inland freshwater fisheries but DFID has no history of involvement in inland fisheries development. In Bangladesh, DFID has invested in a substantial and diverse programme of assistance to inland fisheries. Considering the level of resources the focus should continue to be on working with coastal communities, rather than diversifying into inland fisheries, and/or extending linkages with DFID and other donor projects in the region.

### **Post-harvest interventions or wider issues**

The project has demonstrated that post-harvest approaches should not focus on technology alone but take into account broader related issues. It would be useful to think of a fourth phase which looks at food security and livelihood benefits through an integrated approach to post-harvest issues.

## Operational and management arrangement through the existing FAO-BOBP

The FAO-BOBP has a wider regional remit than the DFID-PHFP covering Malaysia, Maldives, Thailand and Indonesia. Nevertheless there remains complementarity between BOBP's focus on sustainable fisheries resource management, which includes conservation of the fisheries resource and this project's focus on maximising the value of the catch value through improvements in fish quality and reducing losses during handling, distribution and marketing. The main strengths and weaknesses of continuing with the relationship are given below in a SWOT analysis format:

### STRENGTHS

- | Association and interaction with a well known multilateral organisation
- | BOBP has a long history of working with fishing communities and institutions in the Bay of Bengal region
- | Projects are working with and for the same target groups/partner institutions
- | Able to operate within an existing office environment to reduce infrastructure investment and related overheads
- | Exchange of information/ideas between local staff
- | Easy to obtain government approval through a regional setup

### WEAKNESSES

- | Project suffers from not having a distinct identity
- | Higher expectations from target groups and partner agencies
- | Lack of continuity, in BOBP activities affects response from clients towards DFID's inputs
- | Disparity in terms and conditions cause resentment and friction between local staff
- | Lack of clarity on nature of relationship between the two projects

### OPPORTUNITIES

- | Scope for disseminating information throughout the region
- | Interaction, sharing ideas and exchange of information between staff, consultants, project managers from abroad/in-country
- | Co-sharing of staff/equipment costs and project inputs where there is complementarity

### THREATS

- | Closure of FAO-BOBP in 1999
- | Change in FAO-BOBP policy on co-sharing location
- | Change in location of FAO-BOBP headquarters to another country

## Location aspects

The main office is based in Madras and the decision to remain in Tamil Nadu would be heavily dependent on the mutual benefits through co-sharing the present location between the FAO and the priority DFID puts on working in the various Indian states. The advantages and disadvantages of the capitals of the four states that the project currently works in India are given below. Although there was a suggestion in the concept note that the project could expand into Karnataka it would be operating in an environment where it has no previous experience

<b>Tamil Nadu: Madras</b>	Established office structure through FAO-BOBP  Good international and national flights  Fairly good infrastructure  Administrative links with British Council  Post-harvest priorities quite high at state level	Not a DFID priority state in India
<b>Andhra Pradesh: Hyderabad</b>	Presence of DFID office (Slum Improvement Programme, SIP)  Fairly good infrastructure  Good national connections with some international links  Priority DFID state in India  High post-harvest priority at state level.	Not based on the coast
<b>Orissa: Bhubeneshwar/Cuttack</b>	Presence of DFID office (SIP)  Priority DFID state in India  High post-harvest priority at state level.  Govt. Agencies split between two sites.	Poor national flight connections to rest of India, no international links  Infrastructure weak. particularly power and communications.
<b>West Bengal: Calcutta</b>	International/national flights  Priority DFID state in India  Presence of British Council	Low priority accorded to post-harvest and coastal fishing communities.

## TERMS OF REFERENCE FOR THE STUDY

### IMPACT ASSESSMENT FRAMEWORK

The participants reviewed the report of Intervention India (Pvt) Ltd and, taking some account of its recommendations, developed a framework for the impact assessment, which was field tested after the workshop.

#### Design Criteria

The main criteria established by the project team for the Impact Assessment Study (IAS) is that it should be based on the current logical framework and should:

- produce the information on impact necessary to:
- carry out an Output-to-Purpose review (have the intended outputs been achieved, and if so, has this led to the achievement of purpose?)
- assess the likelihood that the project will contribute to the achievement of the intended goal;
- assess the scale and importance of any non-intended impacts.
- be simple, user-friendly and cost-effective to implement and take the views of primary, and secondary stakeholders fully into account;
- be capable of being completed by May 1997, to fit in with DFID's schedule for the preparation of a possible follow-on-project.
- be led by outside consultants, in order to ensure independence, who would work very closely with project staff and GO/NGO partners.

#### Elements of the IAS

Bearing these criteria in mind, the workshop participants decided on the following:

- **Team composition:**

The survey will be implemented by two field teams in India/Sri Lanka led by Catalyst Management Services of Bangalore (Messrs MS Ashok and Mr N Raghunathan) and one team in Bangladesh, led by Socio-consult of Dhaka (Mr Alamgir Chowdhury). Each team will comprise one consultant, two project staff, one GO or NGO representative and one or more fieldworkers. Consistency of approach among the teams (making it possible ultimately to aggregate results) will be ensured by designing and field-testing the approach together and by planned meetings of members of the different teams as the work proceeds. Each team will include at least one woman. To ensure a fall-back position, at least two women will be included in the selection, mobilisation and training of field teams. Even though the project is not working with women in Sri Lanka, a woman will be included in that team.

**Locations:**

The survey will involve detailed surveys of target group and non-target group communities (i.e. with and without the project). Gos and NGOs in 16 purposively selected locations (8 in India, 3 in Sri Lanka and 5 in Bangladesh). The communities will be selected to be as representative as possible of the range of conditions and project experience in the 57 locations where it is currently working.

**Surveys:**

The surveys at each location will take about one week and will involve (a) household and group interviews, using PRA, RRA and other techniques, (b) case studies, (c) interviews with 'key' informants, and (d) interviews with GO and NGO representatives. Both quantitative and qualitative information will be collected. The main unit of analysis will be the household, but groups and secondary stakeholders will also be covered.

**Gender and poverty-focus:**

The surveys would seek to establish the impact of the project on the target group, as a whole, but would specifically focus on the impact on women and on very poor households.

**Data validation:**

The data collected will be validated by 'triangulation' (asking similar questions to individuals and groups in village and GO/NGO discussions, and in different locations by the three research teams) and by checking results against data already collected by the project and official statistics.

**With and without project comparisons:**

The impact assessment will involve comparing the 'with project' and 'without' project situations by interviewing non-project ('control') households (in and outside the village). However, because of anticipated difficulties in identifying suitable 'controls' this approach will be complemented by in-depth interviews to assess the 'before' and 'after' situation for participating households.

**Timing:**

The first round of the survey will be undertaken between mid-February and mid-April and will involve 10 days of field team training and mobilisation and 50 days of fieldwork. A draft report will be circulated by end April and a final report, taking account of comments at the next workshop (5 to 10 May), by end May.

## QUESTIONS BASED ON LOGICAL FRAMEWORK INDICATORS

Flowing from the logframe indicators, there are a number of questions that must be answered in the impact assessment study. These questions are listed below. The questions WILL NOT NECESSARILY be directly asked to individuals and community groups by IAS teams. They do however provide a check list of the information which IAS team must collect.

### GOAL

G 1.1. (these reference to the OVIs in the Logframe)

- What are the components of general living standards?
- Any improvement over last 3 years?
- How many h/h report improvement?

G 1.2

- What assets does a typical h/h own?
- How many h/h acquired new assets last 3 years?

G 1.3

- What food items does a typical family consume ? (breakdown into home grown/ produced and food bought from the market/ other sources)?
- Money spent on food bought, - 3 years ago & now? disaggregate

### PURPOSE

P 1.1 (these reference to the OVIs in the Logframe)

- Components of family income - from fishing & non-fishing sources
- Any improvement in income due to PHF interventions? How much for a typical family?

P 1.2

- Are participants, at least some, members of a Community Based Organization. CBO?
- What kind?
- When did it start?
- Is savings a component of the CBO's activity?
- How are accounts maintained?
- When the CBO started - what was the rate of saving...(per members per week or month)? What is it now?

P 1.3

- What were the PHF practices in the community - 3 years ago & now?
- What new PHF practices have been adopted in neighbouring villages or groups: in the last 3-5 years?

## **PURPOSE**

### **P 1.4**

(for Bangladesh only)

- 1 Repeat P 1.1 for non-fishing incomes

## **OUTPUT**

### **0 1.1**

- 1 Link to P 1.3
- 1 How many h/h have adopted improved PHF technologies?

### **0 1.2**

- 1 From secondary sources like PHFP documents, not covered in field survey

### **0 2.1**

- 1 Link to P 1.3
- 1 No. of h/h adopting such new practices - without project support

### **0 2.2**

- 1 Link to 0 2.1 : qualitative data

### **0 3.1**

- 1 Link to P 1.1
- 1 What are the items - fish & non-fish products - normally sold by a h/h?
- 1 Value of each component of income 3-5 years ago & now, (break-up - species/ process: prices/ period)

### **0 3.2**

- 1 Link to P 1.1 & P 1.3
- 1 Calculate

### **0 4.1**

- 1 Identify sources of credit
- 1 Link to P 1.2
- 1 Has CBO taken any loan from a bank/ FI/ other formal sources?
- 1 How many members have taken a loan from CBO?
- 1 How many individuals have taken direct loans from bank/ formal sources?

### **0 4.2**

- 1 Typical family - total debt - break-down by source - rate of interest for each source  
- 3 years ago & - now

## **OUTPUT**

0 4.3

- | Link to 0 4.2

**0 5.1**

- | Secondary sources

0 5.2

- | Secondary sources

**0 6.1**

- | Secondary sources + interaction with NGO staff

0 6.2

- | Secondary sources + interaction with NGO staff

0 6.3

- | Secondary sources + interaction with NGO staff

0 7.0

- | Secondary sources + interaction with NGO staff

### **Other issues, not included as specific questions, but important:**

- | Equity - participation of the poor and very poor. Who participates & who does not, inclusions and exclusions?
- | Gender distribution of credit....and general gender aspects of the project
- | Health. drinking water, sanitation. education (existing status, perceptions. access to facilities. affordability, quality)
- | Empowerment - women & others
- | Spending/ investment patterns of incremental income - patterns

**COMPOSITION & ITINERARY OF  
IMPACT ASSESSMENT STUDY TEAMS**

**Team 1 - Sri Lanka**

M.S. Ashok, Catalyst Management Services, Bangalore  
George Mathew, DFID-PHFP, Madras  
Chandra Silva, DFID-PHFP, Sri Lanka  
Dr. Ivan Silva, Sri Lanka  
Ms. Kusala, Ministry of Fisheries and Aquatic Resources  
H.S.G. Fernando, Ministry of Fisheries and Aquatic Resources  
Medanthe, INASIA  
Indunil, INASIA  
Ms. Lalitha, INASIA

**Team II - India - Kovalam, Manapad (Tamil Nadu)**

M.S. Ashok, Catalyst Management Services, Bangalore  
George Mathew, DFID-PHFP, Madras  
Ms. Gomathi, DFID-PHFP, Madras  
Ms. Vimala, SANTHIDAN  
Rajan, Tamil Nadu Apex Fishermen Co-operative Federation, Manapad

**Team - III - India - Chandrabhaga (Orissa)**

M.S. Ashok, Catalyst Management Services, Bangalore  
Ms. C. Mohana, DFID-PHFP, Madras  
Binod Mohapatro. DFID-PHFP, Bhubaneshwar  
Sekhar

**Team - IV - India - Subbampeta, Ramanapatem, Upplanka (Andhra Pradesh)**

N. Raghunathan. Catalyst Management Services, Bangalore  
Ms. C. Mohana, DFID-PHFP, Madras  
Durga Prasad, DFID-PHFP, Kakinada  
Sekhar

**Team - V - India - Vellakoil, Pudupettai (Tamil Nadu)**

N. Raghunathan, Catalyst Management Services, Bangalore  
Ms. C. Mohana, DFID-PHFP, Madras  
Ms. Senthil Kumari, ROSA  
Ms. Kalaiselvi, ROSA

**Team - VI - Bangladesh**

Resa Gowsar, Socioconsult International Ltd.  
Naser, Socioconsult International Ltd.  
Alamgir Chowdhury, Socioconsult International Ltd.  
Dr. Goutam Barua, DFID-PHFP, Dhaka  
Ms. Khuku, CODEC  
Nasimul Haque, DFID-PHFP, Dhaka

## ITINERARY

<b>Date</b>	<b>Locations</b>	<b>Team</b>
<b>INDIA:</b>		
24.02.97 to 01.03.97	Kovalam (Tamil Nadu) Nagercoil (Tamil Nadu)	Team II
02.03.97 to 06.03.97	Manapadu (Tamil Nadu) Tuticorin (Tamil Nadu)	Team II
27.03.97 to 02.04.97	Vellakoil (Tamil Nadu) Pudupettai (Tamil Nadu) Nagapatnam (Tamil Nadu) Porayar (Tamil Nadu)	Team V
04.03.97 to 18.03.97	Subbampeta (Andhra Pradesh) Uppalanka (Andhra Pradesh) Ramanapalem (Andhra Pradesh) Kakinada (Andhra Pradesh) Pallam (Andhra Pradesh) Uppada (Andhra Pradesh) Kothapalli (Andhra Pradesh) Konapapeta (Andhra Pradesh) Talarevu (Andhra Pradesh)	Team V
16.04.97 to 21.04.97	Chandrabagha (Orissa) Konark (Orissa) Paradeep (Orissa) Kujang (Orissa) Cuttack (Orissa) Puri (Orissa) Bhubaneshwar (Orissa)	Team III

<b>Date</b>	<b>Locations</b>	<b>Team</b>
<b>SRI LANKA:</b>		
3 1.03.97 to 02.04.97	Colombo	Team I
03.04.97 to 04.04.97	Tangalle (DFEO District)	Team I
05.04.97	Colombo	Team I
06.04.97	Marawella (Chilaw DFEO District)	Team I
07.04.97 to 09.04.97	Colombo	Team I
10.04.97	Colombo	Team I

<b>Date</b>	<b>I Locations</b>	<b>Team</b>
<b>B A N G L A D E S H  </b>		
23.03.97 to 03.03.97	I Dhaka	Team VI
04.03.97	Chittagong	Team VI
05.03.97 to 08.03.97	Cox's Bazar	Team VI
09.03.97 to 17.03.97	Banskhali (Chittagong)	Team VI
18.03.97 to 19.03.97	D h a k a	Team VI
24.03.97 to 28.03.97	Hatia	Team VI
29.03.97 to 30.03.97	Sandwip	Team VI
3 1.03.97 to 12.04.97	Dhaka	Team VI
23.04.97	Dhaka	Team VI
24.04.97	Dhaka	Team VI

# PROJECT LOGICAL FRAMEWORK

Revised January 1997

Narrative Summary (NS)	Verifiable Indicators (OVI)	Name of Verification (MOV)	Important Assumptions
			(Coal to Supergoal)
<b>Goal:</b>			
<b>1. Standards of living of</b> artisanal fishing communities (AFC) and petty fish traders (PFT) at selected Bay of Bengal (BoB) locations sustainably enhanced.	1.1 Target group households (h/h) in India (IN), Bangladesh (BD) and Sri Lanka (SL) report on average 75% increase in standards of living by 31 March 1998 and 85% by 31 March 2000.	<b>1.1 Impact Assessment</b> System (IAS) reports and Export evaluation study (based on participator) evaluation by communities)	<b>1. Technologies and</b> approaches developed by the project disseminated within BoB by natural means and through programmes of Government Organisation (GO) and Non Government Organisation (NGO).
Super Goal: Same in Wider areas in BoB	1.2 Target group h/h in INBD and SL report average 10% increase in average total family asset bases of AFC and PFT h/h by 31 March 1998 and 15% by 31 March 2000.	1.2 IAS reports	
PFT are defined as someone who works in the informal fish marketing sector dealing with small quantities of fish that are retailed locally.	1.3 Target group households report 10% increase in the real value of food consumed in IN, RD, and SL by 31 March 1998.	1.3 IAS reports	2. Same as O>P assumption Nos. 1 and 2
	1.4 Over 50% of women from adopting households report increased role in h/h decision-making by 31 March 2000	1.4 IAS reports	
<b>Purpose:</b>			(Purpose to Goal):
<b>1. Incomes of AFC and PFT</b> households at selected BoB locations sustainably increased	1.16%, 6% and 15% average increase in incomes of target h/h in INBD, SL respectively due to use of improved Post Harvest Fisheries (PHF) practices by 31 March 1998.  (Incomes of female headed h/h and very poor h/h increase by at least the average of all h/h)	1.1 IAS and project reports.	1 Beneficiaries spend increased incomes on raising standard of living
	1.2 Savings of target households more than double within two years of joining Community Based Organisations (CBOs).	1.2 IAS and project reports based on accounts of CBOs.	2. Other GO and NGO programmes enhance standard of living in other ways (eg housing, health)
	1.3 Adoption of at least improved practice by non-project groups in IN (30 groups), BD (3) and SL (16) by 31 March 1998.	1.3 IAS and project reports.	3. Same as O>P assumption Nos. 1 and 2
	1.4 Bangladesh: Income of target h/h increased by 20% due to alternative Income Generating Schemes (IGS) by 31 March 1998.	1.4 Ditto	

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
<b>Outputs:</b>			<b>(Output to Purpose):</b>
1. Appropriate technologies identified and transferred to beneficiaries.	1.1 Beneficiary h/hs adopt through the project improved PH technologies by 31 March 1998: IN (X.000 h/h). BD (1 5). SL (750) and in BD non-PHF technologies (130).  1.2 Target group h/h in project locations independently access improved PHF technologies by 31 March 1988 : IN (1.000 h/h). BD (10). SL (200).	1.1 IAS reports  1.2 IAS reports.	1 Government policies, the political situation, the macro-economic environment and the legal framework in all 3 countries remain conducive to PHF development.
2. Capacity of institutions (local, NGO, GO) to support post-harvest fisheries (PHF) strengthened.	2.1 Gos and NGOs integrate PI IF technologies into their action plans by 31 March 1988, IN (10). BD (3). SL (4).  2.2 Skill and knowledge base of staff of Gos, NGOs and members of CBOs enhanced to tackle PHF issues by 31 March 1988: IN (600). BD (70). SL (500).	2.1 IAS reports.  2.2 IAS reports based on training evaluation reports and records of training institutions.	2. Natural disasters (eg cyclones) do not adversely affect the project.  3. Credit policies remain conducive to PHF development.
3 Access of AFC and PFT households to credit enhanced.	3.1 At least 10% increase in average annual sales turnover (fish, fish products: +other products in BD) of target h/h by 31 March 1998.  3.2 Improved products account for following shares of increased net incomes of adopter target h/h by 31 March 1998: IN (15%). BD (5%) SL (15%).	3.1 IAS reports based on sample survey checked by Participatory Rural Appraisal (PRA).  3.2 Ditto	4. Fish supplies remain stable and fish seasons are as expected  5. Power supplies and transport system in project areas continue to operate effectively throughout the life of the project.
4 Access of AFC and PFT households to credit enhanced	4.1 Proportion of target households enjoying access to formal credit by EOP increases by IN (40); BD (90%); SL (15%)  4.2 Weighted average cost of formal and informal credit to target h/h by 31 March 1998 decreases by : IN (35%). BD (1 5%) and SL (20%).  4.3 Average annual amount of formal and informal credit used by target h/h by 31 March 1998 increases by : IN (40%). BD (50%) and SL (40%).	4.1 IAS reports based on (a) CBO and other accounts and (b) sample survey checked by PRA.  4.2 Ditto  4.3 Ditto	6 Conflicts with mechanised fishers do not adversely affect ATC across to fisheries.  7. Price fluctuations and gluts do not adversely affect project implementation.
5 Dissemination strategy planned and implemented.	5.1 No of target GO and NGO users reporting increased awareness of PHF issued by 31 March 1998: IN (13). BD (21) and SL (3).  5.2 Following number of enquiries to project. [(IN (20). BD (100). SL (50))] of which following converted to activities [IN (50%). BD (60%). SL (50%)].	5.1 IAS reports  5.2	8. Incomes of target groups from other activities (eg. wage labour) maintained at current levels.

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
6. Effective linkages among CBOs, GOs and NGOs facilitated.	6.1 NGOs and GOs undertake new and jointaction plans to address PHF issues [IN (3). SL (1) or other issues [BD(6)] by 31 March 1998.	6.1 Project reports.	
	6.2 Target CBOs able independently to access support from financing and development agencies [IN(22). BD(1). SL( 1)].	6.2	
	6.3 CBOs, NGOs, GOs, in IN, BD), SL, interact with increased frequently and consistency and exchange among them resources, knowledge, experience and skills 31 March 1998.	6.3 Ditto	
7. Project Management Unit (PMU) established and operational.	7.1 PMU established and operational by PM3.	7.1 Project reports and DFID monitoring and review reports	
	7.2 Mangement systems (HR, financc. procurement, decision-making, MIAS) operational hy end PM6.	7.2 Ditto	
	7.3 Project implemented according to annual workplans.	7.3 Ditto	
	7.4 Monitoring and IAS reports produced on time and project design revised in light of project learning.	7.4 Ditto	

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
<b>Activities :</b>			<b>(Activity to Output):</b>
1.1 Identify potential project areas and conduct pre-feasibility study.		1.1	1. Natural disasters (eg cyclones) do not adversely affect ATC and PFTs.
1.2 Access needs and priorities of AFC and PFT in selected areas.		1.2	
1.3 Explore and identify suitable technologies and options.		1.3	2. NGOs with necessary managerial and financial capacity and integrity remain willing and able to work with the project in developing PHF.
1.4 Carry out socio-economic, institutional, marketing and environmental appraisal of technologies and options.		1.4	
1.5 Support formation of groups, as necessary, undertake participatory planning of pilot activities and support implementation.		1.5	3. Communities willing and able to form CBOs, when necessary, and these remain effective.
1.6 Carry out participatory evaluation of pilot activities and develop standard but flexible models for use in other areas.		1.6	4. Communities, GOS and NGOs willing and able to cooperate in developing PHF.
1.7 Promote planning and implementation of models in other areas, liaising with other agencies as needed.		1.7	
2.1 Identify suitable institutions (CBOs, NGOs, GOs) and assess their technical and managerial capacity.		2.1	5. The Project, GOS and NGOs able to retain experienced and trained staff
2.2 Assess capacity building needs of institutions (eg, training: exposure visits) and key resource people/trainers		2.2	6 Access to formal and informal sources of credit continues throughout project period.
2.3 Develop training modules, including training of trainers, implement training and evaluate.		2.3	
2.4 Plan, implement and evaluate exposure visits to other projects or agencies.		2.4	7. Power supplies and transport system in project areas continue to operate effectively throughout the project.
2.5 Plan, implement and evaluate other capacity building events (eg, Seminars, workshops).		2.5	
2.6 Review and support continued process of social mobilisation by CBOs, monitor group maturity and develop exit strategies.		2.6	8. DFID remains committed to the project and provides funds on time.
3.1 Review experience of beneficiaries in gaining access to markets.		3.1	9. Staffing changes in DFID do not adversely affect the project.
3.2 Undertake market research to estimate market trends in project areas and beyond (volume, price, quality and segmentation).		3.2	10 Suitably qualified and experienced staff and consultants available when needed.

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
3.3 Develop marketing alternatives (channels, products, option) and examine potential links to production systems (backward linkages).		3.3	
3.4 Estimate economic returns to technologies and options. analyse risks and devise strategies, policies and coping mechanisms.		3.4	
3.5 Establish market information to monitor market dynamics (demand, prices, movements).		3.5	
3.1 Review experience of AFC and PFT in gaining access to credit.		4.1	
4.2 Access credit needs of CBOs in pilot areas and plan and implement programme with CBOs to strengthen their capacity effectively to manage savings and credit.		4.2	
4.3 Facilitate CBOs in making contact with and demands on banks and other financial service providers.		4.3	
4.4 Participatory monitoring of CBOs in using credit and support further as necessary.		4.4	
4.5 Extend support to credit programmes in other project areas.		4.5	
5.1 Establish dissemination strategy, including identification of potential users.		5.1	
5.2 Identify their information needs and produce communication materials to address		5.2	
5.3 Different types of communications (eg leaflets, videos) distributed in appropriate languages to communities and agencies in IN, BD and SL		5.3	
5.4 Conduct workshops, in-house 'consultants' and other events to disseminate project learning to these organisations.		5.4	
6.1 Identify potential NGOs and GOs to link to project AFC and PFT		6.1	
6.2 Identify common interests among these and facilitate and sustain dialogue and consultation (eg, via existing and new forums).		6.2	

**PROJECT LOGICAL FRAMEWORK**

Narrative Summary (NS)	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
6.3 Maintain links with key NGOs and GOs (eg DRDA and NABARD) and encourage them to focus on needs of AFC and PFT. including (BD) for non-fisheries IGS.		6.3	
6.4 Two forums held in IN. RD. SL bringing together CBOs. GOs. NGOs to address PHF issues by 31 March 1998.		6.4	
7.1 Field Manager and staff recruited and in post by end of project month 3.		7.1	
7.2 Office established and equipped by end PM3.		7.2	
7.3 Project implemented in line with annual workplans.		7.3	
7.4 Consultants hired and other resources procured. as necessary. for smooth project implementation.		7.4	
7.5 Monitoring system designed and implemented by end PY 1 and monitoring reports produced on schedule.		7.5	
7.6 Periodically review government policies and macro-economic and legal frameworks for PHF.		7.6	
7.7 Impact Assessment System designed and implemented by Social and Economic Unit (SEU) with outside support by end of February 1997.		7.7	
7.8 Project learning: ensure feedback of lessons learnt from MIAS into project planning.		7.8	
7.9 Plans for closure or extension of project beyond 31 March 1998 made by end of July 1997.		7.9	

#### Abbreviations

PFC	Petty Fish Traders
AFC	Artisanal Fishing Communities
CBO	Community based Organisations
IGS	Income Generating Schemes
NGO	Non-government Organisation
GO	Government
IN	India
BD	Bangladesh
SL	Sri Lanka

<b>LIST OF ABBREVIATIONS</b>
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ADB	Asian Development Bank
AFC	Artisanal Fishing Communities
AFCCS	Andhra Fishermen's Central Cooperative Society
AFCOF	Andhra Pradesh Fishermen's Cooperative Federation
AFFPRO	Action for Food Production
AZAD	Association of Zonal Approach Development
BCS	Backward Classes Society
BOBP	Bay of Bengal Programme
CBO	Community Based Organisation
co-op.	Cooperative
CODEC	Community Development Centre
COPDANET	Coastal Poor Development Action Network
DANIDA	Danish International Development Agency
Dept.	Department
DFID	Department for International Development
DRDA	District Rural Development Agency
FAO	Food and Agriculture Organisation
FTI	Fisheries Training Institute
GO	Government Organisation
GoD	Government of Bangladesh
GoI	Government of India
h/h	households
IAS	Impact Assessment Study
IFP	Integrated Fisheries Project
IREN	International Development Networks
kg	Kilogram
AIGA	Alternate Income Generating Activities
MFAR	Ministry of Fisheries and Aquatic Resources
NABARD	National Bank for Agriculture and Rural Development
NARA	National Aquatic Resources Agency
NGO	Non Governmental Organisation
DFID	Department for International Development
OVI	Objectively Verifiable Indicators
PFT	Petty Fish Traders
PHF	Post Harvest Fisheries
PHFP	Post Harvest Fisheries Project
PRA	Participatory Rural Appraisal
ROSA	Rural Organisation for Social Action
RRA	Rapid Rural Appraisal
Rs	Rupees
SIDA	Swedish International Development Agency
SIFFS	South India Federation of Fisherman's Sangams
Tk	Taka
TOR	Terms of Reference
UBINIG	Unnayan Bikalpar Niti Nirdharoni Gobeshana
VJNNS	Visaka Jilla Nava Nirman Samithi