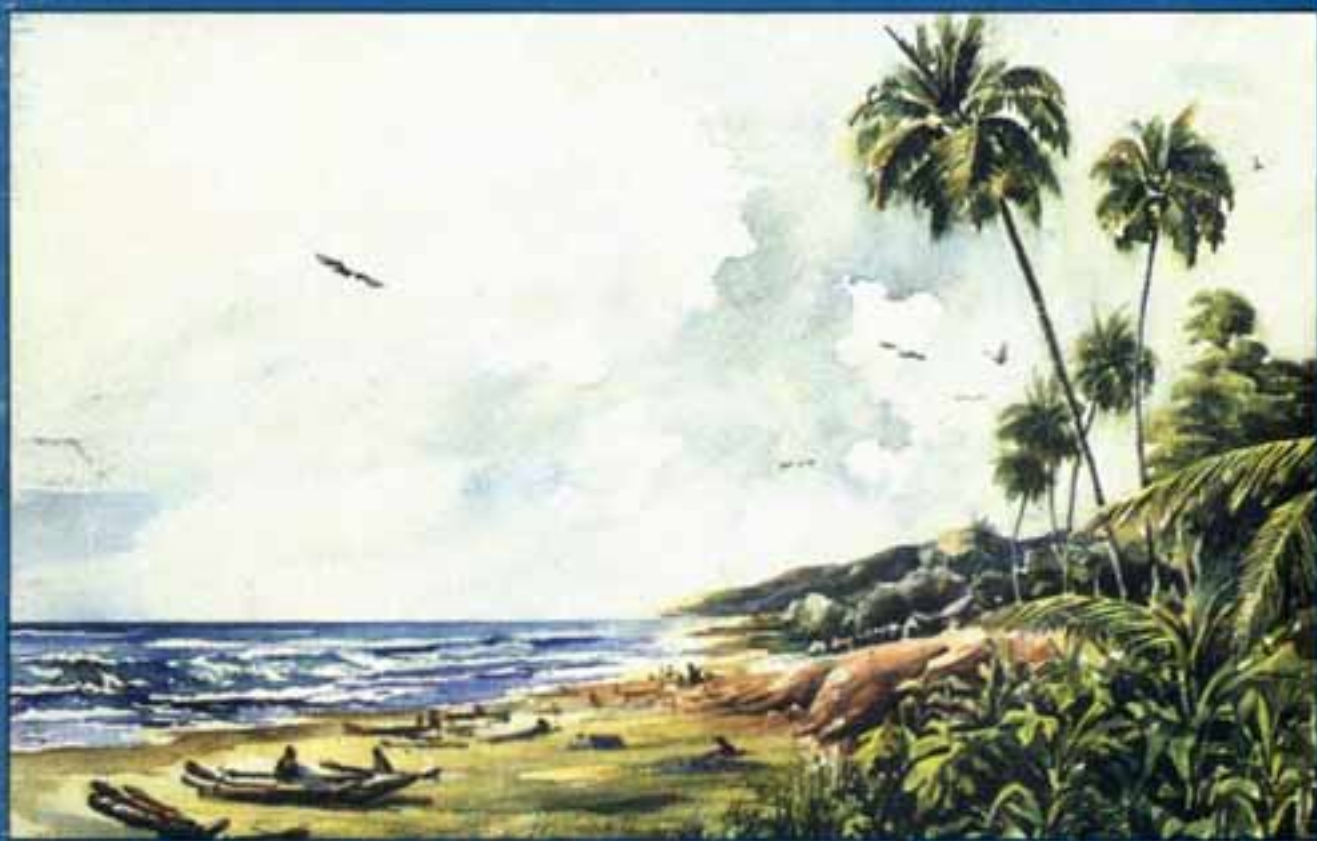


## Report of the 19th Meeting of the Advisory Committee



**INTEGRATED COASTAL FISHERIES MANAGEMENT**

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REPORT OF THE NINETEENTH MEETING  
OF THE ADVISORY COMMITTEE

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16- 17 January, 1995  
Jakarta, Indonesia

This document records the recommendations of the 19th Meeting of the Advisory Committee of the Bay of Bengal Programme for Fisheries Management (BOBP), held on 16 -17 January, 1995, in Jakarta, Indonesia.

The document contains the annual reports (or status reports) of the projects in the Programme. These reports briefly recapitulate the objectives and status of the activities, describe the work and achievements during 1994 and evaluate the progress that was made. Work plans for 1995 are also presented. The reports were prepared at the end of 1994 and presented to the 19th Meeting of the Advisory Committee.

The Advisory Committee is composed of member countries, agencies funding BOBP projects, and the FAO. The Committee meets once a year in member countries on a rotational basis.

The Bay of Bengal Programme (BOBP) is a multi-agency regional fisheries programme which covers seven countries around the Bay of Bengal – Bangladesh, India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand. The Programme plays a catalytic and consultative role in developing coastal fisheries management in the Bay of Bengal to help improve the conditions of smallscale fisherfolk communities in member countries. The BOBP is sponsored by the governments of Denmark, Japan, United Kingdom and the International Maritime Organization of the UN. The executing agency is the FAO (Food and Agriculture Organization of the United Nations).

**May 1995**

| CONTENTS  | Page |
|---|------|
| Report of the Nineteenth Meeting of the Advisory Committee  | 1    |
| <i>APPENDICES</i>   |      |
| A. List of Participants   | 5    |
| B. Agenda   | 8    |
| C. List of Documents  | 9    |
| D. State of the Programme 1994  | 10   |
| E. Post-Harvest Fisheries Project (ODA) – Annual Report 1994  | 12   |
| F. Cleaner Fishery Harbours Project (IMO) – Annual Report 1994  | 30   |
| G. Awareness-Building to Promote Cleaner Fishery Harbours<br>in Indonesia – Project Brief   | 32   |
| H. Small-scale Fisherfolk Communities in the Bay of Bengal,<br>Coastal Fisheries Management in the Bay of Bengal, and<br>information Service – Annual Report 1994 | 35   |
| I. Regional Workshop on Situation Analyses  | 42   |
| 3. Coastal Fisheries Management – Indicative Workplan for 1995  | 48   |
| Appendix i-I: Monitoring and Evaluation (M & E) System  | 54   |
| Appendix i-II: BOBP and National Execution  | 61   |
| Publications of the Bay of Bengal Programme   | 64   |

# **REPORT OF THE NINETEENTH MEETING OF THE ADVISORY COMMITTEE OF THE BAY OF BENGAL PROGRAMME FOR FISHERIES MANAGEMENT**

## **OPENING OF THE MEETING**

1. The Advisory Committee of the Bay of Bengal Programme for Fisheries Management (BOBP) held its Nineteenth Meeting from 16 to 17 January 1995, at the Hotel Kartika Plaza, Jakarta, Indonesia. A list of the participants is given in Appendix A.
2. The Meeting was formally inaugurated, together with the Ninth Session of the IOFC Committee for the Development and Management of Fisheries in the Bay of Bengal, on 16 January 1995 by Mr. Mughtar Abdullah, Director-General of Fisheries, Directorate-General of Fisheries (DGF), Jakarta, Indonesia.
3. The working session of the meeting was opened on 16 January 1995 by the outgoing Chairman from Maldives, Mr. Maizan Hassan Maniku, Director of Fisheries, Ministry of Fisheries and Agriculture, Republic of Maldives.

## **ELECTION OF CHAIRMAN**

4. The Advisory Committee unanimously elected Mr. A.M. Djoko Sugiarto, Director of Planning and Programme, Directorate-General of Fisheries, Indonesia, as its Chairman to hold office until the beginning of its Twentieth Meeting.

## **ADOPTION OF THE AGENDA**

5. The Advisory Committee adopted the Agenda shown in Appendix B. The documents placed before the Committee are listed in Appendix C.

## **BAY OF BENGAL PROGRAMME (BOBP)**

6. BOBP is seen as a regional multi-agency Programme comprehensively addressing the fisheries needs of member countries, and any activity of BOBP should be appropriately and systematically integrated with the other components of the Programme to address issues in a holistic manner.
7. Given the similarities of problems in the region, the Programme should try to promote and achieve, where possible, a 'regional flavour' in all the components working under the BOBP umbrella.
8. Given the often similar fisheries situations in the region and the fact that fisheries development in the member countries is at different stages, it was proposed that BOBP should continue to facilitate sharing of experiences and learnings between and among countries, and promote comparative studies, where necessary.
9. In the context of the Coastal Fisheries Management (CFM) project, Post-Harvest Fisheries (PHF), including marketing and PH technology, was considered a vital ingredient to ensure increased earnings for fisherfolk and sustainable fisheries. FAO and BOBP were requested to assist in identifying donors in order to support PH inputs, in a regional context, to supplement the present ODA activity.

## **COASTAL FISHERIES MANAGEMENT (CFM)**

(DANIDA/JAPAN/Member Governments)

10. All member countries endorsed the benefits of fisheries management in the context of sustainable fisheries development in the region. Further, it was felt that fisheries management is in line with national aspirations to increase fisheries production. It is management which can sustain expanded production.

11. All member countries endorsed their commitment to fisheries management and felt that assistance from BOBP would enhance and maximize the impact of their efforts. Further, the need for flexibility was emphasized in order to take into account the needs of the different member countries and the dynamics of project-induced changes.

12. It is recommended that BOBP explores the possibility of utilizing unspent 1994 funds (GCC-GCP/RAS/117/MUL) to facilitate national execution during 1995.

13. Member countries and donors were encouraged by, and expressed their satisfaction with, the efforts that had been made to ensure the accountability and transparency of the project and recommended that continued emphasis should be given to Monitoring and Evaluation (M & E) and Logical Framework Analysis (LFA).

14. Given that participation in management is often influenced by social and political considerations, it was recommended that a consultative approach to fisheries management and development should also be explored in the region.

15. Given that the CFM project's resources are limited and activities are necessarily of a pilot nature, it was recommended that the scope of the activities be clearly demarcated.

16. Aspects of legal and institutional frameworks of fisheries management should be reviewed by each member country, where necessary, to facilitate management efforts.

17. Development of country workplans, budgets and M & E system during the preparatory phase should be synchronized with the particular budgetary schedules of the member countries to facilitate national execution.

18. India, endorsing the prioritization of the problems identified in its Situation Analysis, recommended that the entire east coast of India be considered for locating pilot activities.

19. Maldives clarified that the problems to be addressed with assistance from BOBP would include grouper mariculture, bait fish and ornamental fish collection, coral mining and tourist-fisherfolk conflicts in the context of sharing marine resources in pilot areas.

20. Efforts in managing fisheries resources in an integrated coastal fisheries management framework, and innovative approaches developed under the BOBP Third Phase, need to be 'institutionalized' for sustainability.

21. Subject to the clarifications recommended by selected countries and recorded elsewhere in this Report, the member countries endorsed the findings and recommendations of the Situation Analysis as the foundation from which the Third Phase activities should be evolved.

## BOBP AND ITS FUTURE ROLE

22. Awareness of the changing circumstances in the region and beyond, and a desire to strategically position BOBP in the forefront of change, rather than in its pursuit, led the member countries to recommend that BOBP should continue to evolve its role and mission to respond to these new changes and demands.

23. BOBP should carefully consider the BOBC Subgroup findings and recommendations and use them as a means to evolve its vision, mission and role in the future, incorporating and participating in such aspects as may be appropriate.

## CLEANER FISHERY HARBOURS (CFH) (IMO)

24. India requested assistance for fishery port personnel training and extension of pilot project experiences to its major and minor ports.

25. Sri Lanka requested assistance in going beyond addressing the awareness requirements of pollution mitigation in fishing harbours in order to facilitate comprehensive and rational fishery port management.

26. Indonesia emphasized the importance of Cleaner Fishery Harbours (CFH) in order to improve fisheries product quality and public health. Further, it was felt that, in addition to building awareness, it was necessary to provide adequate infrastructures and utilities to attain sustainability of such services.

27. Given the member countries' priorities in CFH, and keeping in mind the successful pilot efforts of the BOBP/IMO activity, all member countries identified the need to extend the learning from pilot efforts and to facilitate rational management of fishery harbours. In order to do so, it was recommended that BOBP should actively seek donor support to enable such efforts.

28. Member countries felt that they could benefit from the effort of other regional efforts addressing harbour environment issues, such as the Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas funded under the Global Environmental Facility (GEF) and executed by IMO. BOBP was requested to initiate a dialogue with such regional efforts to promote cooperation and sharing of resources and experiences with them.

29. Bangladesh considered pollution of fishery harbours to be a serious problem and requested that BOBP in its Third Phase should explore and implement a pilot activity in the country.

30. The approach to CFH should be looked at in the context of integrated Coastal Zone Management (CZM). To enable such efforts.. BOBP was requested to explore special purpose funds such as GEF. A more rigorous, comprehensive integrated management of the coastal areas and beyond is suggested.

## POST-HARVEST FISHERIES (ODA)

31. It was emphasized that the present arrangement for the involvement of three countries in the ODA-funded Post-Harvest Fisheries Project were founded on individual bilateral agreements. ODA's aid programme works on a government-to-government basis. If other countries in the Bay of Bengal wish to be involved, a similar individual agreement would be needed. While it is up to those countries to register their interest and commitment by approaching their respective ministries to submit official requests on a government-to-government basis, the Advisory Committee (AC) requested ODA to give sympathetic consideration to such requests.

32. The Committee re-emphasized the need for cooperation between the ODA Post-Harvest Fisheries project and the IMO Cleaner Fishery Harbours project, in view of the interrelation between post-harvest issues and harbour pollution. While recognizing the present constraints of undertaking post-harvest activities under the project in countries not covered by its mandate, it was recommended that assistance be considered on an *ad hoc* basis.

## OTHER MATTERS

33. Given the capacity and experience of SEAFDEC, particularly in training, BOBP countries who do not belong to SEAFDEC requested that it continues to extend its facilities to them.

34. As six of the seven countries of BOBP are members and participating countries of NACA, the NACA representative offered to cooperate and collaborate with BOBP in the areas related to the environment and to the sustainable development of mariculture, suggesting that such an approach would be cost-effective and would minimize duplication of effort. The Advisory Committee recommended that BOBP respond positively to the offer made by NACA.

## NEXT MEETING

35. The Committee gratefully acknowledged the invitation from the Government of Malaysia to host the 20th Meeting of the Advisory Committee, subject to government clearance.

## ADOPTION OF THE REPORT

36. The report was adopted on 17 January 1995.

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## List of Abbreviations

|         |  |
|---------|--|
| ACM     | Advisory Committee Meeting                               |
| CFH     | Cleaner Fishery Harbours                                 |
| CFM     | Coastal Fisheries Management                             |
| CZM     | Coastal Zone Management                                  |
| DANIDA  | Danish International Development Agency                  |
| GCC     | Government's Cash Contribution                           |
| GEF     | Global Environment Facility                              |
| HRD     | Human Resources Development                              |
| LFA     | Logical Framework Analysis                               |
| M & F   | Monitoring and Evaluation                                |
| NACA    | Network of Aquaculture Centres in Asia-Pacific           |
| NGO     | Non-Governmental Organization                            |
| NRI     | Natural Resources Institute                              |
| ODA     | Overseas Development Administration                      |
| PH      | Post-Harvest   |
| PHF     | Post-Harvest Fisheries                                   |
| PRA     | Participatory Rural Appraisal                            |
| RRA     | Rapid Rural Appraisal                                    |
| RES     | Rapid Ecological Survey                                  |
| PRODOC  | Project Document   |
| SEAFDEC | Southeast Asian Fisheries Development Centre             |
| SIFR    | Strategy for International Fisheries Research            |
| TA      | Technical Assistance                                     |
| TCDC    | Technical Cooperation Among Developing Countries         |
| TS      | Times Series   |
| UNCED   | United Nations Conference on Environment and Development |



## Appendix A

### LIST OF PARTICIPANTS

#### Bangladesh

Loqueman Ahmed  
Joint Chief (Planning)  
Ministry of Fisheries and Livestock  
Dhaka

Md. Harun-or-Rashid  
Deputy Director  
Marine Fisheries Department  
Chittagong

#### Denmark

Frits Jepsen  
Chief Adviser (India)  
Indo-Danish Fisheries Project  
Karnataka, India

#### FAO

U Wijkstrom  
Chief  
Fishery Development Planning Service  
Fisheries Department  
Rome

R Seneviratne  
Project Operations Officer, FIO  
Rome

P Martosubroto  
Fishery Resources Officer  
Fisheries Department  
Rome

D James  
Senior Fishery Research Adviser  
Fisheries Department  
Rome

Veravat Hongskul  
Regional Fisheries Officer / Secretary BOBC  
RAPA, FAOIUN  
Bangkok

#### IMO

K Blom  
Special Adviser to the Secretary-General  
International Maritime Organization  
London

#### India

V Sampath  
Asst. Commissioner (Fisheries)  
Ministry of Agriculture  
New Delhi

#### *indonesia*

A M Djoko Sugiarto  
Director of Programme  
Directorate-General of Fisheries  
Jakarta

|                      |  |
|----------------------|--|
| Sukotijo Adisukresno | Director of Resources<br>Directorate-General of Fisheries<br>Jakarta                   |
| S Muranto            | Director of Production<br>Directorate-General of Fisheries<br>Jakarta                  |
| T M DTambunan        | Director of Infrastructures<br>Directorate-General of Fisheries<br>Jakarta             |
| Fuad Cholik          | Director<br>Central Research Institute for Fisheries, AARD<br>Jakarta                  |
| Zainuddin Siregar    | Chief<br>Provincial Fisheries Service (North Sumatera)<br>Medan                        |
| Sihar Siregar        | Director<br>Mariculture Sub-Directorate<br>Directorate-General of Fisheries<br>Jakarta |
| Bambang Wahyudi      | Director<br>Statistics Sub-Directorate<br>Directorate-General of Fisheries<br>Jakarta  |

Malaysia

|                       |   |
|-----------------------|---|
| Lui Yean Pong         | Head, Resource Management Branch<br>Department of Fisheries<br>Kuala Lumpur |
| Ahmad Hazizi bin Aziz | Fisheries Officer<br>Department of Fisheries<br>Kuala Lumpur                |

Maldives

|                      |  |
|----------------------|--|
| Maizan Hassan Maniku | Director of Fisheries<br>Research & Development (MRS)<br>Ministry of Fisheries & Agriculture<br>Male |
| Adam Shakir          | Director of Administration<br>Ministry of Fisheries & Agriculture<br>Male                            |

Sri Lanka

|                |  |
|----------------|--|
| Anton Atapattu | Director<br>Department of Fisheries & Aquatic Resources Development<br>Colombo |
| H Gunawardena  | Chairman<br>National Aquatic Resources Agency<br>Colombo                       |

Thailand

|                   |  |
|-------------------|--|
| Somsak Chullasorn | Director<br>Phuket Marine Biological Centre<br>Phuket                            |
| Jate Pimoljinda   | Senior Fisheries Biologist<br>Andaman Sea Fisheries Development Centre<br>Phuket |

UK (ODA)

|               |   |
|---------------|---|
| I Clucas      | Senior Fish Technologist<br>Natural Resources Institute<br>U.K.                 |
| C Ford-Divers | Development Officer (India Desk)<br>Overseas Development Administration<br>U.K. |

NACA

|              |                                      |
|--------------|--------------------------------------|
| Foo Yan CHEN | Adviser, NACA<br>Bangkok             |
| P Bueno      | Information Officer, NACA<br>Bangkok |

SEAFDEC

|                        |   |
|------------------------|---|
| Kachornsak Wetchagarun | Head of the Training Division<br>Training Department<br>Bangkok |
|------------------------|---|

Secretariat

|                         |  |
|-------------------------|--|
| Kee-Chai CHONG          | Programme Coordinator                    |
| R Roy                   | Communications Adviser                   |
| DJ Nickerson (Ms)       | Coastal Zone Management Adviser          |
| D King                  | Post-Harvest Fisheries Adviser (ODA)     |
| R Ravikumar             | Harbour Environment Adviser (Consultant) |
| P David (Ms)            | Technical Assistant (RAPA)               |
| S Scurville (Ms)        | Senior Administrative Assistant          |
| Indra Gondowarsito (Ms) | Secretary (FAO HQ)                       |
| K Aotarayakul (Ms)      | Secretary (RAPA)                         |

## **Appendix B**

### **AGENDA**

16 January 1995

1. Inauguration
2. Election of Chairman
3. Adoption of Agenda
4. Annual Report 1994 and Workplan 1995 – Post-Harvest Fisheries (ODA)
5. Annual Report 1994 and Workplan 1995 – Cleaner Fishery Harbours (IMO/BOBP)
6. Annual Report 1994 – Coastal Fisheries Management (BOBP)

17 January 1995

7. Report on Situation Analysis of Coastal Fisheries in the Bay of Bengal
8. Targets/Workplan 1995 – Coastal Fisheries Management in the Bay of Bengal
9. Other Matters
10. Next Meeting
11. Adoption of Recommendations

## **Appendix C**

### **LIST OF DOCUMENTS**

1. List of participants
2. Agenda
3. List of documents
4. State of the Programme 1994
5. Annual Report 1994, ODA Post-Harvest Fisheries Project
6. Annual Report 1994 . IMO Cleaner Fishery Harbours Project
7. Annual Report 1994, FAO Coastal Fisheries Management Project
8. Summary Report of Situation Analysis Workshop
9. Project strategy, Monitoring and Evaluation for accountability, and Workplan 1995

## **Appendix D**

### **STATE OF THE PROGRAMME 1994**

#### ***GENERAL***

1. 1994 marked the termination of BOBP's mother project 'Smallscale Fisherfolk Communities', GCP/RAS/11 8/MUL, and the beginning of its new core project 'Coastal Fisheries Management in the Bay of Bengal, funded by DANIDA and the Government of Japan. For administrative reasons, the funds are operated separately under project codes GCP/RAS/1 50/DEN and GCPIRAS/1 5 1/JPN. The member countries continue to support the Information Service with cash contributions for the entire duration of the core project (GCP/RAS/1 17/MUL). The Post-Harvest Fisheries Project, funded by the ODA of the U.K., is in its third phase (1993-1997). The Cleaner Fishery Harbours Project, supported by the International Maritime Organization (IMO), is scheduled to complete its pilot project in the Maldives and Sri Lanka during 1995. The main features of these projects are briefly highlighted below, and their progress, status and future plans are elaborated in separate reports.

#### ***SMALLSCALE FISHERFOLK COMMUNITIES***

2. With the concurrence of the donor agencies (DANIDA and SIDA) of the project 'Smallscale Fisherfolk Communities' and endorsement by member countries at the 18th meeting of the Advisory Committee, a Subgroup of the Bay of Bengal Committee (BOBC) was established. Its terms of reference were to prepare project briefs to address the research needs in the region that would facilitate and enable the countries to better manage their coastal fisheries and coastal aquaculture. The Subgroup completed its work and will present its report at the 9th Session of the Bay of Bengal Committee.

#### ***COASTAL FISHERIES MANAGEMENT IN THE BAY OF BENGAL***

3. The core project for the third phase of BOBP titled 'Coastal Fisheries Management in the Bay of Bengal' commenced in May 1994. The Project became fully operational on 1 December 1994 with the appointment of the Programme Coordinator/Senior Fisheries Management Adviser, Communications Adviser, and Coastal Zone Management Adviser. This project is jointly funded by DANIDA and the Government of Japan and has an annual budget of US \$ 600,000 for five years. Project costs are shared equally by the donors: costs of professional staff, consultants and their duty travel are paid by DANIDA (GCP/RAS/150/DEN) and operating expenses, including supplies, equipment and fellowships, are met by the contribution from Japan (GCP/RAS/15 1/JPN). The core project is supported by the Information Service (GCP/RAS/1 17/MUL) funded by member countries (US \$ 90,000/year)

In striving for the overall objective of sustainable development in coastal communities, the core project seeks to increase the awareness and knowledge of the need, benefit and practices of fisheries management among the various stakeholders. Building awareness does not stop at just information dissemination, but goes on to translate the awareness into strong public opinion and behavioural change in the target clientele. To ensure sustainability of the management process, the activities of the Project are to be nationally executed by national implementing agencies. Besides playing a catalytic role, the Project will offer advisory services on specific management issues and will coordinate regional issues.

Unlike in the earlier two phases, when project implementation was carried out by separate and independent implementing units with counterpart support from host institutions, the present phase will assist in project implementation through the existing administrative and management structure of the government agencies, thereby ensuring that project-induced changes are not only internalized but institutionalized and, therefore, are sustainable.

The Information Service will use a multimedia approach to enable the core project and other projects under the BOBP umbrella to reach the various stakeholders. It will also be responsible for documentation and maintenance of the BOBP library.

### ***POST-HARVEST FISHERIES***

4. The third phase of the Post-Harvest Fisheries project, funded by the **ODA** of the U.K., commenced in 1993 with a budget of US \$ 2 million for five years and will work in Bangladesh, India and Sri Lanka. Its objectives are to enhance the incomes of the artisanal fishing communities and petty fish traders, increase the diversity of fish products marketed by these communities and strengthen the ability of NGOs to replicate and secure sustainable benefits from project activities. Its role is seen as a vital supplement to the Coastal Fisheries Management Project and to the IMO-supported Cleaner Fishery Harbours Project.

### ***CLEANER FISHERY HARBOURS***

5. The fourth in the series of pilot projects supported by IMO, to promote Cleaner Fishery Harbours in the region, commenced in May 1994 in Maldives and Sri Lanka **and** is expected to be completed by October 1995. The Project aims to promote awareness, among various stakeholders in fishery harbours/landing places, on pollution of the harbour environment, its mitigation and sanitary fish handling.

## **Appendix E**

### **POST-HARVEST FISHERIES PROJECT (ODA)**

#### **Annual Report 1994**

##### ***INTRODUCTION***

The Post-Harvest Fisheries Project, although separately funded by the Overseas Development Administration of the United Kingdom (ODA) and managed through the Natural Resources Institute (NRI), is closely co-ordinated with the Bay of Bengal Programme. The Project commenced in August 1987 and from September 1989 until April 1992 was in its second phase. The third phase commenced in April 1993 and is scheduled for implementation over a five-year period.

Three BOBP member countries are included in this Project: Bangladesh, India and Sri Lanka. The principal objectives of the Project are:

- To enhance the incomes of artisanal fishing communities and petty fish traders in India, Bangladesh and Sri Lanka
- To identify and develop the potential for increasing the diversity of fish products marketed by these communities
- To strengthen the ability of NGOs and fisherfolk associations to replicate and secure sustainable benefits from project activities

##### ***SUMMARY OF MAIN ACTIVITIES***

###### **REGIONAL**

A post-harvest overview study was completed by IMM Limited for the four eastern coastal states of India and in Sri Lanka. Later in 1994, a local consultant conducted a similar overview study of post-harvest fisheries in Bangladesh.

These overview studies provide an initial baseline of information concerning activities, institutions and constraints facing post-harvest fishery developments in the three target countries. It is a necessary stage of an ongoing process of providing a better understanding of this sector. As more information is gathered, these studies will be updated to provide a concise and detailed document that will be widely disseminated to policy-makers, governmental and non-governmental organizations, and private sector and international agencies to inform them of the problems and prospects within the post-harvest fisheries sector.

The training programme has continued to address the needs of partner NGOs and fishing communities and to increase their ability to take up initiatives in post-harvest fisheries. The focus is on building up the institutional capacity of NOOs and on raising the skills of the fishing communities in handling, processing and marketing, increasing their awareness of post-harvest issues and enabling the fisherfolk to assess what technical and social skills are appropriate and applicable to their own particular situation.

A project planning and management course was held in Kakinada in July for participants from NOOs based in Andhra Pradesh. It was conducted in collaboration with the College of Fisheries, Mangalore, and the Central Institute of Fisheries Technology, Kochi. It was administered through the British Council, Madras. One-day rural workshops have been targeted at raising the technical skills of the fisherfolk and building up the capacity of fisherfolk's groups to address both their economic and social development.



A local consultant was engaged to assess the training programme in August and, based on the outputs of that study, a longer term training strategy is currently being developed. One outcome will be the expansion of the programme and, as a result, an officer was recruited in November to deal with the training component, specifically to develop techniques for trainers at the community level and strengthen the training capacity of partner NGOs.

## INDIA

Activities have focused on the five main areas of four subprojects. The anchovy drying and marketing subproject has continued to work with the NGO Kanniyakumari District Fishermen's Sangams Federation (KDFSF) in upgrading the traditional drying and marketing techniques of anchovy by improving processing methods to optimise incomes.

The project has successfully implemented commercial scale production of dried anchovies, but has encountered difficulties in obtaining outside financing to ensure the future sustainability of this high-risk operation. This highlights the issue of credit for NGOs, which is difficult to obtain for this type of high-risk venture and whose terms are so restrictive that the financial resources of the NGO are at risk.

Considerable efforts were made in 1994 to obtain orders and market the products. The entire 1993 season procurement of 14.6 tonnes was sold by August. Sales were through a holding company and a network of distributors based in the Madras metropolitan area and traders in southern Tamil Nadu and Kerala. As a result, all the loans have been repaid and substantial efforts have been made to secure funding for the 1994 season. Two organisations have indicated that they would be prepared to make long-term loans.

In order to build on this success, the management of the project was appraised at the local level and several measures were put in place prior to the new anchovy season. A local manager was recruited through the South Indian Fishermen's Federation Sangam (SIFFS) and an advisory committee was formed. The membership of the committee reflects the organizations involved in this project, namely the KDFSF management and staff, ODA-PHFP Marketing Adviser, SIFFS and the local manager. This would ensure far greater participation in the project by local partners. The committee met for the first time in August and was agreed that autonomy would be given to the local manager in Nagercoil who would be supported and guided by the ODA-PFIFP office. The overall strategic decisions would, however, be left to the committee.

A new subproject was initiated when market studies indicated that traditional 'Maldivian' (*masmeen*) fish was in considerable demand in South India and Sri Lanka. Tuna is recognized as a large, underutilized resource in certain parts of India and adding value through village-based processing is seen as an appropriate development objective which would provide social and economic benefits that are positive. Studies on tuna landings and the existing marketing pattern in Kakinada, Andhra Pradesh, indicated that there was potential for locating and developing this activity in Kakinada.

Pilot production of *masmeen* was set up at the village level to resolve some of the technical difficulties of producing good quality *masmeen*. As this involves a smoking stage, the project was expanded to investigate the potential for producing and marketing smoked fish products, which are traditionally produced in this area.

However, concerns were raised with regard to the impact of the project and the scope for dissemination outside the project area. Although the technical aspects were resolved satisfactorily, a social and economic appraisal was carried out by the IMU in late 1994 to ensure that the wider issues were addressed.

This work has only just been completed, but the indications are that the project has limited future potential. The main reason is the impact that shrimp farming is having in this region; the infrastructure developed for the shrimp farms ensure these communities have access to supplies of fish and, therefore, the use of smoking for the preservation of fish/shrimps is likely to decline.

The use of ice subproject has concentrated on the development and promotion of simple low-cost insulated ice boxes on non-motorized craft, especially the kattumaram raft fishermen in southern Tamil Nadu and Andhra Pradesh.

The provision of ice at the beach level is becoming increasingly important and there are demands from fishing communities to increase the supply of ice to the villages. This demand has begun to stimulate interest in insulated ice boxes for storage of ice and also in marketing. The project is currently addressing this need by undertaking field trials with suitable insulated containers and monitoring their effectiveness prior to any large-scale implementation.

The development of permanent ice boxes (PIE), that could be used as ice retail points, is also being investigated in collaboration with other donors. However, the design, role and management of PIBs and the social and economic effects on different groups must be closely evaluated.

The Project has continued to work alongside DOF officials in the implementation of government schemes to supply insulated boxes to fishermen by facilitating inputs from various agencies. Towards the end of 1994, the DOF in Kakinada had agreed to supply and distribute ice boxes to fishermen through a local NGO (VJNSS), who will also be responsible for selecting the target fishermen. The DOF also agreed that the NGO would implement a scheme to manage the repayment of the ice boxes, although the DOF would still be responsible for the financial liability.

The NGO support/Government links subproject is aimed at building up the capacity of NGOs and Government officials to work more effectively at the community level in order that interventions can be effectively implemented. This approach is designed to develop the fishing communities socially and economically and address the problems and needs of these vulnerable groups, particularly in gaining access to credit, transportation to market and improved fish handling and processing.

Memoranda of Understandings (MOUs) were signed with the following NGOs in 1993 based on proposals that they submitted:

- Rural Organization for Social Work (ROSA), Tranquebar
- Coastal Poor Development Action Network (COPDANET), Madras
- Shantidan, Kanniyakumari District, Tamil Nadu
- Visakha Jilla Nava Nirinana Samiti (VJNNS), Andhra Pradesh

Several activities were identified and implemented. These MOUs have been reviewed and modified, with extensions being agreed on, based on the experiences of the previous year.

A transport van has been hired in Vaniyakudy, Kanniyakumari District, for a trial period, to provide fisherwomen easier access to the markets. The ODA-PHFP is providing funds for the hire charges and the women manage the operations. The trial has been successfully operating for four months and will continue until early next year (1995). The initial results are encouraging, although it appears that the hire system makes a profit during the off-season and a loss during the peak season. This is because during the off-season fisherwomen are prepared to pay to travel to distant markets as the margins are higher, whilst during the peak season they only travel to nearby markets. Shantidan is now collecting data on the final destinations of travellers, to work out an appropriate range of fares. It is also investigating the possibility of extending the use of the van for other purposes (*e.g.* social outings). This should ensure a greater revenue. So too, if its use is extended to *non-sangam* members. Overall, the operation is just breaking even and Shantidan is now considering purchasing its own van for use by the women's groups.

The four NGOs, with the active support of the Project, have been involved in identifying and accessing formal sources of credit and in setting up suitable credit schemes with the support of local financial institutions. COPDANET has established credit channels for four women's self-help groups in villages where it is working. VJNSS has mobilized savings for women's groups in several hamlets of the

Uppada region. Working capital assistance has been released, through the Indian Bank/National Bank for Agricultural Rural Development (NABARD), for villages working with ROSA, with the women saving under the self-help group scheme of NABARD. Delays have been experienced in getting funds released by banks because of regulations, administrative requirements, and differences between policy implementation at the senior and branch level. Project staff play a very supportive role in meetings with bank officials, explaining the credit needs and conditions of these fishing communities.

The Project has continued to support the effort by the Tamil Nadu Department of Fisheries and to coordinate the activities between the DOF and the State Social Welfare Board (SSWB) in providing aluminium fish containers for fisherwomen members of co-operative societies (FWCS). Approximately 3600 containers have been provided with financial assistance from the SSWB. In addition, 326 containers have been distributed at full cost among NOOs and 100 to members of the FWCS. This activity in Tamil Nadu is now being handled by the DOF and the Project is looking to extend the activity to Andhra Pradesh and Orissa.

Marketing support to fisherfolk communities and NGOs is vitally important, as most of the subprojects are related to the support and development of the marketing system. Therefore, a marketing economist from NRI visited the project in June to develop a strategy for future involvement of the Project in fish marketing.

In support of this strategy, three types of activities are being implemented through the Marketing Advisor. The first will be aimed at obtaining a better understanding of the structure and dynamics of the traditionally processed fisheries sector, This information will provide an invaluable resource base for providing information to local organizations and in assisting in project identification and appraisal. The second activity will focus on assisting local organizations in setting up and appraising marketing development projects, without any commitment to fund such projects. To support these two activities a third aspect of the strategy is to continue to provide guidance and support but also to expand this role through networking and collaborating with existing organizations on marketing issues. This will be formalized at a workshop in March 1995 which will provide the Project the opportunity to interact with other organizations and discuss marketing development in the fisheries sector. The newsletter planned by ODA-PHFP in early 1995 will also be utilized to highlight relevant marketing issues.

## BANGLADESH

In Bangladesh, the Project has continued to support NOOs working with coastal fishing communities and in understanding the specific problems of the set bagnet communities.

A short-term visit was undertaken by an NRI consultant to work with Dwip Unnayan Songtha (DUS), an NGO based on Hatiya Island. This support was for their programme of assistance to local fishing groups involved in the preservation and marketing of the *hilsa* catch. Further inputs to assist DUS staff have been recommended. These are, training in basic fish handling and preservation methods and in project management techniques.

Set bagnet fishery activities have focused on the specific problems faced by these communities. This fishery is a major contributor to the livelihood of the coastal communities, which are amongst the poorest sections of the population. Concern has also grown over the possible effects of government legislation to outlaw set bagnets which are seen as destructive and, therefore, a threat to the sustainability of the fishery resource. But set bagnet fishing communities are amongst the most marginalized in Bangladesh and care must be exercised in considering any changes in their livelihood.

A 13-month social and economic study was, therefore, initiated in May 1993 to investigate the social and economic conditions of three communities engaged in set bagnet fishing to ensure a thorough understanding of the dynamics of the communities: Delipara, a hamlet on the shores of North Selimpur village, Chittagong; Rakhainpara, a hamlet near Cox's Bazar, and Rahmatbazar, a hamlet on the southeast coast of Hatiya island. The study was undertaken to ensure that any interventions are socially

acceptable, economically viable and can contribute to a real improvement in the livelihood of the communities. A local socioeconomist field researcher was recruited to undertake the study based on guidelines that had previously been drawn up. Research was conducted simultaneously in each of the communities with reports being sent to Madras and UK for supervision and monitoring purposes.

Following from this study, a workshop was held in June 1994 to discuss the findings with the individual communities, Government, NGOs, and other organizations involved in coastal fisheries. Inputs from this workshop were incorporated into the final report, which will be translated into Bangla for dissemination purposes.

As a result of community-level discussions and the feedback from the workshop, a proposal was drawn up with the specific purpose of developing models for working with set bagnet communities. The first phase will focus on enhancing the capacity of development organizations to work with these communities and on community-level activities. The second phase will focus on the replication of models developed during the first phase.

The proposal also addresses the needs of highlighting and representing the interests of these communities through institution-building mechanisms. This project will commence at the beginning of 1995.

A series of training workshops have been conducted to strengthen the capacity of NGOs who work with smallscale fishing communities so that they can address the needs of these coastal fisherfolk communities and promote and support sustainable income-generating activities. After each training course a follow-up activity was conducted to assess the strengths and weaknesses of the participating NGOs in implementing the planned activities and to provide guidance and advice. The workshops and follow-ups provide NGO field staff an improved understanding of the social and economic problems and needs of coastal fisherfolk communities.

At the final workshop in June 1994, participants discussed and reviewed the various income-generation activities that had been drawn up using participatory techniques with the respective communities. Various interventions have taken place and include group mobilization by the communities and facilitation of health, education and sanitation services from government departments. As a continuation of the capacity-building exercise, seed capital has now been provided to the NGOs by the ODA-PHFP to support the income-generating activities and they will administer these funds following guidelines drawn up during the final workshop.

## **SRI LANKA**

The Project's activities in Sri Lanka have continued to support and address the problems of small-scale itinerant fish traders, in recognition of the important role played by them in fish marketing throughout the island. Attention has also been focused on improving the quality of fish available for human consumption.

The work with the cycle vendors has been consolidated and the collaborating organization, Innovations and Development Networks (IRED), has continued to support the cycle traders. The need was recognized for some form of organization **if the traders were to make any effective impact, through** collective bargaining power, on other aspects affecting the quality of their lives.

The approach was to focus on encouraging participation amongst the traders and to demonstrate the opportunities that can exist through group formation. During this exercise, the most active traders were identified and encouraged to form cluster groups according to the location of their residence. At these meetings, group leaders were chosen through a democratic and participatory process and a constitution was drawn up to determine the operational and managerial functioning of the organization. The assistance and active participation of the cycle traders was then sought by the leaders of each cluster group to discuss the merits and importance **of** forming a cooperative society.

A general meeting was held and an executive committee was formed, comprising of the active members of the cluster groups. The members of the executive committee were trained at a workshop on management and leadership issues. Subsequently, the leaders of these cluster groups were invited to a meeting with representatives of the Ministry of Fisheries in March 1993. The cycle traders then decided to form the Retail Fish Traders' Association of Sri Lanka in association with the Association of Sri Lankan Fisheries Cooperatives.

The next stage is to reduce the support to the cycle traders. This is necessary if this activity is to be sustainable, but care will have to be exercised in balancing the reduction of support with building up the capacity of the cycle traders to manage their own affairs over the long term. Further inputs are focusing on training in financial management and leadership skills, assisting traders to conduct a general awareness campaign to increase membership and undertaking a facilitation role to assist traders in accessing other sources of funds.

The work with the cycle traders will also be replicated in the Negombo area. It is geographically close to Colombo, has a large cycle trader population, and a baseline survey and needs assessment has already been carried out. The objective is to form an association within the next six months. Field staff based in Negombo will be trained in field activities, meetings will be held with the cycle traders, cluster groups will be formed, and cross-fertilization visits will take place between the traders from St John's Market, Colombo, and Negombo. Feedback from information obtained through monitoring, and the experiences already gained at St John's, will be used to develop and direct this work.

At the annual committee meeting in April 1994, the post-harvest overview was discussed with the Director of Fisheries who requested the Project to work on developing the capacity of cooperatives in the post-harvest sector. It was subsequently agreed that three areas would be investigated for carrying out activities with the cooperatives, namely the Negombo, Puttalam, and Hambantota Districts. Within these areas, a needs assessment survey will be carried out to identify post-harvest constraints and two organizations (cooperatives or other associations) will be selected from each area to work with this collaborative project. The idea is that these organizations will act as a model in order to test post-harvest interventions that can be replicated by other organizations.

Government policy towards cooperatives development has been monitored in view of the State and Presidential elections in the latter half of 1994. Although a new Minister of Fisheries was appointed in September, the policy to expand the remit of cooperatives and shift the emphasis from production towards 'value addition' and marketing remains unchanged. The onset of elections delayed the 'needs assessment' survey, but this is now in the process of being carried out.

The internal monitoring unit (IMU) was established in 1993 with the appointment of an economist and is responsible for carrying out in-depth appraisal of subprojects prior to implementation, followed by output and impact monitoring and reporting back to field staff and Project management. Emphasis is placed on identifying practical, cost-effective and timely means of verifying the impact of Project inputs, as well as assessing progress against set targets.

The IMU also has an important role in closely working with Project staff to select appropriate and measurable indicators in order to monitor the impact of Project activities. All Project staff attended a workshop on logical frameworks using the Team Up approach in March 1994. This was then used as the basis for revising the subproject logframes with the [IMU and Project staff, and establishing suitable quantitative and qualitative indicators that would reflect the nature of the activities.

The IMU has established a three-tier system of monitoring, and these are defined as follows:

- Census studies that determine the social and economic structure of target communities
- Baseline studies which focus directly on those groups involved in the project activities
- Perception studies which are sociologically orientated and focus on the perception of the individuals concerned as to how they feel they have benefited from project inputs.

the nature of the work that the IMU undertakes combines the role of monitoring with social and economic research on the target communities. As much of this work is sociological in nature, the Project has recently recruited a second person, with the required skills in this discipline, to work in the IMU.

The IMU has also been involved in assisting partner institutions in Bangladesh and Sri Lanka to undertake internal monitoring of projects. Although this is more desirable than conducting the monitoring directly by the IMU and avoids the problem of language difficulties, it should be viewed as a support service rather than as a direct involvement.

Further details of the subprojects and related activities follow:

## **REGIONAL**

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### ***Subproject: Overview Study (REG 1)***

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| OBJECTIVE | To provide a planning framework for development interventions within the post-harvest fisheries sector and to raise the profile of post-harvest issues in the Bay of Bengal region. |
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|-------------|--|
| STATUS 1993 | Study completed in Sri Lanka in December 1993. |
|-------------|--|

#### Targets 1994

*Conduct studies of the post-harvest overview situation in the four eastern coastal states of India: Tamil Nadu, Andhra Pradesh, Orissa and West Bengal.*

#### Achievements

Study completed by IMM Limited in early 1994 and report issued.

*Identification of a local consultant to undertake the overview study in Bangladesh.*

A study methodology developed and drawn up for adoption and implementation in Bangladesh. Local consultant recruited and the study undertaken in August. Draft report completed and sent for appraisal by project management.

#### Targets 1995

Information will continue to be collected from various institutions and organizations in all three countries and the existing data updated.

Publication and dissemination of information as a study document.

#### Future

As more information is collected, the overview studies will provide a detailed document on the post-harvest fisheries sector. It will have application to policy-makers, governmental and non-governmental organizations, and private sector and international agencies, informing them of the constraints and future options within the post-harvest sector.

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## ***Subproject: Training and support to NGOs (REG 2)***

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OBJECTIVE To strengthen the effectiveness of NOOs and intermediary development institutions in supporting the development of target groups.

To increase revenue of fishing communities through increasing skills in, and awareness of, post-harvest fishing aspects and through uptake of alternative income-generation schemes.

STATUS 1993

Staff of NGOs trained in project planning and management skills and in fish handling and marketing aspects. Target groups in fishing communities trained in basic fish handling, processing and preservation.

### Targets 1994

*Staff of NGOs trained in project planning and management skills and in fish handling, processing and marketing.*

*Target groups in fishing communities trained in basic fish handling, processing and marketing.*

*Target groups in fishing communities trained in community issues.*

*Review of training programme.*

### Achievements

One workshop on project planning and management completed at Kakinada in March for 12 NGO staff.

Twenty rural training courses in better fish handling and processing techniques have been conducted since November 1993 for 320 beneficiaries in Tamil Nadu.

Fifty training courses in community issues related to post-harvest practices conducted at the village level for 520 fisherwomen.

Training programme reviewed and future needs assessed by Indian consultant. Recommendations made for a training strategy.

### Assessment

The training activities have been developed as a result of dialogues with the participatory organization and fishing communities. These have now been reviewed and the feedback incorporated into the next phase. This will now emphasize the development of techniques for training 'trainers' at the community level and within the NGO structure.

### Targets 1995

Selection of suitable candidates to undergo training as 'trainers'.

Follow-up of training programme to assess progress.

Schedule of training activities to be drawn up for 1995/6.

### Future

Consolidation of the training programme with the eventual formation of a cadre of personnel from the government and non-government sectors who will be able to deliver appropriate training courses to ensure the long-term sustainability of this activity.

## INDIA

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### *Subproject : Anchovy Drying and Marketing (IND 3A)*

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| OBJECTIVE   | To assess the market potential for expanding the utilization of anchovies by identifying novel marketing strategies which enhance their value both as fresh fish and processed, value-added products.  |
| STATUS 1993 | Commercial operations commenced in August 1993 and 14.6 tonnes of dried anchovies were procured from the fishing communities. Difficulties were encountered in securing funding for the project and in marketing the products, although the development impact of the project has been high. A marketing adviser to KDFSFS and four extension officers have been funded by the Project to assist in the development and implementation of the anchovy drying project. An NRI consultant visited the project in late 1993 to advise on its further development. |

#### Targets 1994

*To increase marketing efforts to sell and promote dried anchovy products.*

*Repayment of loans given by various parties and alternative funding to be secured for next anchovy season (Aug-Dec '94).*

*Increase participation and maintain support for partner NGO.*

*Evaluation of the project.*

#### Achievements

Stock of anchovies sold by August to traders in Madras and elsewhere in southern India.

All loans repaid and a business, market and development plan prepared to support requests for funds to operate ADP on commercial basis. As a result, two organizations (Oxfam, SIFFS) have agreed to make loans to the project for the next fishing season.

Formation of an advisory committee that has representatives of all the parties involved in the project and is responsible for implementing decisions affecting the outcome of the project.

Visit by NRI consultant at the start of the 1994 fishing season to review the medium-term viability of the project.

#### Assessment

Significant progress has been made, although there are still problems in securing funds to provide sufficient working capital. Improvements in the procurement and marketing systems have been achieved with the recruitment of a competent local manager.

However, this season has seen the virtual collapse of the anchovy fishery along the Kanniyakumari coast. The situation is being monitored.

#### Targets 1995

Wider dissemination in the subregion of improved anchovy-drying methodology and supporting marketing infrastructure.

Gradual withdrawal of direct support to KDFSFS, as subproject development objectives are met, and assistance in securing of funds for operational needs at least for three years when ADP can be self-sustaining.

Expansion of project to include other partner organizations and other varieties of low-value fish that can be demonstrated to have a market potential.



### Future

The project has demonstrated that low-value fish can have their value increased through product development and that there is scope for marketing these products commercially, although securing working capital for such a venture is still problematic. However, if this can be overcome, then the project could become financially independent within the next few years.

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### ***Subproject: Tuna Processing (IND 3B)***

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OBJECTIVE To assess the market potential for expanding the utilization of tuna, which will enhance its value both as fresh fish and processed, value-added products.

STATUS 1993 The potential for introducing smoke-dried *masmeen* (or Maldivian fish) processing to women fish marketing groups in the South Arcot District of Tamil Nadu was investigated but economic viability was doubtful due to high price of fresh tuna and, hence, the proposal was dropped. However, investigations in Kakinada, Andhra Pradesh, indicated favourable scope for production of *masmeen* in the Uppada group of villages. The market potential was appraised.

#### Targets 1994

*Pilot-scale production implemented to resolve the technical difficulties in producing masmeen.*

*Social and economic appraisal undertaken prior to full-scale production taking place.*

#### Achievements

Good quality *masmeen* produced for test marketing.

Appraisal undertaken in late 1994, but initial indications are that the project has limited impact and the future viability is questionable.

#### Assessment

The future potential of this project is now doubtful, although further studies may be necessary.

### Future

Terminate project if it is deemed to be economically unviable and socially unacceptable.

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### ***Subproject : Use of ice infishing communities (IND 4)***

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OBJECTIVE To improve the quality and value of fish landed by artisanal fishing craft through the promotion of the use of ice on board and insulated boxes made from low-cost materials.

STATUS 1993 The focus has been towards developing and promoting simple low-cost insulated ice boxes on non-motorized craft, especially *kattumarams*, along the southern and eastern coasts of India.

Designs of simple ice boxes have been drawn up in collaboration with fisheries groups. Initially, these boxes were for storing prawns, but later discussions indicated that the fishermen were also interested in storing fish as well. Initial results have been promising, but field trials pointed out a weakness in the structural integrity which had been compromised in the process of trying to produce a cheap, lightweight box.

### Targets 1994

### Achievements

*Development of simple low-cost insulated ice boxes and implementation of field trials in Tamil Nadu and Andhra Pradesh.*

Designs and initial field trials completed. Feedback incorporated into improving design and structure by Tuticorin College of Fisheries.

A simple PUF ice box constructed in collaboration with the Andhra Pradesh Fisheries Development Cooperative and field-tested. Initial trials promising and further boxes to be constructed for a more in-depth study.

*Initiate other needs-based activities aimed at the development and promotion of simple icing systems.*

Discussions with NGOs and fishing communities were incorporated into a strategy paper that was drawn up to focus on initiatives for using ice and icing systems.

*Implementation of PIBs in fishing villages,*

Funding of PIBs being constructed by KDFSFS have been stopped due to administrative problems between KDFSFS and their funding source. The Project's role was to monitor the success of the use of PIBs. In view of these difficulties the actual funding and implementation of PIBs by the Project will have to be very carefully assessed.

### Assessment

The benefits of using ice is reflected in the demands of fishing communities for the provision of ice at the beach level. Ice is increasingly seen as an essential commodity by traders and fishermen alike. Future initiatives will be directed at enabling these groups to gain access to ice through the provision of permanent ice boxes and insulated ice boxes for storing ice and for marketing purposes. However, any initiatives must still demonstrate the technical and economic advantages of using ice and insulated boxes. The involvement of the community, however, must be stressed when considering PIBs.

### Targets 1995

Complete field trials of low-cost ice boxes for *kattumaram* raft fishermen in Tamil Nadu and Andhra Pradesh.

Continue to provide advice to NGOs and State DOFs on use of ice and insulated ice boxes for handling and storing of fish.

### Future

The demand for ice will stimulate demand for insulated ice boxes and the focus should be on manufacture of low-cost boxes appropriate to the fishing communities' needs by local suppliers rather than by industrial manufacturers.

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***Subproject: Shark Leather Development (IND 5)***

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OBJECTIVE To increase incomes of target groups through improved utilization of shark skin for export leather production.

STATUS 1993 The benefits for small-scale fishermen remain very doubtful and the project has restricted itself to providing informal advice and maintaining a watching brief on this subproject.

Target 1994

Achievements

Conclude subproject by July 1994

Project terminated.

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***Subproject: NGO Support and Government Links (IND 6)***

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OBJECTIVE To increase the incomes of women fish traders groups through better transport links to market, reduced losses, improved products, and better access to credit.

STATUS 1993 A study was carried out to investigate existing sources of credit, the strength and weaknesses of the credit systems available to fisherfolk from NGOs, private and government sectors, and assess the role of credit in the livelihood of this group.

A feasibility study was carried out to assess the options for introducing various transport systems that would improve access to markets by women fish traders.

The response to the fish containers has been very positive and there is a need for the project to continue to work with all the parties involved.

Targets 1994

Achievements

*To work with the DOF and act as a facilitator between the various women's groups, government organizations and manufacturers of the containers.*

The project has continued to act in a facilitation role between women's groups and the government sector to obtain the aluminium fish containers.

*Introduction of transport systems for improving access to market.*

The NGO Shantidan has introduced a van hire system to be operated and managed by the women's groups. It has been successfully operating for four months and will continue until early next year.

*To assist NGOs in identifying and accessing formal sources of credit, setting up suitable credit schemes with the support of local finance.*

Several NGOs have implemented various savings schemes over the past year.

An extension leaflet on credit and savings is being produced for the women's groups and DOF.

### Assessment

The response to the fish containers by the women traders has been very encouraging and, with the DOF in Tamil Nadu now undertaking this activity, the Project has withdrawn support.

The other programmes are slowly building up the institutional capacity of NOOs and a dialogue has taken place with NGOs to initiate mechanisms that will eventually lead to self-sustainability for themselves and the fishing communities.

### Targets 1995

Pilot trials with the fish containers are being undertaken by NGOs and the DOF in Andhra Pradesh to monitor the usage and potential impact of the introduction.

Prepare a document, on the types, sources and criteria for availing of credit through the informal and formal channels, for dissemination to NGOs and fishing communities.

Increased networking and support to existing networks by the project through participation at meetings, correspondence, and publication of a newsletter aimed specifically at the NGOs and communities.

### Future

Stronger grassroots level organizations in fishing communities and increased capabilities of NGOs are essential if the transfer and dissemination of proven technologies are to be achieved and sustainable benefits are to be secured from project activities.

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## ***Subproject      Development of Internal Marketing (IND 8)***

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### OBJECTIVE

To increase the incomes of the small-scale marketing sector through provision of advice on infrastructure improvements and marketing strategies.

### STATUS 1993

Fish prices were monitored in five centres of Tamil Nadu for inclusion in a fish marketing database. Although the information has proved to be a useful marketing and management tool, no institution has shown an interest in using the outputs or in taking on the database commercially.

Continuation of support to KDFS by funding of local staff to support the marketing of dried anchovies.

### Targets 1994

*To develop and formulate a strategy for supporting fish marketing in India.*

*Continuation of data-collection for fish marketing database until December 1994.*

*Implementation of a traditional products market information database.*

*Workshop on smallscale fish marketing in India.*

*Study to analyze the markets system, structure and performance of the traditional products sector*

*Marketing support continues to KDFS*

### Achievements

NM consultant commissioned to formulate a study in June 1994 and draw up a long-term strategy for implementation by Project.

Data collected from key markets and the information on prices and landing patterns has proved to be a useful management tool.

Software being developed for collating the information. Key markets identified in Tamil Nadu, Andhra Pradesh, and Orissa for collection of prices: More key markets may be included and will depend on the study of the market systems.

Concept note drawn up and details of workshop to be circulated with an operational date in February 1995.

Several organizations have been approached to submit proposals for undertaking this study which will commence early next year.

Local staff supported by project funds.

### Assessment

The principal strategy for marketing development support to local partners is based around the traditional processed product sector, although other viable marketing initiatives will also be considered. Effective marketing is essential if income-generating schemes in the post-harvest sector are to be successful. The entire strategy of marketing of small enterprises' products will be of crucial importance. The focus is towards institutional strengthening and building up the capacity of organizations to manage marketing of fish and fish products.. This will be addressed through provision of market studies at the local and national level, advice on marketing systems and provision of training in enterprise management.

### Targets 1995

To implement a study of the traditional fish products marketing system in Orissa and Andhra Pradesh.

To monitor the effectiveness and impact of the traditional products database.

To host a workshop involving all current and potential partners in order to discuss future projects and activities with reference to the project's marketing strategy.

### Future

More organizations being able to implement marketing projects without the assistance of the Project.

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*Subproject Itinerant Fish Traders (SRL 14)*

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OBJECTIVE To increase the revenue of small-scale fish traders through reduction of losses, improved handling and accessing available credit.

STATUS 1993 Continued support to IRED in the area of fish marketing and particularly in the role played by cycle vendors in fish marketing. In 1993, the cycle traders expressed a desire to form an organization to strengthen their capacity to manage their own affairs and to negotiate with the Government to improve their status. Subsequently a cooperative was formed under the constitution of the Fisheries Cooperative Societies.

Targets 1994

Achievements

*Implementation of savings and loan schemes.*

Long-term loan scheme which has resulted in three traders changing their mode of transport from a bicycle to a motorbike. Other traders have used loans to settle outstanding debts and purchase tools of the trade.

*Monitoring of progress of cooperative society after first year of operation.*

A mobile loan scheme has enabled traders to borrow money on a daily basis for purchase of fish. Loans have to be settled within 14 days. Under this scheme, 84 loans were granted within a five-month period.

Only about ten per cent of the traders have become members. This is attributed to several factors: no office space for the society, which causes problems during bad weather; lack of confidence and understanding of the society; lack of interaction between the manager of the society and traders due to traders operating throughout Colombo. However, the long-term and mobile loan schemes were successful, with recovery of loans satisfactory.

*Investigate the possibility of construction of ice boxes being undertaken by local artisans or by the traders.*

Local artisan engaged to produce a box but the finished product was not very acceptable. However, the introduction of loan schemes through the society may encourage traders to purchase boxes from the manufacturer as a tool of the trade. This is currently being monitored.

Assessment

This activity has concentrated on understanding the operational characteristics of itinerant fish traders whilst introducing a new technology in the form of an insulated box for cycle traders. A significant output has been the formation of a fish marketing traders' association with official recognition from the Ministry of Fisheries. Information is still required on the smallscale marketing sector, which is responsible for supplying the more traditional markets, if effective post-harvest intentions are to succeed.

### Targets 1995

Undertake training of traders in financial management and leadership skills.

Facilitation role to help the cycle traders access other sources of funds.

Assisting the traders to promote the benefits of the association and launch a general awareness campaign.

Replication of project activities in Negombo District, working with cycle traders.

### Future

To enable the cycle traders at St John's Market, Colombo, to take a more active role in managing their own affairs, with the long-term goal of self-sustainability. The activities in Negombo to draw upon these experiences and replicate the success with the cycle traders operating in that area.

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## ***Subproject : cooperative Development in Post-Harvest Fisheries***

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OBJECTIVE To support and build up the capacity of cooperatives in managing fish marketing activities through institutional strengthening and provision of advice on marketing strategies.

STATUS 1993 Non-operational

### Targets 1994

### Achievements

*Identification of suitable areas in which to work.*

Three areas have been identified by the DOF in Hambantota, Negombo, and Puttalam Districts.

*Selection of suitable cooperatives through which to work,*

A needs assessment survey has to be carried out to appraise the institutional capabilities of the cooperatives and the fish marketing system that operates. Each cooperative will act as a model, so the ability to act as a nodal agency is also important.

### Assessment

Fishing cooperatives have tended to focus on the production and supply side of fisheries and the Sri Lankan Government has recognized this by recently introducing a policy to assist cooperatives in playing a greater role in fish marketing and in enhancing the value of both fresh fish and fish products.

The first stage is to initiate an in-depth appraisal of the actual demands of the cooperatives in the post-harvest sector and to ensure that any interventions are socially and economically acceptable.

### Future

This will depend upon the appraisal, but if that is positive the next stage is to draw up a programme of needs-based activities at the pilot stage. Realistic targets will be set for 1995 once this is completed.

## **BANGLADESH**

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***Subproject Use of Ice and Added Value to Fisheries Products  
by Artisanal Communities (BGD 10)***

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**OBJECTIVE** To increase the incomes of artisanal communities through loss-reduction and addition of value.

**STATUS 1993** A programme of workshops commenced in May 1993, funded by the ODA Post-Harvest Fisheries Project, to enable local NGOs working with coastal communities to build up their capacity through training and institutional strengthening measures so that they could promote sustainable income-enhancement in smallscale fishing communities.

### Targets 1994

*Continue support to NGOs involved in working with coastal communities,*

### Achievements

A 14-month training programme implemented from May 1993 to build up the capacity of selected NGOs in the identification and preparation of proposals for improving the socioeconomic conditions of fisherfolk communities.

Presentation of proposals by NGOs identifying income-generating activities drawn up in collaboration with the fishing communities, using guidelines laid down by ODA-PHFP. Funds released in November 1994 for implementing income-generating activities

### Assessment

The prime objective is to increase the capacity of NGOs as development agents within these communities. The NGOs involved in the workshops were encouraged to draw up cost-effective projects for income-generating activities using techniques learnt through participating in the workshops. The proposals drawn up reflect the fact that addressing the needs of these communities cannot be done through a monosectoral approach, as post-harvest issues are intrinsically linked to social factors, credit availability, and access to markets. However, the key criterion is that the proposals are credible within the target group of fishing communities.

### Targets 1995

Implementation, management, and regular monitoring of income-generating activities by NGOs.

### Future

To enhance the capacity of NGOs working with coastal communities to mobilize and organize fisherfolk communities to undertake activities for the improvement of their socioeconomic conditions.



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***Subproject : Set Bagnet Fisheries (BGD 11)***

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OBJECTIVE To investigate the social and economic conditions of the set bagnet community in order to ensure that technical interventions are socially acceptable and economically viable in the face of proposed legislative changes in fishing practices.

STATUS 1993 Visit by an NRI social anthropologist to initiate a 14-month study by a local consultant, who could investigate the long-term social and economic activities related to set bagnet fisheries. Identification of target areas and a methodology developed.

Targets 1994

*Study to investigate the long-term social and economic activities related to the set bagnet fishery:*

*Results of study incorporated into a project proposal for further inputs over four years.*

*Recruitment of two local staff to manage the project.*

Achievements

Study completed in June and a workshop held to disseminate the findings to government and non-government officials and representatives of donors.

Project proposal accepted by the programme director for implementation in January 1995.

One staff member already in place and another to be recruited to start in January 1995.

Assessments

Previous discussions with NGOs working with set bagnet communities reinforced the view that effective interventions would require a thorough knowledge of the social and economic aspects of these marginalized communities. A study was initiated in 1993. The proposal that was drawn up was a result of the 14-month microlevel social and economic study of these communities. The aim is to address the specific needs and constraints of the set bagnet communities. This would be achieved by enhancing the skills base of development agencies and Government to work with these communities and address, in particular, post-harvest fisheries concerns and the linked issues of credit and marketing.

Targets 1995

Develop and implement community- and institutional-level training courses in basic fish handling, processing and marketing.

Address the needs of access to credit and issues of marketing within the communities.

Investigate alternative income-generating activities the fisherfolk communities could develop.

Future

Any viable activities identified following the study will depend on establishing positive support from the communities.

## **Appendix F**

### **CLEANER FISHERY HARBOURS (IMO)**

#### **Annual Report 1994**

##### ***INTRODUCTION***

The third in the series of pilot projects supported by the International Maritime Organization (IMO) to promote Cleaner Fishery Harbours commenced in Sri Lanka and the Maldives in 1994. While the clearance from the Ministry of Fisheries and Aquatic Resources, Sri Lanka, was received in January 1994, it was slightly delayed in the Maldives where official clearance, from the Ministry of Finance and Treasury, Department of External Resources, was obtained only in early May 1994. Nevertheless, preparatory work in both countries commenced immediately prior to the 18th Meeting of the Advisory Committee, held in Male in April 1995. The total budget for the Project is US \$ 90,000 and the project is expected to complete its activities by mid 1995.

##### ***PROJECT STRATEGY AND IMPLEMENTATION***

The Project is designed to promote participatory pollution mitigation by the various stakeholders connected with the operations in a fishery harbour. The immediate objective is to create an awareness among them of the need for a clean harbour environment and sanitary handling of fish landed at the harbour. To achieve this, the following activities are proposed:

- A study to collect baseline information on the selected fishery harbour with particular reference to types, sources and causes for pollution
- A study to understand the perceptions of the various stakeholders
- A consultative process involving the various stakeholders, including harbour administrators, the municipality and NGOs, to evolve a strategy for awareness-building and to determine the mechanism for implementation
- Design of appropriate mass-media material and group activities
- Implementation of the awareness campaign

All project activities are coordinated by nominated national agencies with support from BOBP. The National Institute of Fisheries Training (NIFT) in Sri Lanka, who are responsible for Fisheries Extension, and the Marine Research Section (MRS) of the Ministry of Fisheries and Agriculture in the Maldives were the nominated agencies.

##### ***PROGRESS DURING 1994***

###### **SRI LANKA**

The site originally proposed for project activities was changed from the Fishery Harbour at Galle to the one at Negombo at the request of the Hon. Minister and the Secretary, as Negombo is seen as a major fishing centre and in view of other Ministry inputs under other fishery sector projects.

The National Aquatic Resources Agency (NARA) was contracted to conduct a baseline study to collect information on the activities in the fishery harbour, the types and levels of pollution, the sources of pollution and the existing facilities for reception and disposal of wastes. The study was completed and a report made.

NIFT, with the assistance of the District Fishery Extension Office, staff of the training centre at Negombo and the cooperative, conducted a study on the several focus groups of harbour-users to assess their knowledge, attitude and practice with reference to mitigating pollution. The report is under preparation.

## **MALDIYES**

Preparatory work for implementating the awareness campaign commenced with a preliminary meeting organized by MRS, with the various ministries and government agencies directly involved with the management of the Male harbour, in order to apportion the different inputs necessary for achieving a cleaner harbour environment. The main groups and their tasks were

- MRS of the Ministry of Fisheries and Agriculture to address the needs of the Male Fish Market and evolve appropriate water quality standards for cleaning fish
- Maldives Water and Sanitation Authority to improve harbour water quality
- Ministry of Construction and Public Works for maintenance of harbour facilities
- Ministry of Transport and Communication to deal with vessels using the harbour
- Ministry of Information and Culture to assist in mass media campaigns
- Male Municipality to improve reception/disposal of garbage

To augment this integrated approach, MRS, the national implementing agency, has entered into an understanding with a local NGO – Volunteers for Social Harmony and Improvement (VESHI) – which will actively involve itself in the awareness campaign.

The study to determine the perception of the stakeholders is scheduled for early 1995. However, Clean-up Day, September 17, 1994, was used as an appropriate occasion to kick off the campaign. MRS and VESHI organized a clean-up operation in Male harbour to remove floating and submerged garbage: they distributed leaflets to harbour-users highlighting the seriousness of harbour pollution, pollution hazards to public health and the high cost of maintaining man-made harbours, and they erected billboards conveying the cleaner harbour message.

### Targets 1995

- Using the information from the perception studies in Sri Lanka and Maldives to design and produce appropriate communication material.
- Mass-media campaigns.
- National workshops to review the work done, and evolve guidelines for promoting cleaner fishery harbours at other centres.

## Appendix G

### AWARENESS-BUILDING TO PROMOTE CLEANER FISHERY HARBOURS IN INDONESIA

#### Project Brief

#### *GENESIS*

Implementation by BOBP during 1988-89 of the IMO-supported pilot project to upgrade reception facilities for oily waste and garbage at Vishakhapatnam Fishery Harbour, India, generated interest in member countries to address the problem of fishing port pollution and its effect on fish quality. A regional needs analysis was undertaken to obtain baseline information on major fishery harbours in BOBP member countries. The two main reasons for insanitary port conditions were found to be:

- Inadequate reception/disposal facilities for solid and liquid wastes
- Lack of awareness among harbour-users on the need to maintain a clean fishery has pur

The immediate objective, therefore, was to change the perception of harbour-users from apathy to participatory pollution mitigation. A pilot project in Phuket, Thailand, during 1992-93 substantiated the fact that awareness-building and eliciting community support were the key elements to catalyze action, by harbour authorities as well as the users, to address this serious problem. The increasing demand for a better product in domestic and export markets, and growing concern among consumers for sanitary handling of fish, are the reasons for now viewing pollution mitigation as an investment and not a cost.

The third in the series of pilot projects to improve fishery harbours is presently underway in Sri Lanka and Maldives and the 18th meeting of the BOBP Advisory Committee recommended that a project proposal, to support a similar pilot project in Indonesia, be prepared for IMO's consideration.

The Directorate-General of Fisheries, Indonesia, through its Directorate of Fisheries Infrastructure, has requested that the fishery harbour at Belawan in North Sumatera be considered for such a project. A brief description of the project idea follows.

#### *PRESENT SITUATION*

Belawan is a major commercial and fishery harbour in North Sumatera, Indonesia. It is situated on the Malacca Straits. It serves a fleet of nearly 300 fishing vessels, including purse seiners, gillnetters and other boats that fish the offshore waters, besides smaller inshore boats. The total fish landing in 1993 was approximately 20,000 t. Besides the government-operated facilities, several private fishing companies (processors) operate their own jetties. The harbour complex includes several fishmeal plants, five ice plants, workshops and fuel oil storage facilities. Fresh water is pumped from deep borewells and stored in overhead tanks. Berthing charges, based on vessel size, and licences and taxes on trade provide the revenue for the port. Municipal services for clearing garbage are provided by the local government. However, inadequate reception facilities for solid and liquid wastes result in pollution of the harbour waters. The problem is exacerbated by domestic waste, sewage and industrial effluents from housing and waterfront industries.

## ***INSTITUTIONAL FRAMEWORK***

The fishing port of Belawan is managed by PPN (Pelabuhan Perikanan Nusantara) Belawan under the overall supervision of the **DG**, Fisheries. Interaction with the commercial harbour is limited to periodic review meetings with the Port Administrator and licensing of fishing vessels. Maintenance and upkeep of the fishing port is the responsibility of the subsection for facilities maintenance, who subcontract the collection and disposal of garbage to the local municipality. Port rules and regulations at present deal only with matters relating to port dues and security.

## ***PROJECT JUSTIFICATION***

Lack of enforceable regulations to control pollution of the harbour environment, exacerbated by inadequate reception and disposal facilities for garbage, oily waste and liquid wastes from processing plants, has resulted in increasing pollution in proportion to the increasing fish trade. The revenue generated by the port is inadequate to sustain harbour maintenance. As is often the case, the emphasis is on improving facilities that can generate more revenue and not on controlling pollution, which is viewed as a cost.

In such a scenario, community support is vital. However, improvements cannot take place without changes in attitude, perception and behaviour. An awareness campaign to provide key information to the target group (harbour-users, administrators and consumers) and training of harbour personnel to implement the campaign are the first steps to promoting the cleanliness ethic.

## ***TARGET BENEFICIARIES***

The main beneficiaries of cleaner fishery harbours will be fish consumers, users of the harbour and harbour administrators.

## ***EXPECTED END OF PROJECT SITUATION***

Successful completion of the awareness campaign in one year will result in

- Initiation of a community-based approach to pollution mitigation
- Guidelines for harbour administrators for use in other locations
- Development of multimedia communication material

## ***PROJECT STRATEGY AND IMPLEMENTATION***

Through a consultative process, involving harbour administrators, fish traders' associations, the dockworkers' association, village elders and the municipality, evolve a plan of action for participatory pollution mitigation.

- Develop strategies to implement the awareness campaign.
- Produce communication material for different focus groups.
- Implement the awareness campaign.
- Conduct periodic workshops to exchange information and promote cooperation with nonsectoral agencies to address the problems.

All activities of the project will be implemented by the PPN under close supervision by the Directorate-General of Fisheries. The Project will be supported by the International Maritime Organization (IMO) through the Bay of Bengal Programme. Local associations of stakeholders and NGOs involved with community development will be closely associated with the delivery of Project outputs.

## ***OUTPUTS***

- Multimedia awareness campaign and development of communication material
- Co-option of local organization channels to conduct the campaign
- Local and national workshops to steer the project

## ***INPUTS***

IMO shall support the cost of the project (approximately US\$ 100,000), covering

- Project co-ordination and travel
- Studies to determine most appropriate awareness campaign
- Development and production of multimedia material
- Support awareness campaign implementation
- Supplementary reception facilities for garbage and oily wastes

DGF, Indonesia shall provide national counterpart staff to implement the Project and facilitate coordination with other nonsectoral agencies, NGOs and local associations. They shall upgrade shoreside facilities to minimize harbour pollution and undertake required inputs for proper disposal of solid and liquid wastes.

## ***PROJECT MONITORING, REPORTING AND EVALUATION***

The Project shall be monitored jointly by the national counterpart agency and BOBP. Quarterly progress reports shall be prepared by the project for the DOF and IMO/BOBP.

## ***PROJECT DURATION***

The project is expected to be completed in one year.

## **Appendix H**

### **SMALL SCALE FISHERFOLK COMMUNITIES IN THE BAY OF BENGAL**

#### **COASTAL FISHERIES MANAGEMENT IN THE BAY OF BENGAL INFORMATION SERVICE**

##### **Annual Report 1994**

### ***INTRODUCTION***

This report briefly describes the last activity of the Bay of Bengal Programme (BOBP) mother project, 'Small scale Fisherfolk Communities in the Bay of Bengal', which was to support a BOBC Subgroup to evolve project briefs outlining the research needs of member countries to better manage their coastal fisheries and coastal aquaculture, the initiation of the new core project 'Coastal Fisheries Management in the Bay of Bengal', and the activities of the Information Service during 1994.

### ***SMALL SCALE FISHERFOLK COMMUNITIES (GCP/RAS/118/MUL)***

Formation of the **BOBC Subgroup** and its terms of references were endorsed at the 18th Meeting of the Advisory Committee in April 1994. Two members each from Malaysia and India were nominated as the subgroup members to represent the interest of Southeast Asian and South Asian member countries, respectively. The BOBP functioned as the Secretariat for this subgroup and the Senior Extension Officer coordinated the country appraisals and reporting. The detailed report of the subgroup is to be presented to the IOFC Committee for the Development and Management of Fisheries in the Bay of Bengal (BOBC) at its 9th session during January 18-20, 1995, at Jakarta.

### ***COASTAL FISHERIES MANAGEMENT IN THE BAY OF BENGAL (GCP/RAS/150/DEN and GCP/RAS/151/JPN)***

The new core project of the BOBP, 'Coastal Fisheries Management in the Bay of Bengal', was, for administrative reasons, initiated in May 1994. The Advisory Committee of the BOBP at its 18th Meeting in the Maldives recommended that the operational start of the Project should coincide with the entry on duty of the international staff of the Project and, consequently, the Project became fully operational in December 1994.

In anticipation of the operational start of the Project, an officer-in-charge was appointed to initiate preparatory activities in member countries. During 1994, each member country nominated its National Implementing Agency and the National Coordinator and undertook the preparation of a Situation Analysis of their coastal fisheries. This helped them to think through fishery management-related problems and identify areas and problems which could be addressed, with catalytic assistance from the BOBP during its third phase.

The BOBP provided the member countries with guidelines and an annotated checklist of topics which could be considered in the preparation of the Situation Analysis. This was primarily done to facilitate

a certain uniformity in the Situation Analysis. The Situation Analysis of each country identified high priority problems and provided information about the problems. Representatives of member countries met with project staff at a two-day regional workshop in Madras, India, to discuss the situation analysis and to chart the way ahead.

A summary report of the outcome is presented as a separate document.

The Situation Analysis by each member country was discussed at a Workshop on BOBP Third Phase Implementation Strategies held at FAO Headquarters, Rome, Italy, on December 8, 1994. The *aide memoire* summarizing the results of this workshop is available with the BOBP secretariat.

## **INFORMATION SERVICE (GCP/RAS/117/MUL)**

The Information Service completed the publication of all remaining reports and working papers on the projects and subprojects completed during the second phase of the BOBP. (See Table 4.)

A pocket diary for 1995 was produced to mark the beginning of the third phase.

### **PROJECT INPUTS AND THEIR UTILIZATION**

- |    |                 |                                    |
|----|-----------------|------------------------------------|
| 1. | GCP/RAS/118/MUL | Small-scale Fisherfolk Communities |
|    | Donors          | DANIDA, SIDA                       |
|    | Budget          | US\$ 11,080,833 from 1987 to 1994  |

Expenditure till the end of 1993 was US \$ 10,554,899. The balance was allotted to complete all reporting, conduct of the 18th Meeting of the Advisory Committee, support of the work of the BOBC subgroup and to permit its members to present their report at the 9th Session of the BOBC in 1995. Table 1 gives details of the budget and expenditure. The post of Programme Director was discontinued from May 1994. The Senior Extension Adviser coordinated the work of the Subgroup from May to December 1994.

- |    |                 |   |                        |
|----|-----------------|---|------------------------|
| 2. | GCP/RAS/117/MUL | : | Information Service    |
|    | Donors          | : | Member countries       |
|    | Budget          |   | US \$ 100,000 per year |

During 1994, the Information Service completed the publication of all reports and working papers on the subprojects undertaken by GCP/RAS/118/MUL, the SWEDMAR project on the Impact of Environment on Fisheries of Bay of Bengal, the UNDP project on Biosocioeconomics of Small-Scale Fisheries, and the IMO Cleaner Fishery Harbours project. The Information Officer completed his assignment in September 1994 and all support staff were terminated by June 1994. Table 2 gives details of budget and expenditure.

- |    |                                    |   |                                   |
|----|------------------------------------|---|-----------------------------------|
| 3. | GCP/RAS/150/DEN<br>GCP/RAS/151/JPN | : | Coastal Fisheries Management      |
|    | Donors                             |   | DANIDA, Government of Japan       |
|    | Budget                             | : | US \$ 3,000,000 from 1994 to 1999 |

Pending the appointment of the Senior Fisheries Management Adviser (also the Programme Coordinator) and the Communication Adviser, an officer-in-charge was appointed *ad interim* from May 1994. The Programme Coordinator joined the project in December 1994. To supplement the



Project in activities concerned with Coastal Zone Management, the Environmental Protection Agency (EPA) of the US has agreed to fund the cost of a Coastal Zone Management Adviser who also joined the Project in December 1994 for an initial period of one year.

Due to delays in recruitment of Project staff, Project activity was limited to the preparation of a Situation Analysis (by nominated national implementation institutions) of coastal fisheries needing management intervention and the conduct of a regional workshop to discuss the findings. The Project's expenditure is reflected in Table 3.

The negative expenditure shown for general operating expenses and equipment is due to the contribution from ODA and other projects towards administrative costs, and proceeds from the sale of surplus equipment transferred to the Project inventory. Replacement and purchase of new equipment will be made in due course.

Tables 4, 5 and 6 give details of BOBP publications in 1994 (post- 18th AC Meeting), professional staff and consultants, and support staff.

**Table 1**  
**GCP/RAS/118IMUL - Budget and Expenditure (US \$)**

| <i>Code</i> | <i>Object of Exp.</i> | <i>Total<br/>1987-94</i> | <i>Expenditure<br/>1987-93</i> | <i>Est. Exp.<br/>1994</i> | <i>Balance<br/>1995</i> |
|-------------|-----------------------|--------------------------|--------------------------------|---------------------------|-------------------------|
| 10          | Personnel             | 5,356,751                | 5,156,750                      | 156,000                   |                         |
| 20          | Duty Travel           | 1,062,963                | 1,022,963                      | 35,000                    |                         |
| 30          | Contracts             | 1,042,360                | 982,360                        | 42,000                    |                         |
| 40          | Gen. Op.Exp.          | 454,896                  | 439,896                        | 25,000                    |                         |
| 50          | Materials             | 632,553                  | 622,553                        | 4,200                     |                         |
| 60          | Equipment             | 514,755                  | 434,755                        | 80,000                    |                         |
| 80          | Training/Fellowship   | 741,931                  | 681,503                        | 25,000                    |                         |
|             | <b>Subtotal</b>       | <b>9,806,209</b>         | <b>9,340,780</b>               | <b>367,200</b>            |                         |
| 90          | Servicing cost        | 1,274,624                | 1,214,119                      | 47,736                    |                         |
|             | <b>Grand Total</b>    | <b>11,080,833</b>        | <b>10,554,899</b>              | <b>414,936</b>            | <b>110,998</b>          |

**Table 2**  
**GCP/RAS/117/MUL - Budget and Expenditure (US \$)**

| <i>Code</i> | <i>Object of Exp.</i> | <i>Deposits<br/>1987-94<br/>and<br/>Interest</i> | <i>Expenditure<br/>1987-93</i> | <i>Est. Exp.<br/>1994</i> | <i>Balance<br/>1995</i> |
|-------------|-----------------------|--|--------------------------------|---------------------------|-------------------------|
| 10          | Personnel             |  | 390,953                        | 24,352                    |                         |
| 20          | Duty Travel           |  | 4,305                          | 1,107                     |                         |
| 30          | Contracts             |  | 24,771                         | 2,884                     |                         |
| 40          | Gen.Op.Exp.           |  | 12,588                         | 216                       |                         |
| <b>50</b>   | <b>Material</b>       |  | <b>8,078</b>                   | <b>160</b>                |                         |
|             | <b>Subtotal</b>       |  | <b>440,695</b>                 | <b>28,719</b>             |                         |
| 90          | Servicing cost        |  | 22,035                         | 1,436                     |                         |
|             | <b>Grand Total</b>    | <b>*636,826</b>                                  | <b>462,730</b>                 | <b>30,155</b>             | <b>143,941</b>          |

\* 1994 contribution due from Indonesia, Maldives, Sri Lanka and Thailand. Prior arrears from Bangladesh and Sri Lanka not as yet received.

**Table 3**  
**GCP/RAS/151/JPN - Budget and Expenditure (US \$)**

| <i>Code</i> | <i>Object of Exp.</i> | <i>Budget<br/>1994-98</i> | <i>Est. Exp.<br/>1994</i> | <i>Balance<br/>1995</i> |
|-------------|-----------------------|---------------------------|---------------------------|-------------------------|
| 10          | Personnel             | 346,000                   | 5,583                     |                         |
| 30          | Contracts             | 210,000                   | ml                        |                         |
| 40          | Gen.Op. Exp.          | 161,435                   | (12,700)                  |                         |
| 50          | Supplies              | 150,000                   | 1,450                     |                         |
| 60          | Equipment             | 100,000                   | (13,000)                  |                         |
| 80          | Fellowship/Training   | 360,000                   | 10,500                    |                         |
|             | <b>Subtotal</b>       | <b>1,327,435</b>          | <b>(8,167)</b>            |                         |
| 90          | Servicing cost        | 172,565                   | 1,062                     |                         |
|             | <b>Grand Total</b>    | <b>1,500,000</b>          | <b>(7,105)</b>            | <b>1,507,105</b>        |

**GCP/RAS/150/DEN - Budget and Expenditure (US \$)**

| <i>Code</i> | <i>Object of Exp.</i> | <i>Budget<br/>1994-99</i> | <i>Est. Exp<br/>1994</i> | <i>Balance<br/>1995</i> |
|-------------|-----------------------|---------------------------|--------------------------|-------------------------|
| 10          | Personnel             | 1,079,928                 | 44,832                   |                         |
| 20          | Duty Travel           | 162,000                   | 4,019                    |                         |
|             | <b>Subtotal</b>       | <b>1,241,928</b>          | <b>48,851</b>            |                         |
| 90          | Servicing cost        | 161,450                   | 6,350                    |                         |
|             | Unspecified           |                           | 96,622                   |                         |
|             | <b>Grand Total</b>    | <b>1,500,000</b>          | <b>55,201</b>            | <b>1,444,799</b>        |

**Table 4**  
**LIST OF BOBP PUBLICATIONS ISSUED IN 1994**

Reports

- BOBP/REP/62 *Fisheries Extension in the Maldives.*
- BOBP/REP/64 *Chandi Boat Motorization Projects and Their Impacts.*
- BOBP/REP/65 *Learning vs Doing in Bangladesh: Extension Systems Development for Coastal and Estuarine Fisherfolk Communities.*
- BOBP/REP/66 *Promotion of Small-Scale Shrimp and Prawn Hatcheries in India and Bangladesh.*
- BOBP/REP/67 *The Impact of the Environment on the Fisheries of the Bay of Bengal.*
- BOBP/REP/68 *Fisheries Extension Services: Learnings from a Project in Ranong, Thailand.*
- BOBP/REP/69 *Report of the Eighteenth Meeting of the Advisory Committee.*

**Working papers**

- BOBP/WP/92 *Cage Nursery Rearing of Shrimp and Prawn Fry in Bangladesh.*
- BOBP/WP/93 *Dealing with Fishery Harbour Pollution - The Phuket Experience.*
- BOBP/WP/94 *Biosocioeconomic Assessment of the Effect of the Estuarine Set Bagnet on the Marine Fisheries of Bangladesh.*
- BOBP/WP/95 *Biosocioeconomic Assessment of the Effects of Fish Aggregating Devices in the Tuna Fishery in the Maldives.*
- BOBP/WP/96 *Biosocioeconomics of Fishing for Small Pelagics along the Southwest Coast of Sri Lanka.*
- BOBP/WP/97 *The Effect of Artificial Reef Installation on the Biosocioeconomics of Small-Scale Fisheries in Ranong Province, Thailand.*
- BOBP/WP/98 *Biosocioeconomics of Fishing Shrimp in Kuala Sepetang, Malaysia.*
- BOBP/WP/99 *Biosocioeconomics of Fishing for Shrimp in the Langkat District on the East Coast of North Sumatera, Indonesia.*

**Table S**  
**Professional Staff 1994**  
**(GCP/RAS/150/DEN, GCP/RAS/151/JPN, GCP/RAS/117/MUL and**  
**GCP/RAS/118/MUL)**

***INTERNATIONAL OFFICERS***

|   | <i>Name of incumbent<br/>(country)</i> | <i>Date of</i> |             |
|---|--|----------------|-------------|
|   |  | <i>Arr</i>     | <i>Dep.</i> |
| 1. Programme Coordinator                | Chong, Kee-Chai<br>(Malaysia)          | 12/94          |             |
| 2. Project Manager a. i.                | Ravikumar, R<br>(India)                | 05/94          | 12/94       |
| 3. Sr. Extension Officer*               | Roy, R<br>(India)                      | 05/94          | 12/94       |
| 4. Coastal Zone Management<br>Adviser + | Nickerson, (Ms) DJ<br>(USA)            | 12/94          |             |

***INTERNATIONAL CONSULTANTS***

| <i>Post</i>         | <i>Name of incumbent<br/>(country)</i> | <i>w/m</i> |
|---------------------|--|------------|
| 1. Information**    | Muthiah, S<br>Undia)                   | 4.0        |
| 2. Subgroup*        | Yong-Ja Cho<br>(Canada)                | 1.0        |
| 3. Fishery Harbours | Ravikumar, R<br>(India)                | 1.5        |

\* Costs covered by GCP/RAS/1 18/MUL

\*\* Costs covered by GCP/RAS/1 17/MUL

+ Costs covered by EPA of US

**Table 6**  
**Supporting Staff 1994**  
(GCP/RAS/150/DEN, GCP/RAS/151/JPN, GCP/RAS/117/MUL and  
GCP/RAS/118/MUL)

***ADMINISTRATION (Madras)***

|                    |                      |                    |
|--------------------|----------------------|--------------------|
| Scurville, (Ms) S  | Sr. Admin. Assistant |                    |
| Shanmugan, T P     | Sr. Driver           | retired <b>May</b> |
| Sivashanmugam, P M | Sr. Driver           |                    |
| Rajendran, S       | Driver               | till April         |

***INFORMATION SERVICE \*\* (Madras)***

|               |                    |           |
|---------------|--------------------|-----------|
| Arnalore, E   | Artist/Draughtsman | till June |
| David, (Ms) C | Secretary          | till June |

***SECRETARIAL SERVICE***

|                  |           |            |
|------------------|-----------|------------|
| Ellis, (Ms) M    | Secretary | till April |
| Verghese, (Ms) C | Secretary | till April |

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\*\* Costs covered by GCPIRAS/I 17/MUL

## **Appendix I**

### **REGIONAL WORKSHOP ON SITUATION ANALYSES**

**Madras, December 15-16, 1994**

#### **SUMMARY REPORT**

The representatives of the BOBP member countries met in Madras on the 15th and 16th of December 1994 to discuss the Situation Analyses developed by them. The workshop had an opportunity to discuss each country's Situation Analysis and seek clarifications. The workshop discussed the national priorities of the problems that had been identified by the countries and which they were interested in addressing with assistance from BOBP during the third phase. The other issues that were discussed at the workshop included the commitment of the member countries to national execution of the Project, the hurdles that they may encounter in the process and the approaches necessary to ensure the accountability of the BOBP-assisted activity to its various stakeholders: the concerned fisherfolk, member countries, FAO and the donors. The proceedings of the workshop are summarized below.

The Situation Analyses presented were prepared by institutions specifically nominated by the fishery agencies of the member countries and the effort was coordinated by the National Coordinators, also nominated for the purpose.

The Situation Analyses are indications, primarily, of the concerns and priorities of the fishery agencies of the member countries. The fishery situations and problems that have been identified and prioritized by the fishery agencies often involve a whole range of stakeholders, including fisherfolk of various types, traders, exporters, local government agencies, environment agencies and consumers as resource users of fisheries and other resource subsystems in the coastal zones. Therefore, it was concluded that the Situation Analyses should be seen as starting points of a process rather than specific proposals for BOBP's consideration. This would suggest that one of the first tasks for the fishery agencies and BOBP would be to make additional efforts to better understand the problems through the eyes of the various stakeholders and to understand the characteristics of the problems and of the stakeholders from the economic, social, ecological, institutional, and legal points of view in order to reach a stage where the agencies and stakeholders concerned can agree on the problem or problems that should and need to be addressed and how. This initial exercise of developing the process — the coming together of stakeholders and the various appraisals, consultations and negotiations — would take up part of the first year of the Project, and end with a clear and well-developed consensus of country-by-country objectives and what needs to be done (resulting in detailed workplans). This could then be addressed by the countries over the remaining four years of the Project, with catalytic and facilitating support from BOBP.

Experience around the world seems to indicate that resource management is rarely successful unless all the stakeholders participate in not only developing the management plan but also in implementing it. The problem with participatory development with multiple stakeholders is that it is almost impossible to predict with any certainty the directions the activity will take as it progresses. The member countries, BOBP and the stakeholders in the Project will have to keep this in mind and allow for flexibility, driven more by the issues and problems defined by stakeholder consensus.

Integrated coastal fisheries management in the context of coastal zone management, which would be required to address the types of problems identified by the Situation Analyses, is a large and complex task, and its sociopolitical nature (in addition to the fact that it concerns access to resources, livelihoods of people, and sharing of open access common property resources) clearly means that the mandate for the tasks is in the hands of the government and the concerned stakeholders. BOBP, it was pointed

out, could assist the process and catalyze it, but it could not do it. Given this, it was suggested that it was vital that the member governments should be committed to undertaking the task of enabling participatory, integrated management of coastal resources in the prioritized locations, and should see BOBP in an assisting role. It was further agreed that it was important that the commitment of governments was sought and ascertained by BOBP as a precondition to project implementation. However, it was emphasized that member governments face constraints which include staff shortages, in particular staff with the necessary skills and knowledge, the need to involve local, provincial and state level agencies who often have the mandate for implementation in some countries, and difficulties in allocating funds at appropriate times due to the need for fishery agencies to synchronize fund requests with their national budgetary cycles. This would suggest that commitment to national execution may come in incremental steps.

The workshop discussed the role that BOBP could play, given the size of its resources in terms of its funds and staffing. This would require the Project to restrict itself to an enabling, facilitating and catalytic role. It would also mean that the activities taken up by the Project will necessarily have to be restricted to a size where, all other things considered, they are within the realm of possibility. This aspect needs to be especially considered in the first year of process development, problem definition and workplanevolution: it may well be that the efforts would have to address only those few problems that have the highest priority among the stakeholders, and the strategy of the Project would be to limit itself to pilot efforts which could then be extended by the countries themselves. It was suggested that, considering the importance of the problems being addressed, there was need to supplement the resources of BOBP, and that BOBP and FAO should take measures to identify other sources of funds to strengthen the third phase activity.

The third phase of BOBP will have to be accountable, not merely at the end of the Project period but continuously along the way, to the ultimate beneficiaries – the fisherfolk, the governments of the member countries who are the real implementers of the effort, FAO and the donors sponsoring the Project. More than merely satisfying the concerns and needs of the stakeholders, the Project itself needs to know at any stage whether what the Project and others involved in the Project are doing is what the stakeholders desire and need. This will require a well-designed monitoring and evaluation (M & E) programme to be built in from the very beginning, and one of the key tasks of BOBP will be to develop such an M & E programme in close consultation with the stakeholders during the first year as it moves towards defining the problems and actions.

Given the complexity of the tasks which the project will be involved in and given the sociopolitical nature of common property resources management, the criteria of success and failure will have to be carefully evolved. Some of the criteria and the performance indicators will be qualitative and some quantitative and some may even have to be proxy or surrogate indicators when the variable in question cannot be directly assessed. The project will need to develop benchmarks and baseline information with which it will need to gauge progress, and it can depend on various sources of information for this:

- The first two phases of BOBP have generated a lot of information that may be found in over 160 reports produced and other kinds of documentation. This material would provide not only some baseline information but also trends in the region.
- The member countries have their own information bases.
- The initial participatory appraisals of various types used to define the problems, identify causes and effects, and evolve actions will provide another source of information;
- Finally, as the project progresses, there may be need for special studies and reviews.

A combination of these will not only provide baseline and benchmark data but, along the way, also provide indicators of progress, achievement and success. The key issue is that the Project should see

monitoring and evaluation as central to its task and share such information regularly with all the stakeholders to ensure its credibility and accountability.

The workshop finally discussed the tasks that would have to be undertaken during the first year of activity, immediately after the Advisory Committee Meeting of BOBP. A proposed workplan which emerged from the discussion is dealt with in another section.

## ***SITUATION ANALYSES***

The Situation Analyses undertaken by the BOBP member countries have proposed that the following areas of activity and fisheries be considered by the countries, with assistance from BOBP, during BOBP's third phase.

### **BANGLADESH**

The Government of Bangladesh is interested in better managing the estuarine set bagnet (ESBN) fishery all along the coast of southern Bangladesh. The ESNB is a traditional fishery which provides a livelihood to a large population, most of whom are below the poverty line and have few alternate sources of income. The fishery provides a sizeable portion of the marine and brackishwater capture fishery production and, more importantly, provides animal protein to the rural poor. The ESNB fishery, which interacts with at least seven other fisheries (including pushnets, beach seines, trammelnets, marine SBN and the marine trawl fishery), has been identified as an extremely destructive fishery, which could lead to overfishing of several important marine and brackishwater species.

The Department of Fisheries would like to consider participatory approaches to

- the introduction of seasonal closures of the ESNB fishery in certain locations,
  - promotion of the trammelnet fishery as an alternative income source for ESNB fisherfolk,
  - promotion of alternate fishery and nonfishery sources of income-generation to reduce the numbers of ESNB fisherfolk, and
- attempting modifications of the ESNB to make it more selective.

The DOF is also interested in developing an information system for coastal fisheries, a lack of which has been a serious impediment to enabling fisheries management.

### **INDIA**

The Government of India is interested in

- better managing the trawl fishery, which primarily targets *P monodon*; and
- in managing, with the participation of fisherfolk, the rapid development of coastal aquaculture, of *P monodon*, to ensure its sustainability along the Coromandel Coast in the states of Andhra Pradesh and Tamil Nadu on the east coast of India.

The trawl fishery has expanded considerably in the last two decades, and there have been several instances of social conflict with artisanal fisherfolk, into whose area of operation the trawl fishery often intrudes. While production and catch rates of the trawl fishery have shown no signs of decline, there are other indications, such as reduction in average sizes of species in the catch and changing species composition in catches, which suggest the need for management.



The Government is also keen on addressing the problem of by-catch discards of the trawl fishery, which is sizeable. The Government is interested in:

- Implementing gear modifications to reduce catch of juveniles and by-catch
- Introducing seasonal closures in certain areas to reduce catch of juveniles
- Introducing area closures in spawning areas
- Promoting gear diversification of trawlers
- Developing economical means of by-catch utilization
- Promoting management measures to reduce conflict between trawl and artisanal fisherfolk

The rapid development of coastal aquaculture is causing a variety of problems, both environmental and social. Salinization of soil and groundwater, pollution due to water and soil disposal, disease problems, damage to mangroves, destruction of by-catch during wild seed collection, conversion of agricultural land, and land use conflict are some of the concerns. The Government is interested in regulation and improved management through development of

- Siting procedures
- Pollution mitigating measures
- Sustainable culture practices
- Environmental standards

and by reducing by-catch waste in wild seed collection.

## INDONESIA

The Government of Indonesia is interested in **model management schemes for coastal fisheries and coastal mariculture using participatory, community-based approaches to improve the livelihood of fisherfolk. The Government would like to evolve and test the approaches and methodologies by undertaking a pilot exercise in Central Tapanuli District of North Sumatera Province on the west coast of Sumatera. The focus of the effort would be to look at**

- **coastal fisheries issues and problems in Sorkam Subdistrict, and**
- **a combination of coastal fisheries and mariculture issues and problems in Sibolga Subdistrict of Central Tapanuli District.**

The Government hopes that with the success of such efforts they would have model schemes which could then be extended to other parts of Indonesia and the region.

Inadequate management measures and inappropriate enforcement mechanisms have resulted in conflicts between groups of fisherfolk. Coastal areas often face conflict situations due to multiple users of subsectors. The recent development of mariculture has created problems such as wild seed collection using destructive fishing practices, unmanaged development of fisheries to generate feed for the sector, and pollution. Fisherfolk incomes are low and there is concern about the quality of fish and fish products. The Government, among other things, is interested in addressing these problems by improving

- the zoning of fisheries and their control,
- traditional post-harvest technology,
- management of the anchovy fishery, and
- management of mariculture

and through the introduction of

- credit schemes,
- agri-business development to provide alternate income sources, and
- partnership schemes to bring together small- and medium-scale fisherfolk.

## MALAYSIA

The Government of Malaysia is interested in **the promotion of sustainable coastal zone management approaches for marine parks as productive ecosystems contributing to fisheries production. As a pilot exercise, in developing and testing methodologies and approaches, the Government intends to focus on the marine park that has been established around Langkawi Island off the coast of Kedah and Perlis States on the west coast of peninsular Malaysia. Of particular interest to the Government is the fact that, should the exercise prove successful, there are 22 other islands which have areas around them designated as marine parks where the learnings of the pilot exercise could be extended.**

**Coastal, inshore fisheries in Malaysia form the backbone of the fishing industry, contributing nearly 90 per cent of the annual landings. Abundant resources, little control over resources, and proximity to population centres in the past led to heavy investment and overcapitalization of the industry. The multispecies stocks in the coastal waters are known to be stressed. The Department of Fisheries has introduced a number of steps to enable**

- the better management of the fisheries, including licensing and zoning to limit entry,
- establishment of marine parks, and
- the development of artificial reefs.

A variety of developments has worked towards the degradation of coastal resources, including destruction of mangroves for land reclamation and conversion into brackishwater aquaculture, agriculture development, rapid expansion of tourism, and destruction of seagrass beds and coral reefs. The Government, committed to ecodevelopment and sustainability, is interested in concerted action to address the problems and to enable and facilitate sustainable coastal zone management. Central to this effort is the establishment of marine parks to, on the one hand, conserve habitats and biodiversity and to, on the other, help fisherfolk to earn higher incomes through more sustainable fisheries and by moving into nonfishery enterprises like ecotourism. Langkawi Island provides an almost ideal site where fisheries, marine parks and tourism are developing interactively, unfortunately at the cost of smallscale fisherfolk who are facing shrinking fishing grounds.

## MALDIVES

The Government of Maldives is interested **in enabling participatory, atoll and island community-based reef resources management through the development of approaches and methodologies in a pilot exercise focusing on Vaavu, Meenu, Faafu and DhaHu Atolls. Further, it is also interested in developing management approaches and methodologies for mariculture of groupers for live export, a new industry which the private sector is keen on developing.** The Government has in the recent past begun an exercise to promote participatory management of reef resources and, given the interest and commitment of the fisherfolk and of government agencies, feels that it will be possible to develop approaches which could be extended to the whole country.

The people of the Maldives depend on their reefs not only for their livelihood to a certain extent but also for their very security against the forces of nature. In the past, without benefit of management, the people have seen their reef resources being stressed and overexploited, particularly in the cases of the giant clam and beche de mer fisheries and through extraction of coral and sand for building purposes. The Government and, more importantly, the island dwellers are very concerned about developments and possible conflicts between users of reef resources. It has expressed interest in participating in exercises to come up with mechanisms that would enable sustainable development.

In the case of grouper mariculture, which is a new concept, the private sector and the Government are keen that any development be preceded by EIAs and accompanied by sound management to avoid the experiences of the past.

## SRI LANKA

The Government of Sri Lanka is interested in **improved management of the fishery along the west, south and east coasts of Sri Lanka, which targets ornamental fish for live export**. While not enough is known of the biology or the population dynamics of the concerned species, several environmental agencies have expressed concern about the fishery and about the impacts the fishery may have on ecologically sensitive habitats such as coral reefs, estuaries, seagrass beds, lagoons and mangroves. Further, the Association of Live Tropical Fish Exporters of Sri Lanka has expressed concern about the viability of the industry in terms of the regulations brought into effect by the Department of Wildlife Conservation in 1994. The Government, in response to these concerns, has committed itself to improving the management of the ornamental fish fishery and the Ministry of Fisheries and Aquatic Resources is in the process of formulating rules and regulations for inclusion in the Fisheries Ordinance. The Government hopes that improved management will ensure the sustainability of the fishery and protect the earnings of large numbers of divers and artisanal fisherfolk who depend on the fishery for their livelihood.

The Government is interested in

- improving its understanding of the biology and population dynamics of the targeted species through appropriate research,
- the development of a participatory monitoring system for the fishery, and  
evolving and promoting management measures which have the support and participation of all the stakeholders.

## THAILAND

The Government of Thailand is interested in improving fisherfolk livelihoods through **the development of community-based, participatory approaches to the management of fisheries and aquaculture, in a coastal zone context, through a pilot exercise focusing on Phang Nga Bay along the Andaman Sea coast of Thailand**. The rapid and dramatic development of the fisheries industry in Thailand over the last few decades has resulted in several problems, including stressed pelagic and demersal stocks, deterioration of fisheries resources and their habitats, conflicts between fisherfolk, between various gear and between capture and culture fisheries, and environmental degradation of fisheries habitats due to waste discharge from aquaculture, industry and tourism.

The Government has taken various steps to address some of these problems through limiting entry to the trawl fishery, licensing of fishing craft, mesh size regulations, ban of certain types of destructive gear, seasonal and area closures, and deployment of artificial reefs. However, the real problem has been in enforcing the regulations, and this has led the Government, in particular provincial governments, to want to involve the fisherfolk and other sectors in the task through participatory, community-based approaches.

The Phang Nga Bay is a major capture/culture fishery location surrounded by the provinces of Phang Nga, Krabi and Phuket. As a microcosm of Thai fisheries, it displays almost all the problems encountered in the country. The Government is keen on developing management approaches facilitated by

- establishment of marine parks,
- deployment of village-based artificial reefs, and
- better enforcement through improving people's awareness and participation.

The path has been paved by a recent coming together of the governors of the three provinces to enable joint exercises for the protection and development of Phang Nga Bay.

## Appendix J

### COASTAL FISHERIES MANAGEMENT

#### Indicative Workplan for 1995

##### ***ACTION IN EACH MEMBER COUNTRY***

1. Assignment of **institution(s) and staff responsible for BOBP-assisted activity:**  
Resulting in development of criteria for, and nomination of, appropriate institution(s) and staff with the necessary professional knowledge, skills and seniority to meet the requirements of the activities of the BOBP project.
2. Initial visits by **country staff and BOBP staff to identified work locations for discussions and consultations with various stakeholders:**  
Resulting in identification of stakeholders, an improved understanding of the problem(s) and the way the problem(s) are perceived by the different stakeholders.
3. Participatory appraisals of communities, fishery situations, **ecosystems**, resource systems:  
Resulting in definition of problem(s), their causes and etiology; system understanding of community dynamics; improved understanding of stakeholder perceptions and priorities; understanding of fishery and ecosystem issues and concerns; better understanding of the indigenous knowledge of traditional community-based resource management systems; identification of government agencies whose cooperation would be necessary; preliminary understanding of solution options from various stakeholder viewpoints.
4. Awareness/perception analysis **of various stakeholders:**  
Resulting in understanding of content of awareness, preferred communication channels, influence networks and awareness needs that would have to be addressed.
5. Identification of fishery and nonfishery agency staff:  
Resulting in who will be involved in facilitating and enabling integrated, participatory resources management in the country, in coastal contexts, with special emphasis on fisheries
6. **Skill gap analysis and training needs assessment of agency staff:**  
Resulting in understanding perceptions, information needs, skill needs, and the optimal ways to provide the same.
7. **Initiation of consensus-building on problem(s) definition, solution options, and responsibilities of various stakeholders:**  
Resulting in consultations and negotiations leading to agreement and commitment to the problem(s) that need to be addressed by the countries, with assistance from **BOBP, and on their *modus operandi***
8. **Development of monitoring and evaluation procedures, identification of success and performance indicators, and initiation of continuing programme by concerned stakeholders.**
9. **Development of country workplans and budget statements.**
10. **National meeting to get country endorsement/commitment for the workplan and budget:**  
The workplan to be evolved will comprise of activities which can produce not only outputs with immediate visibility and impact but long-term, sustainable reforms in the structure of organizations and management set-ups of member Government institutions.

## ***BOBP IMPLEMENTATION STRATEGY***

The ultimate objective of the BOBP's Third Phase for fisheries management is to facilitate sustainable development in the coastal communities of member countries. It is envisaged, that this can be achieved through an integrated coastal area development approach, which will comprise of:

- Conservation of fisheries resources
- Economic diversification
- Provision of infrastructure and social services
- Environmental protection

However, the Third Phase is primarily concerned with fisheries management, which, operationally, is the containment and regulation of fishing effort, but will promote other inputs and coordinate its activities with such efforts.

On the other hand, the member country's development strategies spelt out in the Project Document (PRODOC) are still, by and large, production-oriented. That is to say, the aim is still to increase production and productivity, generate employment and supply the needed animal protein to its people as well as earn foreign exchange. These are the fundamental desires and goals of the countries. However, with the steadily growing concern with overfishing and depletion of resources, the benefits of management on these resources is also becoming obvious to the member countries.

In the Third Phase, the member countries and BOBP have to develop an operational consensus and mechanism to marry the two strategies and come up with an implementation strategy which is acceptable to the member countries themselves and is consistent with the intermediate and long-term objectives of BOBP's mandate and responsibilities as agreed to by the member countries and donors.

At a time when many development agencies are switching their focus to environmental protection and resource sustainability issues, BOBP must, and will, stick to and be committed to fish production and address the continuing plight of the impoverished fisherfolk and their communities, without compromising or jeopardising the long-term integrity and sustainability of fisheries resources that supply high quality fish to the people.

This can be achieved through building greater and more widespread awareness of the benefits of management of fisheries resources.

The awareness-building must clearly send out the message that fisheries management can, and must, work and there is no other alternative to management if the fisheries resources are to supply a continuous flow of fish to the people. In other words, 'GIVE FISHERIES MANAGEMENT A CHANCE TO SUCCEED'. It can and must be done.

## ***OPERATIONAL STRATEGY AND MECHANISM***

Today, the basic purpose and function of fisheries management is to reduce excess or surplus fishing capacity or pressures to a level which can sustain the fisheries, in terms of the number of fisherfolk, fishing boats and gear. It also includes the re-examination of the technologies employed in catching the fish and determining if the technologies in use are resource- and resource habitat-impairing.

In creating greater and more widespread awareness, it is critical that we use the fisherfolk to influence and bring about lasting change in the attitudes and perceptions of resource managers, policy-makers and resource users to the vulnerability of the fisheries resources under fishing pressures due to

inadequate safeguards and control of the level of fishing effort. In other words, managing the level of fishing effort so that it does not impair the long-term productivity, stability, sustainability and equitability of the fisheries resource system and the larger environment in which the fish are found and breed.

There is now definitely a need to change the approaches we have used so far to manage fisheries resources. Fisheries management ideas and concepts are not new, but there is a real need to re-sensitize resource managers, policy-makers and resource users to the benefits of explicit control of fishing effort. The time has passed where the need for fisheries management can be advocated without offering any explanation or clarification to the fisherfolk of what fisheries can do for them: **more fish to catch and higher prices for their fish through organized fishing and marketing. The key** here is to help them organize themselves; not only must the fisherfolk and resource managers provide total support to management, but they must have a conviction about it and be committed to it. To ensure their commitment, they must closely identify with the ideas and concept of management. There is now a new and different generation of fisherfolk that is relatively more vocal and **radical. Their** voices can be effectively used to influence the older generation and their peers and bring about needed changes. They must feel pride in the idea and concept of management.

To bring this about, it is critical that we actively seek out their ideas, their perceptions of fisheries problems and what they see as potential solutions. In other words, they must buy into the solutions. We must go to the fisherfolk and hear them out. Their ideas and potential solutions should then be listed and evaluated on their merits, feasibility and acceptance by the majority. This then will constitute the base on which to work - **a management action plan**, which will be implemented by them with assistance from the government.

The PRODOC has set down a proposed project strategy which reads as follows:

All activities of the Project will be implemented by the national institutions in the respective countries responsible for fisheries management and related subjects. The Project will therefore be closely coordinated with, and be supplementary to, any ongoing national effort.

At the beginning of the Project, at least one year will be devoted to the establishment of baseline information with regard to the state of fisheries and their management, and to the identification of Project activities. During this process, due note will be taken of the recommendations of the United Nations Conference on Environment and Development (UNCED) and the Strategy for International Fisheries Research (SIFR).

The implementation will have a three-pronged approach:

- Multimedia campaigns targeted at different levels, from policy-makers to fisherfolk, to increase awareness of the needs, benefits and mechanisms of fisheries management
- National seminars and workshops on management strategies, methods and practices for key personnel of the administrations, research organizations and representatives of the fisherfolk
- Advisory services on specific management issues, usually short-term in nature, when requested by member governments

At the regional level, consultations among the participating countries will be conducted to exchange information, share experiences, and cooperate in Project implementation.

At the country level, the unit of the fisheries administration responsible for fisheries management will be the implementing agency for Project activities. This unit will also be responsible for the necessary liaison with other national fishery and nonfishery agencies. It will also liaise with the Project headquarters. The fisheries agencies, where necessary, will be assisted in their tasks by non-governmental organizations and private sector groups.

At the regional level, the Project will be executed under the Bay of Bengal Programme (**BOBP**), which is an umbrella organization for the projects with specific purposes.

The Programme sponsored by different donors, will operate from its headquarters, in Madras, India, and ensure effective coordination of work, a multidisciplinary approach and cost-effective use of common services, such as those for Information and Administration.

The Programme will have an Information Service, funded by the member governments, as a separate project. It will use a multimedia approach enabling the Programme to reach, in the most effective way, various target audiences – fisheries officials and scientists, fisherfolk communities, development agencies, the public. It will, in particular:

- Support the fisheries management projects in awareness-building activities
- Prepare materials for education, extension and training
- Document Programme activities through a quarterly newsletter and various reports

The Information Service, with its well-equipped library, is an asset the Project will benefit from throughout its implementation.

In the beginning, especially, the Project will make use of the accumulated knowledge and experience of BOBP and its regional contact network built up over the years. Of particular relevance is the ongoing work in the field of biosocioeconomics.

### ***MONITORING AND EVALUATION SYSTEM***

***(Building accountability and performance audit into BOBP's third phase)***

The draft for discussion in Appendices J and I provides a more detailed description on the rationale and justification for greater responsibility, accountability and transparency in Project implementation and management. Success criteria, performance indicators and measures, and the methodology for building more awareness and commitment are mentioned. This is as it should be, because of the need to protect the investments of scarce financial resources in development work. Accountability is even more urgent, given that funding for development work is rapidly drying up and, most important of all, that such funding comes out of the public purse. In BOBP's third phase, every effort will be made to work with member government institutions to build in greater transparency and accountability of the Project's output, especially to our clientele-target beneficiaries in the coastal zone.

Institutionalizing fiscal and technical accountability and responsibility in a monitoring and evaluation (M & E) system is necessarily a step-by-step effort and cannot be expected to take place or succeed overnight. Nor should an M & E system be viewed negatively or a threat to management. An M & E system is a management tool to improve performance and the quality of our work.

### ***BOBP AND NATIONAL EXECUTION***

Appendix J-II provides a more detailed discussion of national execution. National execution of the Project must and can be achieved with commitment from all quarters. It has often not worked out as intended in the past for very simple reasons:

- Lack of adequate incentives
- Staff assigned for national execution is not adequately matched in terms of professional experience/skills to the project objectives and requirements
- Lack of institutional commitment of the senior leadership and management

Also, all too frequently, staff assigned for national execution are not released on a full-time basis and such staff invariably have the option to fall back on other international staff implementing other externally-funded projects.

All this, however, does not imply that national execution has never worked. Where interests, commitment and motivation were all present, national execution has succeeded admirably.

**BOBP WORKPLAN FOR 1995 (PROPOSED)**  
**COASTAL FISHERIES MANAGEMENT IN THE BAY OF BENGAL (GCP/RAS/150/DEN & 151/JPN)**

| ACTIVITY NUMBER | ACTIVITY DESCRIPTION  | 1995 |   |   |   |   |   |   |   |   |   |   |   | 1996-99  | REMARKS |
|-----------------|---|------|---|---|---|---|---|---|---|---|---|---|---|--|---------|
|                 |   | J    | F | M | A | M | J | J | A | S | O | N | D |  |         |
| 01              | Close review, interpretation and translation of project objectives, outputs, institutional collaboration framework, including literature search/review  |      |   |   |   |   |   |   |   |   |   |   |   | (To be worked out in close consultation with member country institutions in follow-up to the Situation Analysis and Country Workplan completed for 1995) |         |
| 02              | Site visits by country staff and BOBP staff to consult with key stakeholders (Stakeholders Analysis/PRA/RRA/REA)  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 03              | Review of assignment of host institution and staff members as counterparts for BOBP Third Phase Project activities  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 04              | Skill gap analysis and training needs assessment  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 05              | Propose and work out specific activities and detailed country workplans in close consultation with member governments using 'MENU' as a working guideline, including national execution mechanisms on <i>modus operandi</i> , with enabling/facilitating assistance from BOBP |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 06              | Awareness/Perception Analysis of Stakeholders and Content of Needed Awareness, including preferred mass multimedia communication channels and factors influencing producer and consumer behavioral changes  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 07              | Identify government and non-government organizations, including private sector, interested in collaborating with BOBP on participatory CFM in an ICZM framework   |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 08              | Develop M & E system for project and stakeholders   |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 09              | Finalize country workplans and budget requirements  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |
| 10              | National workshop on country workplan and budget  |      |   |   |   |   |   |   |   |   |   |   |   |  |         |

\* Discuss project with donors. NOOs. FAORs. UNDP/RRs and other like-minded institutions



| SUBCOMPONENT I   | COMPONENT I  |   | COMPONENT II  |   | COMPONENT III  |  | COMPONENT IV  |   |
|------------------|--|---|---|---|--|--|---|---|
|                  | EDUCATION/RESEARCH APPROACH  |   | OCCUPATION/INCOME APPROACH  |   | AGRI-BUSINESS APPROACH   |  | TECHNOLOGY APPROACH   |   |
|                  | <b>Creation and Building of Management Awareness</b>   |   | <b>Diversification of Income Sources</b>  |   | <b>Integrated Rural and Coastal Zone Development</b>   |  | <b>Development of Resource-Friendly Technology</b>  |   |
|                  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>   | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  |
|                  | Irrational use of resource base  | <ul style="list-style-type: none"> <li>• Training of local opinion leaders</li> <li>• Professionally organized mass multi-media campaigns</li> <li>• Face-to face extension</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Low productivity and declining catch leading to low incomes for fishing households</li> <li>• Unfair share systems</li> </ul>  | <ul style="list-style-type: none"> <li>• Identify and carry out feasible opportunities to diversify source of income for fishing communities</li> <li>• Re-examine share system &amp; division of output/income</li> </ul>  | <ul style="list-style-type: none"> <li>• Lack of agri-business/rural enterprise opportunities in rural areas</li> </ul>  | <ul style="list-style-type: none"> <li>• Provide incentives for investors to open up agri-business opportunities in rural coastal areas, such as fish-based cottage</li> </ul>   | <ul style="list-style-type: none"> <li>• Resources-damaging technology</li> </ul>   | <ul style="list-style-type: none"> <li>• Develop resource-friendly technology, passive vs active gear, hook-and-line, longline etc.</li> <li>• Give rather than take (return) Promote culture-based fisheries or aquaculture/sea farming</li> <li>• Rationalize fishing boat motorization programme</li> </ul>                  |
|                  | <i>Output/Impact</i>   |   | <i>Output/Impact</i>  |   | <i>Output/Impact</i>   |  | <i>Output/Impact</i>  |   |
| SUBCOMPONENT II  | <b>Transfer Fisheries Management Costs to Fishing Community, Wherever Feasible</b>                                       |   | <b>Attracting Fisherfolk Out of Fisheries</b>   |   | <b>Development of Marketable Work Skills</b>   |  | <b>Stock Enhancement of Open Waters Based on Artificially-Produced Seeds</b>  |   |
|                  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>   | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  |
|                  | Punitive enforcement of fisheries management not acceptable to fishin communities  | <ul style="list-style-type: none"> <li>• Community-based systems of management adapted from traditional systems/ indigenous knowledge</li> <li>• Discourage punitive fisheries management enforcement</li> </ul>        | <ul style="list-style-type: none"> <li>• Lack of employment and other livelihood means in rural coastal areas</li> </ul>  | <ul style="list-style-type: none"> <li>• Identify and place suitably-qualified fisherfolk and their womenfolk in factories and manufacturing plants as factory workers as alternative to fishing</li> </ul>   | <ul style="list-style-type: none"> <li>• Lack marketable skills due to illiteracy and trainin opportunities</li> </ul>   | <ul style="list-style-type: none"> <li>• Provide vocational training and small loans to start petty trade/cottage industries, such as grilled/BBQ fish stalls along beaches</li> </ul>   | <ul style="list-style-type: none"> <li>• Overfishing, over-crowding, over-capitalization.</li> <li>• Easy access to low interest credit, lead to over-capitalization</li> </ul> | <ul style="list-style-type: none"> <li>• Reduce fishing pressures through rotational fishing</li> <li>• Build up stocks through recolonization and open water stocking</li> <li>• Allow overfished stock to recover through reduction in days for fishing, closed seasons, closed areas, mesh size regulations, etc.</li> </ul> |
|                  | <i>Output/Impact</i>   |   | <i>Output/Impact</i>  |   | <i>Output/Impact</i>   |  | <i>Output/Impact</i>  |   |
| SUBCOMPONENT III | <b>Skill Gap Analysis and Training Needs Assessment for Fisheries Management</b>   |   | <b>Market Access and Pricing Policy</b>   |   | <b>Improving Capacity Utilization of Available Excess Installed Capacity In Fisheries</b>  |  | <b>Emphasis on Improving Value of Catch Instead of Volume of Catch</b>  |   |
|                  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  | <i>Issues/Problems</i>   | <i>Intervention/Solution</i>   | <i>Issues/Problems</i>  | <i>Intervention/Solution</i>  |
|                  | <ul style="list-style-type: none"> <li>• Staff mismatch</li> <li>• Lack of competence in fisheries management</li> </ul> | <ul style="list-style-type: none"> <li>• Re-assign staff with competence in fisheries management</li> <li>• Provide short- and long-term training, including on-the-job transfer of needed skills/ knowledge</li> </ul> | <ul style="list-style-type: none"> <li>• Low ex-vessel price and discriminatory trade/marketing practice (e.g. predatory pricing)</li> <li>• Poor post-harvest technology and market sanitation resulting in low quality</li> </ul> | <ul style="list-style-type: none"> <li>• Improve market access and price paid to fisherfolks, and improve bargaining power through cooperative marketing</li> <li>• Common property into private property</li> <li>• Timely market sanitation improve harbour facilities</li> </ul> | <ul style="list-style-type: none"> <li>• Excess installed capacity in fishing fleet</li> <li>• Excess installed capacity in cold storage and processing</li> </ul> | <ul style="list-style-type: none"> <li>• Identify alternative opportunities in utilizing fishing fleet, cold storage and seafood processing capacities.</li> <li>• Work through women in fisheries development and management</li> </ul> | <ul style="list-style-type: none"> <li>• Continuing post-harvest loss of 30% from market channels</li> </ul>  | <ul style="list-style-type: none"> <li>• Improve post-harvest primary handling and secondary processing</li> </ul>  |
|                  | <i>Output/Impact</i>   |   | <i>Output/Impact</i>  |   | <i>Output/Impact</i>   |  | <i>Output/Impact</i>  |   |

NOTE: Clearly separate BOBP and Member-Country's Mandate Responsibilities

## **Appendix J-I**

### **MONITORING AND EVALUATION (M & E) SYSTEM**

#### **(Building accountability and performance audit into BOBP's third phase)**

#### ***BACKGROUND AND INTRODUCTION***

At the last Advisory Committee Meeting (ACM) of the Bay of Bengal Programme for Fisheries Development held in the Maldives, the desirability and need for the assessment of the impact of the BOBP since its inception in 1979 was raised and discussed. The 18th ACM agreed that the donor agencies supporting BOBP should look into the matter. Further, the ACM also recommended that success and performance criteria, measures, and indicators to verify BOBP's delivery of Programme outputs and, achievements be identified and, wherever feasible, quantified or measured.

#### ***PURPOSE OF REPORT***

Here is one possible response to the ACM recommendation and the views on the desirability and need for impact assessment of BOBP. This response is from the collective perspective of the BOBP Management/Secretariat and is for the consideration of the 19th Advisory Committee Meeting of the Bay of Bengal Programme for Coastal Fisheries Management in Jakarta from 16-17 January 1995.

The purpose of this report is to not only identify the performance and success parameters of impact assessment, but also to develop the methodology for such an impact study, especially in the context of BOBP implementation of the third phase.

While there is a lot of merit and value in conducting an impact assessment of the first two phases of the BOBP spanning 15 years, the cost of mounting such an assessment has not been provided for in the budget of the third phase. However, beginning with the third phase, a serious attempt is being made to build greater accountability and transparency into the implementation, management and delivery of the third phase of the Programme. In other words, a monitoring and evaluation (M & E) system to closely track the progress and achievements of the Programme, its outputs and services, is instituted from the beginning.

#### ***SCOPE OF REPORT***

For a start, the impact assessment should focus only on a few key impact parameters, such as capacity-building, institutional-strengthening, and strengthening of sound leadership in fisheries and fisheries management, including benefits from improved fisheries management accruing to fisherfolk. Although the success criteria and performance measures and indicators are more difficult to define, they are basic and fundamental impact parameters which accountability and performance audits seek to verify in terms of the achievements of the BOBP initiatives in fisheries management and development.

Performance audits and accountability can be conducted at different levels, depending on the purpose at hand:

- At donor level, to protect their investments and ensure that benefits accrue to target beneficiaries
- At member government level, to ensure that personnel competence (HRD) and institutional capability are strengthened to enable them to help the target fisherfolk beneficiaries to increase their standards of living

- At BOBP HQ and FAO/UN level, to ensure timely and high quality input to collaborating institutions to carry out Programme mandates for member governments in their work with fisherfolk.
- At fisherfolk and other stakeholder level, to ensure that they are the ultimate beneficiaries of any donor/member government's investments and BOBP's enabling TA intervention.

When funding permits, these and other impact parameters can be examined in more analytical and quantifiable detail. Primary data are definitely required to evaluate the impact of BOBP on its target beneficiaries, including the development of appropriate methodology to quantify such impact. Extensive field surveys and secondary data collection are called for to conduct a meaningful impact assessment.

An elaborate M & E system, using LogFRAME, will be followed. Either a Microsoft PROJECT or PC LogFRAME from Team Technologies' software programme will be used to track the status, progress and milestones of project activities and achievements.

### ***DISCLAIMER***

To be sure, not all positive or negative impacts on the performance of the departments of fisheries and the benefits accruing to the fisherfolk and fishing communities can be traced and attributed to BOBP initiatives. Care must be exercised in ascribing credit to BOBP; after all, the environment and economy we live in is not static but highly dynamic and constantly evolving and changing. Thus, BOBP's active catalytic, facilitating and enabling role, and mechanisms in building awareness and translating this awareness into strong public opinions and behavioral changes in public and private sector attitudes, are only indicative and enabling, helping member government institutions to move along in the direction desired, as indicated in the Situation Analyses.

### ***BOBP AND IMPACT ON FISHERIES LEADERSHIP***

At 15, BOBP is rapidly becoming an 'institution' in its own right and more confident of its place and role in the Bay and beyond. During the last 15 years, it has not only facilitated and assisted member countries in the expanded production of fish but made an appreciable impact on the lives of its primary target clientele and, to an extent, on the secondary beneficiaries in the market channel in which the fish enter and flow to the final consumers. Such impact was effected more in the form of new or modern technology. However, in the third phase, BOBP's impact must come from the introduction and adoption of management of fisheries and other aquatic resources in the coastal ecosystem.

This impact would have been more pronounced and visible if not for the steadily deteriorating dynamics of open access common property fisheries resources already underway, caused by uncontrolled fishing and poor resource and environmental management during the decades after World War II (when fisheries were more or less left alone).

The leadership of the member countries, donor governments and agencies remain committed to BOBP's vision and mission. Their commitments are reflected in their sustained contribution, not only in financial terms but goodwill and cooperation between and among member countries on both sides of the Bay and beyond. There is now a clear, friendly working relationship among the different member countries and donor governments, closer consultation on issues of common interest, and mutual benefits. This consultative forum and open line of communication has not come by accident but has been developed and nurtured over the years through deliberate and conscious effort. The willingness to share expertise and experience clearly exists among member countries, and it can be strengthened even more through Technical Cooperation among Developing Countries (TCDC) mechanisms. This in itself is partial testimony of the impact and strength of BOBP in bringing together countries which otherwise would hesitate to dialogue with each other on resolving problems which frequently arise, such as fishing encroachment into territorial waters, problematic seafood trade practices and the effects of poor sanitary standards.

Fisheries leaders, policy-makers and resource managers, brought together through BOBP auspices at least once a year, have established a good rapport and mutual respect which can be brought to bear in resolving common problems affecting their fisheries, especially as some of these problems – pollution in coastal waters and high seas as well as in geographically contiguous zones, fish habitat impairment and degradation, growing competition in seafood trade which can undermine free trade, to name but a few – intensify.

More significantly, other countries have also expressed their interest in joining BOBP to tap its expertise and that of its member countries. They see the BOBP mechanism enabling closer collaboration and consultation among member and donor countries as being beneficial for their fisheries.

A good measure and indicator of fisheries leadership performance can be

- Recognition by the leadership of the need for, and the benefits of, fisheries management
- Government commitment, in terms of budgetary allocation for management, monitoring, surveillance, and control of fisheries exploitation, including support for fisheries research and development (R & D) which can improve the effectiveness and impact of the management measures instituted.

Other measures of the performance of BOBP would be in the form of the recognition of

- The need for, and the benefits of, responsible fishing
- Exploitation of shared stock of highly migratory fish and straddling stocks
- Reduction in the number of arrests of member-country fishing boats fishing illegally in national waters of other member countries
- Reduction in fishing conflicts between and among different fisherfolk in national waters

Lessons learned, and experiences with past fisheries management, reveal that management of fisheries has not made any lasting impact because plans for such management were generally put together hastily and with little or no R&D, analysis of indigenous knowledge and information. Looking to the future, if BOBP can assist member governments in developing knowledge-intensive management measures or, at least, a reliable database, BOBP would have earned its returns. Knowledge-intensive fisheries management would increase the probability of success, resulting in a positive impact. In this respect, indigenous knowledge should be tapped and capitalized to develop workable management measures.

### ***BOBP AND CAPACITY-BUILDING AND INSTITUTIONAL-STRENGTHENING***

BOBP is part of a long-term investment in capacity-building and institutional-strengthening of fisheries departments in member countries. A measure of its achievements and an assessment of the impact of its objectives on the departments of fisheries is clearly required. Measurement or assessment of impact can show how successful the BOBP investment has been and can be.

These results will benefit not only BOBP. Being one of the first large-scale integrated fisheries management projects in the region executed by FAO/UN, an excellent opportunity exists for other ongoing and future fisheries management or coastal area management projects to learn from BOBP's M & E results and experiences.

### **SKILL GAP ANALYSIS AND TRAINING NEEDS ASSESSMENT**

To build greater transparency and accountability in Project implementation through an M & E system, it is essential to carry out a limited skill gap analysis of the existing M & E system as practised in the

department or directorate-general of fisheries in the member countries. Based on this exercise, a training needs assessment can provide an indicative need for both short and long-term training in the M & E system.

It is safe to say that a very limited or very basic M & E system exists in the different member government fisheries institutions. The system is for all practical purposes mainly in the areas of financial M & E, accounting disbursement of funds. Technical and impact M & E are not generally available and if it exists, it is mostly descriptive in nature and not analytically rigorous.

One of the main training needs in building greater transparency and accountability, especially concerning technical and fiscal responsibility, is in a Logical Framework, or LogFRAME, and M & E system. The training in LogFRAME can prepare the staff in carrying out regular Performance Audits of the fisheries department or directorate-general. Performance audits can pinpoint weaknesses and strengths and areas available for improvement in servicing the target beneficiaries. These audits quantify the timebound delivery of project outputs and services, thus providing a clear picture of achievements and milestones. At each and every step in project implementation, progress and achievements are measured by critical milestones in a timebound framework. Microsoft PROJECT, a user-friendly programme, is now available for use in building greater accountability in project implementation. Performance audits employ these tools to verify achievements. BOBP and FAO/UN have in-house expertise and the methodology to carry out the proposed training in member countries.

Other training which can be provided by BOBP and FAO/UN staff to improve work output and performance of fisheries institutions are in the areas of stakeholder analysis, PRAJRRRA, Rapid Ecological Survey (RES), sector planning modelling for fisheries, strategic planning in fisheries, integrated coastal zone management, special area management planning, economic valuation of coastal resources, participatory management, community-based management, and database for fisheries statistics (TS).

Depending on the needs of member countries and the number of staff to undergo the needed training, courses can be planned and organized either at the national or regional level.

## **POSSIBLE PERFORMANCE DIMENSIONS**

The following performance indicators or proxy measures can be used to evaluate the impact of **BOBP** on the fisheries of member countries.

- Transfer of knowledge and skills to staff of fisheries departments which can be applied in their daily work to improve professional competence and confidence
- Organizational productivity (the output of the departments of fisheries): for instance, the number of reports on fisheries management produced or the number of management initiatives for fisheries taken by the departments of fisheries
- Increasing importance given to fisheries management, as measured by the number of nationally-funded projects and fisheries productivity, stability, sustainability and equitability in the distribution of benefits from improved management
- Reduction in the number of open conflicts between and among fisherfolk and in cases of fisherfolk taking the law into their own hands. General reduction of tension
- BOBP national counterparts assuming increasingly responsible leadership roles and positions through promotion
- Commensurate increase in budgetary allocation for fisheries management and for similar functions and responsibilities
- Implementation of programmes, policies, regulations and actions which reflect the strong opinions of the public and private sectors involved in fisheries

- Closer coordination and consultation between, and among, national agencies on fisheries matters
- General increase in standards of living of fishing communities in the Project area

(Details to be worked out.)

## ***BOBP AND FISHERIES MANAGEMENT***

Today, the basic purpose and function of fisheries management is to reduce excess or surplus fishing effort or pressures to a level which can, in terms of the number of fisherfolk, fishing boats and gear, sustain the fisheries. It also includes the re-examination of the technologies employed in catching the fish and determining if the technologies are resource- and resource habitat-impairing.

It is safe to state that available fisheries management rules, regulations, and measures are, in general, fairly well thought-out and technically sound. In some cases, legislation for fisheries management has been promulgated with a view to resolving social and other conflicts rather than to manage resources – a treatment of the symptom rather than finding a cure! Fisheries management, as instituted and implemented in various countries, has not made any lasting impact, not because it is technically-flawed or poorly conceived and formulated but because fisherfolk do not yet understand and appreciate the need for, benefits from, and economic value of managing the fisheries resources which they rely on for their livelihood and subsistence. They see management as another government imposition on their freedom to catch the fish they have relied on for a long time – an imposition from outside! They do not identify with it, nor do they feel a sense of ownership of the idea nor the need to manage their fisheries through restrictions which governments impose on their freedom to go to sea and catch at will. After all, they have enjoyed such freedom from generation to generation, from father to son to grandson, and expect it to continue.

For management to work, the fisherfolk have to see management as benefitting them and not benefitting others. They need to identify with it and feel a sense of belonging and pride of ownership of the management idea. In other words, if it is **their** idea, they are more likely to subscribe readily to it and enforce and police its implementation and execution. Involving them directly in fisheries management will not only ensure their active participation and successful implementation, but release and relieve government of costly expenditure, frustrations and resentment. In Malaysia, at least thirty per cent of the annual budget of the Department of Fisheries is for fisheries management enforcement. Through **participatory co-management of the fisheries, the costs of fisheries management can be transferred to the fishing communities, saving the government expenditure which can profitably be used for other more pressing problems, such as rehabilitating fisheries habitats and fisheries re-colonization.**

## ***BOBP AND COST-EFFECTIVENESS***

BOBP has now 15 years of experience in fisheries development and management. Overall, there is now available more than four decades of information-gathering in the search for solutions to fisheries problems, especially as it relates to fisheries management. With all these lessons learned from the past while evolving and developing solutions, BOBP has the opportunity in its third phase to make use of, and capitalize on, this wealth of experience and information to develop lasting solutions to fisheries problems. Knowledge-intensive solutions are, necessarily, more cost-effective, especially when such solutions use the collective first-hand knowledge of all the users of the fisheries resource. They are also more easily implemented. The implementers are committed to these solutions because they helped to develop them. Unnecessary expenditure can be saved from not reinventing fisheries management all over again or replicating what is already known or experimenting with management measures which have not worked at all. In addition, knowledge-intensive approaches to solutions can also seek solutions outside of fisheries. In other words, fisheries solutions should not be confined or limited to searches for solutions within fisheries alone but should also be sought outside.

Further, cost-effectiveness, as a performance indicator of the combined BOBP and member country's initiatives in fisheries management, can be improved through ensuring the relevance and efficiency of the management measures introduced.

### ***BOBP AND MAINTENANCE RESEARCH FOR FISHERIES***

Without realizing it through lack of knowledge or oversight, or even lack of capacity to manage fisheries, governments in general and fisheries departments in particular have allowed fisherfolk to catch fish with little or no control and management. Such practices can be tolerated as long as the number of fisherfolk is low in relation to the resources they are **exploiting**. **However**, as their numbers increase, such *laissez-faire* or uncontrolled and unmanaged practices can no longer be condoned.

Under both managed or unmanaged fisheries exploitation, it is important that a minimum level of 'repair and maintenance' of the resource system be carried out, especially based on research and development (R & D), to ensure the productivity, stability, sustainability and equitability of the resource base. This is to initiate remedial or corrective measures to minimize, if not prevent, impairment of the resources, resource habitats, broodstocks, and the general environment in which the resources are found and reproduce.

In the past, the tendency to allow things to develop until problems arise was allowed to continue, and when remedial and corrective measures were taken it was frequently too late to be of any impact. As the delegates from Thailand pointed out during the Situation Analysis Workshop in Madras, India, from December 15-16, 1994, it has only now suddenly dawned on the governments of the contiguous provinces of Southern Thailand that pollution is threatening their fisheries, aquatic resources and environment. They now want to take concerted collective action because they fear that there will be no more fish to manage if corrective steps are not immediately put into action.

Preventive repair and maintenance R & D helps to correct and remedy a deteriorating fisheries before the resources are destroyed.

**A possible measure of performance here is the number of fishing grounds no longer being used over time. In other words, the fisherfolk have moved or shifted to new fishing grounds because they have had to abandon traditional fishing grounds that have been overfished. Due to the loss of the fisheries economy, the local rural economy is affected. Although it is true that one fishing ground after another has been lost or abandoned consequent to overexploitation, there have also been instances of abandoned fishing grounds being re-colonized. This is indicative of the potential of rotational fishing and a possible fisheries management strategy, and needs to be further looked into. Re-colonization of old fishing grounds could well be facilitated through timely R & D and similar technical interventions.**

### ***CONCLUDING REMARKS***

At the end of five years, the bottom line is still qualitative and quantitative improvement in the welfare of the target fisherfolk and their communities. Where **does BOBP want to be** in five years' time? The answer to this basic question would tell us what needs to be done in implementing the third five-year phase of BOBP.

Details of the BOBP M & E system for the third phase will be further elaborated in close consultation with the member government institutions. The present budget only allows a limited 'desk' impact assessment using secondary data generated and accumulated over the last two phases of **BOBP**. Additional funding is clearly needed if a more exhaustive and comprehensive quantitative assessment of BOBP's impact is desired by the donor community and member governments. Such a study can be contracted out, when funding becomes available, and supervised by BOBP.

**Figure 1: The 4 x 4 LogFRAME Matrix for M&E System**

| Narrative summary | Objectively verifiable indicators (% Target)  | Means of verification   | Assumptions   |
|-------------------|---|---|---|
| GOALS             | Qualitative and quantitative improvement in the welfare of fisherfolk and their fishing community in North Sumatera, Indonesia  | Field surveys and interviews carried out by independent external review team as well as by in-house regular monitoring  | Willingness to cooperate and work hard. Receptive to change   |
| PURPOSE           | Incomes and standards of living of 20 fishermen increased by 20% a year through diversifying their sources of income from fishing to nonfishing activities. Decrease in number of outboard motorized boats  | Track disposable income levels and how increased disposable incomes are spent, Note shift in composition of and preferences for market goods and services namely, possession of consumer durables and other household goods, diet changes and preferences from staples to luxury goods.<br><br>Decline in level of fishing effort                     | Willingness of tourists to pay for services in retrofitted fishing boats converted into recreation boats.<br><br>No new fishermen entering the same fisheries. Labour demand in local industries.   |
| OUTPUTS           | Gainfully employed fishermen in marine and nonfish-related jobs and in income-generating opportunities, earning Rp 200,000/month. Savings accounts opened for 20 fishermen, earning 10% interest/annum  | Number of tourists ferried by fishermen and earnings per day. Savings account passbooks. Number of factory jobs held by fisherfolk.   | Tourists take to water recreation and overcome hesitancy over water sport with the introduction of boat and water safety features for the marine ecotourism activities.<br><br>Factories willing to hire ex-fisherfolk with relevant skills |
| ACTIVITIES/INPUTS | Attract 20 fishermen owning 20 outboard motorized boats <b>out of the oily</b> sardine fishery in North Sumatera per year, by providing them with gainful employment in marine ecotourism, ferrying tourists for scuba diving, surfing, wildlife viewing or for work in factories or manufacturing plants, in petty trades, as these fishermen are not breaking <b>even in their fishing operations</b> , i.e. not covering all their <b>fixed</b> and variable costs of fishing. Projected <b>budget for this activity</b> is Rp 500,000,000 | Fishing boats <b>retrofitted to</b> accommodate and <b>cater to</b> tourist safety—water and boat safety features built in. <b>Fund</b> disbursement by activity and fiscal period. Number of training sessions held for fishermen to make them employable in local industry.<br><br>Enterprise management training sessions for self-employment held | Fisherfolk remain interested in their new-found occupations and do not return to fishing. Fishermen provided with training in marketable/occupational skills through vocational training centres  |



## Appendix J-II

### BOBP AND NATIONAL EXECUTION

'National execution' is a catch phrase which is increasingly evident in externally-funded technical/development assistance projects. This approach to project implementation is seen mainly as a means to achieve sustainability of the development process by building in the institutional capacity to carry it forward, beyond the timeframe of the project. There is increasing concern among the donor fraternity that money and effort expended should not result in project-induced changes coming to an abrupt halt at project termination, as has often been the case in the past. While this concern is real and the logic sound, there are several constraints which can perhaps be highlighted in the context of project activities of the BOBP during the past fifteen years.

#### *BOBP'S FIRST TWO PHASES*

Project activities during the first and second phase of BOBP, from 1979 to 1993, can broadly be categorized as follows:

- Development and demonstration of new technologies
- Support and assistance to national research efforts
- Assistance in institutional capacity-building and utilization;
- Assistance to countries in evolving national plans.

It is implicit that such assistance was given for mainly two reasons: lack of national funds and/or lack of national expertise.

Though the two projects – 'Development of Small-Scale Fisheries' and 'Coastal Fisherfolk Communities of the Bay of Bengal' – **had similar overall** objectives of improving the living standards of coastal fisherfolk, the former had activities with a technology development bias, the latter was more extension- and people-oriented. Project activities were usually a result of the felt needs of the sectoral Ministry in each country, but several were born out of needs expressed by fisherfolk and some were due to assessments by Project staff.

The main disciplines of the BOBP during this period were:

- Fishing vessel technology
- Fishing gear technology
- Coastal aquaculture
- Extension and fisherfolk community development
- Marine resources bioeconomics
- Socioeconomics.

Post-harvest issues were addressed separately by an ODA-funded project executed by the Natural Resources Institute (NRI) of the UK in Bangladesh, India and Sri Lanka, under the BOBP umbrella.

**Fishing Vessel Technology:** Project inputs were, generally, the development of new fishing craft and improvements to traditional craft to cater for felt needs. Project activities were restricted to Bangladesh, India, Indonesia and Sri Lanka.

In all four countries, the approach was to undertake pilot activities at chosen sites, work in cooperation with the private sector and demonstrate the technology using key fisherfolk.

'National execution' in its strict sense was not possible for three main reasons:

- No technical expertise in boat design was available in the Ministry to do pioneering work
- Prototype development involved close cooperation with the private sector boatbuilding industry
- The limited project timeframe required a strict time schedule

Certain important outcomes need to be highlighted. For technology transfer to occur, the target groups need to be convinced that the solution is techno-economically viable, technology development should take into account the availability of local skills and materials; solutions have a better chance of acceptance if they find favour with key fisherfolk; and, viable institutional credit should be available to fuel the development.

**Fishing Gear Technology:** Activities under this discipline were less pioneering in nature and involved, more, the improvement of local fishing gear in terms of efficiency and cost. Some activities were undertaken to investigate fishing methods, in order to ease the pressure on nearshore fishery resources. Here again, the timebound nature of the project made it expedient to work with key fisherfolk receptive to new ideas and able to actively participate in fine-tuning the development of new/improved technologies.

In the BOBP region, it is more common to find government expertise in fishing gear than in fishing vessel technologies.

**Coastal Aquaculture: Allotment of suitable areas** for coastal aquaculture activities and the relatively high priority accorded by member countries to this discipline precipitated an approach close to 'national execution'. In nearly all activities, the projects were executed by national agencies with professional and financial support from BOBP.

It was only during the second phase that the emphasis shifted to activities which were people-oriented and close cooperation was established with NGOs already familiar with the target communities.

**Fishery Resources:** Activities in this discipline were mainly to improve the information base for selected marine species, in terms of stocks and their exploitation, and to improve methodologies for data collection and stock assessment. As in 'coastal aquaculture', the activities were implemented by national fisheries agencies with technical and financial support from **BOBP**.

**Extension:** The subprojects in Extension essentially attempted to evolve strategies, methodologies and techniques (in a learning mode, in the process of implementing project activities) by adjusting to particular situations and conditions. The learnings from extension work raised issues regarding sustainability of, and the constraints to, 'national execution' by fisheries agencies.

Fishery extension work often overstepped the boundaries that are generally staked out for fisheries agencies. The needs of fisherfolk communities quite often involve tasks and measures which are outside the ambit of fisheries agencies. The wide range of interpersonal and group work skills needed is generally not available. Field staff lack the motivation and incentive, while scientists usually do not have the 'social-sciences' background to deal with social issues.

## ***FUTURE DIRECTION OF NATIONAL EXECUTION***

After forty years of technical / development assistance and human resources development, it is hoped that the critical mass of trained human resources in many departments of fisheries has now reached a stage where not only project implementation and management activities can be taken over by nationals themselves, but the burden of financing these activities can also be shifted to national governments. This healthy trend has already taken root in many newly emerging industrialising economies of Asia.

The new BOBP will collaborate in this endeavour to encourage this transition from externally-funded and international project staff-implemented projects to a nationally-funded and nationally-executed project management regime. To bring this about, reliance on local management models will be necessary, aided as it were through technical cooperation among developing countries (TCDC) mechanisms, whenever such opportunities present themselves.

## ***CONCLUSIONS***

The organization and structure of fisheries agencies in the BOBP region are, by and large, based on the earlier goals of increasing fish catch. The two main areas of work of agency staff have been disbursement of government subsidies for boats and gear, and basic fishery research. Forays into cooperatives, marketing and commercial boatbuilding have been made in some countries by establishing quasi-government agencies. Field staff have been involved mainly in collection of catch data and collection of loan dues and have no training to even discuss the felt needs of fisherfolk.

Under such circumstances, it is possible only to internalize development with the assistance of the private sector and NGOs, provided the project implementation strategy takes into account a participatory delivery system. Institution alization however, depends on what extent fisheries agencies can change their organizational and administrative culture.

## **PUBLICATIONS OF THE BAY OF BENGAL PROGRAMME (BOBP)**

The BOBP brings out the following types of publications:

Reports (BOBP/REP/...) which describe and analyze completed activities such as seminars, annual meetings of BOBP's Advisory Committee, and subprojects in member-countries for which BOBP inputs have ended.

Working Papers (BOBP/WP/...) which are progress reports that discuss the findings of ongoing work.

**Manuals and Guides (BOBP/IMAGL..)** which are instructional documents for specific audiences.

**Information Documents (BOBP/INF/..)** which are bibliographies and descriptive documents on the fisheries of member-countries in the region.

Newsletters (*Bay of Bengal News*) which are issued quarterly and which contain illustrated articles and features in nontechnical style on BOBP work and related subjects.

Other publications which include books and other miscellaneous reports.

Those marked with an asterisk (\*) are out of stock but photocopies can be supplied.

### ***Reports (BOBP/REP/...)***

33. *Nonformal Primary Education for Children of Marine Fisherfolk in Orissa, India.* U. Tietze and N. Ray. (Madras, 1987.)
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*Note: Apart from these publications, the BOBP has brought out several folders, leaflets, posters etc., as part of its extension activities. These include Post-Harvest Fisheries folders in English and in some South Indian languages on anchovy drying, insulated fish boxes, fish containers, ice boxes, the use of ice etc. Several unpublished reports connected with BOBP's activities over the years are also available in its Library.*

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