

# Bay of Bengal Programme

## Environment

CLEANER FISHERY HARBOURS  
IN THE BAY OF BENGAL

BOBP/WP/82



BAY OF BENGAL PROGRAMME  
Cleaner Fishery Harbours

BOBP/W P/82  
IMO

Cleaner Fishery Harbours  
in the Bay of Bengal

*Compiled by*  
R. Ravikumar  
*Consultant, BOBP*

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This report summarizes the proceedings of a regional consultation on Cleaner Fishery Harbours in the Bay of Bengal, held in Penang, Malaysia, 9-11 December 1991. It also includes summaries from reports on the status of fishing harbours in India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand.

The Consultation was held to review the findings of surveys conducted in BOBP member countries and recommend follow-up action.

The surveys, the Consultation and the report on it were jointly sponsored by the International Maritime Organization and the Small-Scale Fisherfolk Communities project of the Bay of Bengal Programme (BOBP).

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 – it develops, demonstrates and promotes new techniques, technologies or ideas to help improve the conditions of small-scale fisherfolk communities in member-countries. The BOBP is sponsored by the governments of Denmark, Sweden and the United Kingdom, by member-governments in the Bay of Bengal region and also by AGFUND (Arab Gulf Fund for United Nations Development Organizations) and UNDP (United Nations Development Programme). The main executing agency is the FAO (Food and Agriculture Organization of the United Nations).

The International Maritime Organization under its Global Programme for the Protection of the Marine Environment concentrates on activities of a catalytic nature, designed to support national and regional action to enhance marine environment protection.

This document has not been cleared by the governments concerned or by the FAO.

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*The two commonest causes of pollution in fishery harbours: (1) lack of reception facilities for garbage, resulting in it being dumped into harbour waters (above), and pumping of oily bilge water into harbour waters (below).*



## 1. INTRODUCTION

The substantial development in the fisheries of all countries in the Bay of Bengal region can be primarily attributed to the increase in the fishing fleet in general and motorized boats in particular. This fleet generally comprises of small day-boats exploiting the inshore waters as well as larger boats for harvesting fish resources in offshore and distant waters. Though a large portion of the overall fish production is from traditional boats operating from beaches and small fishing centres, the increasing number of motorized boats has resulted in the creation of fishery harbour complexes to provide facilities for berthing, handling of fish catches, bunkering and boat supplies.

Some larger harbours have been integrated with main ports, while several of them have been established exclusively for fishing boats. The main ports are required to comply with international and national regulations and measures with regard to pollution and the infrastructure to deal with it. Such measures and regulations are neither acceptable nor enforced in many fishery harbours and landing places.

The main activities in such places, viz, fish handling, bunkering, fish marketing and boat repairs, generate pollutants in proportion to the size of the fleet and the number of people using the harbour. Pollution can be in the form of oil leaks, bilge discharge, fish waste and garbage. In many cases, effluents from nearby industries and sewage discharge into the harbour exacerbate this problem. Such pollution can have a detrimental effect on the quality of fish handled at such centres, besides creating an unhygienic environment.

It was to study how serious the problem of pollution is in the fishery harbours of the region that the project 'Cleaner Fishery Harbours in the Bay of Bengal' was undertaken. The project has the development objective of creating an environment in fishing harbours/landing centres conducive to hygienic handling of fish. The immediate objectives were to

- (a) conduct surveys of selected fishing harbours/landing centres to obtain baseline information on pollution factors and how they affect the port environment and fish quality; and
- (b) organize a regional consultation to discuss the findings of the surveys and recommend follow-up action.

The Project was sponsored by the International Maritime Organization (IMO) and the Bay of Bengal Programme (BOBP), both of whom are concerned with cleaner harbours. The IMO's Global Programme for the Protection of the Marine Environment concentrates on activities of a catalytic nature, designed to support national and regional action to enhance marine environment protection. Improvement of the port environment, and collection of baseline information for pollution problem identification and assessment are two issues which are also of concern to the BOBP, with particular reference to fishing harbours and landing centres.

Under the Project, country surveys were conducted in selected fishing harbours in India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand by teams of national experts in the fields of marine pollution and post-harvest technology. Bangladesh did not participate in the surveys. These findings were discussed in a regional consultation organized in Penang, Malaysia in December 1991. The valuable information obtained from the surveys was appreciated by all at the Consultation, as such surveys had not been conducted before.

Besides the national consultants involved in the surveys, a representative connected with the management of fishing harbours in each BOBP member country participated. Other delegates included representatives from IMO, FAO and BOBP.

This report contains summaries of the proceedings of the Consultation and of the country survey reports.

## 2. SUMMARY OF CONSULTATION PROCEEDINGS

Status reports on selected fishing harbours were used as working documents for the Consultation. These reports contain information on the size of the fishing fleet, quantities of fish landed per annum, available infrastructure and facilities. Pollution factors affecting the port environment and fish quality were categorized as vessel-generated, user-generated and from external sources. The findings were well supported by visual records in the form of slides and video recordings.

The participants presented their findings and highlighted the main pollution problems in each centre. They also made their recommendations on how to improve the situation.

The presentations showed that fishery harbours could be polluted in many ways. It was noted that nearly all activities, such as fish landings, fish marketing, bunkering, boat supplies, boat repairs and fish processing, generate pollutants and if the infrastructure to handle them is inadequate – which is the case in most places – the port environment and harbour water quality suffers. The problem is exacerbated by sewage and other effluents flowing into the harbour in many cases. In addition, some harbours suffer from specific problems such as siltation and overcrowding that further aggravate environmental degradation.

The delegates viewed with concern the fact that harbour water is used to clean the fish at some stage after landing, in nearly all fishing harbours.

**The main conclusions of the discussions were :**

- Harbour water pollution is mostly organic in nature.
- Garbage collection and disposal facilities must be improved.
- Toilet facilities must be improved.
- Users lack awareness on the importance of a clean environment.
- Standards are required for water quality acceptable for cleaning fish.
- Guidelines are required for suitable disposal of sewage, effluents, fish waste and toilet waste.

While discussing suitable follow-up action, some important issues that needed to be



*Organic pollution*



*Garbage disposal*



*Toilet maintenance*



*Environmental pollution*



*Water degradation*



*Waste disposal*

considered were brought out. For example, while user-generated pollutants causing localized pollution could be remedied by providing the necessary infrastructure and facilities, pollution from external sources was beyond the control of harbour managers. Another was the importance of taking due note of the economic loss that may result through non-compliance with good standards and practices.

The Consultation noted that two distinct follow-up actions were required : – in the short term, to address pollution aspects and other shortcomings causing localized harbour pollution, and, in the long term, to consider the overall affects on small-scale fisheries of environmental degradation beyond the confines of fishery harbours.

Recommendations were made, after further discussions, for national, regional and international agencies to consider.

## 2.1 *Recommendations*

### 2.1.1 SHORT TERM

Ensure the immediate improvement of the port environment by

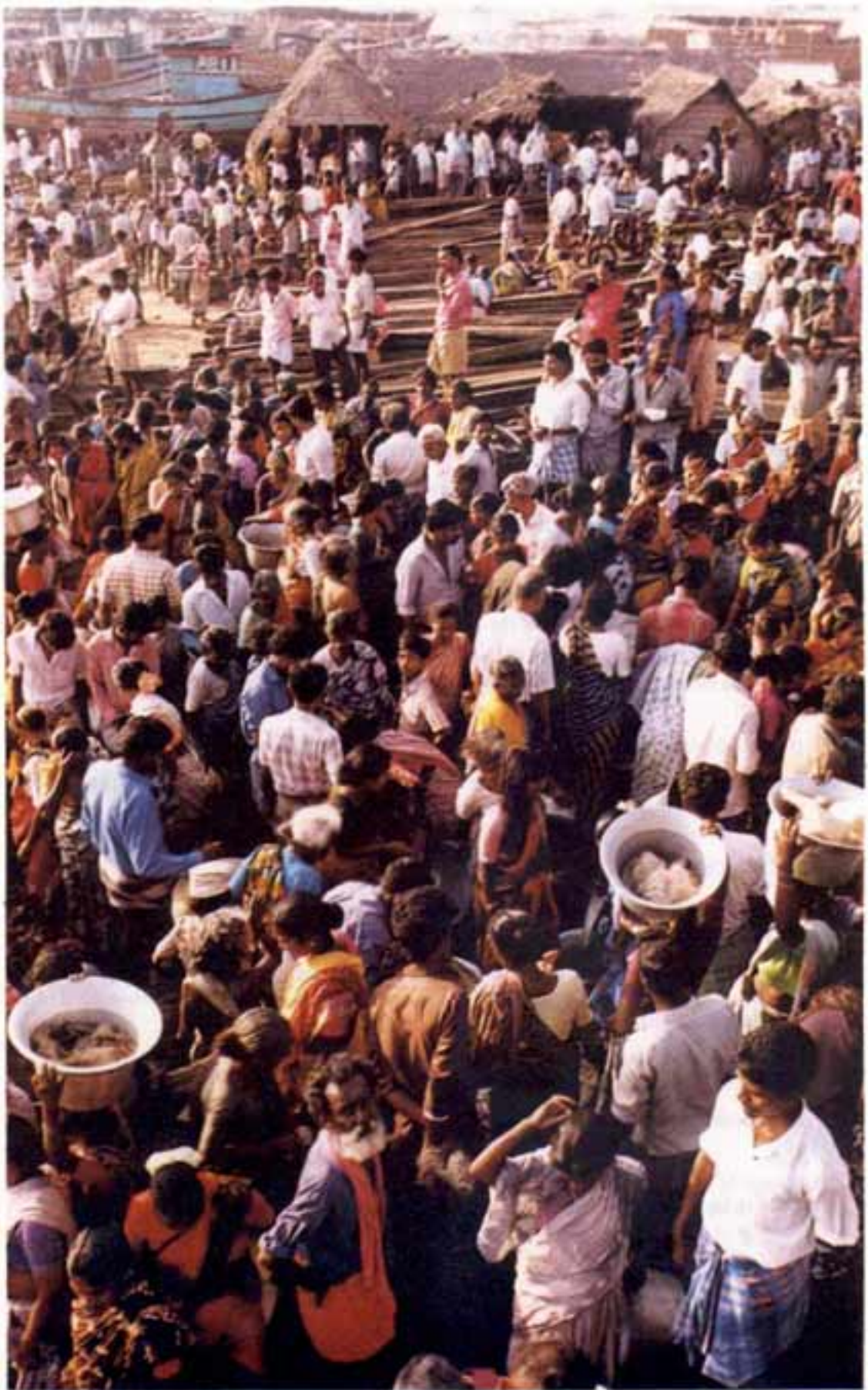
- (a) improving facilities for garbage collection and disposal;
- (b) providing and/or rehabilitating basic toilet and fresh water facilities in the harbour;
- (c) using appropriate technology to improve facilities and fish handling;
- (d) providing guidelines and promoting extension activities to organize the various groups involved to collectively address the problem;
- (e) awareness-building for fisherfolk, traders, harbour administrators and others involved, including children, on the importance of a clean environment for better hygiene and food quality;
- (f) training of managers and education of users in the proper use of facilities; and
- (g) achieving voluntary acceptance by users of guidelines for the use and upkeep of the harbours where rules and regulations do not exist.

### 2.1.2 LONG TERM

To achieve better management of the pollution problem, considering its adverse effects on the small-scale fisheries sector, due consideration should be given to

- (a) integrated planning by all those responsible for environment, urban planning, industrial development, health and fisheries, so that they could collectively address environmental issues affecting the fisheries sector;
- (b) establishment of acceptable standards for water quality, disposal of waste from industry, disposal of domestic sewage and treatment of solid and liquid wastes from the fishing industry;
- (c) more in-depth surveys, including the socio-economic aspects of future harbour development; and
- (d) zoning of industrial areas and land reclamation in relation to existing and planned small-scale fishery operations and aquaculture activities.





*The Madras Fishery Harbour: The kattumaram land their catch in this open stretch where every activity from cleaning the fish to retail sales, then takes place.*