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HARBOUR PLANNING AND
MANAGEMENT AT THE MACRO LEVEL

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1.0 INTRODUCTION

Fisheries infrastructure in Indonesia is divided into two main groups : **National** and **Provincial**.

National ports are subdivided into three categories according to their handling capacities as follows :

Class A or oceanic port can handle vessels up to 1500 GRT;

Class B or archipelagic which usually handles up to 50 tons of fish daily;

Class C or coastal port which handles up to 20 tons daily.

The Provincial ports, on the other hand, are fish landing centres, known locally as PPI (short for Pangkalan Pendaratan Ikan).

Despite the time constraints, the mission visited a class A port (Muara Baru in Jakarta), a class B port (Pekalongan in Semarang) and the PPI at Merauke to try to identify possible shortcomings in the operational and management sectors at the macro level and propose future training programmes.

2.0 CURRENT OPERATIONAL PRACTISES

Despite the fact that the mission only visited 3 sites, the various shortcomings identified at each site proved to be more of a generally accepted trend rather than isolated cases.

The shortcomings basically fall into four categories :

- a) Berth management;
- b) Onshore facilities;
- c) Hygiene;
- d) *Environmental awareness.*

2.1 Berth Management

The quays nearest the market halls do not appear to function as off loading quays at all, but rather as general quays.

At Pekalongan, for example, 100 GT vessels, just back from a 4 week trip, were seen to tie up at the off loading quay in the afternoon and only discharge the fish the next day, in time for the auction. When queried about this they blamed the lack of cold storage space ashore. Simple tie-up areas, which would liberate a lot of valuable quay space, do not seem to exist and give rise to the false impression that the harbour is congested.

The time factor (time between catch and sale) and ambient temperatures never appear to be of importance to the vessel owners, even when onboard freezing facilities are not available.

At Muara Baru, for example, the handling of un-iced fish and the auction of badly iced fish continues well into the late morning, with ambient temperatures of around 30 degrees Centigrade. In other countries, even when the fish is iced properly, most handling and auctioning is done overnight, when the ambient temperatures are substantially lower.

2.2 Onshore Facilities

The basic onshore facilities do not appear to be geared to the real demands of a modern fisheries industry, which requires a high order of cleanliness and hygiene :

- 1). Water for hosing down the auction floors is always in short supply, resulting in blocked and smelly drains;
- 2). Rainwater collection and storage systems do not appear to be installed anywhere;
- 3). Filtered seawater, a good fall back solution in areas where fresh water is scarce, is not used anywhere;
- 4). Fish baskets appear to be too flimsy and do not allow for proper vertical stacking without damaging the fish;
- 5). Toilets always appear to be few and far apart;
- 6). Simple cold rooms to store supplies of fresh fish appear to be missing entirely from the shore facilities;
- 7). After weighing, off loaded fish is never re-iced with good fresh ice but simply covered by one or two chunks of soiled ice from the hold, further adding to the spoilage of the catch.

2.3 Hygiene

Most people in the harbour area (vessel crews, handlers and packers, labourers, etc) do not appear to understand that they form part of the food industry and that the fishing port, together with the fishing vessel, is part of a food processing factory. For example :

- 1). In all the harbour sites visited, onboard toilets (discharging directly over the stern) were in constant use;
- 2). On more than one occasion, neighbouring vessels were simultaneously hosing down fish or washing fish holds with harbour water, pumped aboard the vessels;
- 3). Not surprisingly, fish holds aboard the vessels have been found to be contaminated with faecal colliforms;
- 4). Rotten fish was found lying around in many places, attracting all kinds of pests;
- 5). Gutting and cleaning of fish is allowed anywhere inside the harbour area;

- 6). It was observed that the fish boxes are difficult to keep clean due to a wrong design. The problem is further exacerbated when good supplies of water are lacking;
- 7). The fact that the landed catch is usually in such a bad state of decomposition (only 5-8% is anywhere near fresh) never seems to worry either the vessel operators or the fish buyers themselves;
- 8). To add insult to injury, at all the places visited, the landed catch was handled and treated very roughly, further lowering its commercial value.

2.4 Environmental Awareness

Pollution of the environment by the fishery industry, itself a food provider, is rampant and the environment around the fishing harbours appears to be completely neglected.

For example, at Pekalongan :

- 1). Large slicks of oil (engine, hydraulic and bilge) were observed floating amidst the moored boats.
- 2). The area around the refuelling berth was found completely smothered in oil and gasoline, indicating carelessness in the handling of petroleum products;
- 3). The areas around the quays are replete with plastic bags and other flotsam, which could be sucked inside engine cooling systems;
- 4). Pieces of old net and mooring lines are also thrown overboard making it difficult for the authorities to dredge by cutter suction.

3.0 CONCLUSIONS

Irrespective of the size and class of harbour, three major shortcomings appear to affect the operational and management aspects of current fishing harbours :

- 1). **DESIGN** : Not enough attention is being paid to minor design details at the planning stage of the harbours leading to a detrimental knock-on effect on harbour operations;
- 2). **ENFORCEMENT** : If statutory laws do exist to combat some of the more obvious shortcomings, then enforcement of the law is clearly lacking.
- 3). **EDUCATION** : The fisheries industry as a whole suffers from a wide lack of understanding of the food industry, of which it forms part.

These shortcomings, if not addressed at an early stage, will eventually become a hindrance to development, especially when fishery products have to compete in the international market.

In the **immediate future**, therefore, consolidation of the existing harbour infrastructure should take precedence over the construction of new facilities.

However, future harbour projects should alleviate the above mentioned shortcomings directly, through improved design concepts, following wherever possible, international standards for handling and hygiene.

4.0 RECOMMENDATIONS

Consolidation of the existing network of coastal infrastructure or fishing harbours should take the form of a three-pronged approach, consisting of :

- 1). Input by foreign consultants and/or overseas training of selected DGF staff (design and construction supervision Engineers) from the Infrastructure Department on such topics as water supply, environmental engineering, waste disposal, public health engineering and harbour management techniques in established overseas fishing ports;
- 2). Local training and/or upgrading of harbour masters, assistants, hygiene inspectors etc. to tackle the enforcement of laws in the field;
- 3). Nation-wide extension programme to improve the industry's workforce (anybody remotely connected with the industry) and its attitude to the fisheries industry, with special attention to the environment, post harvest handling and hygiene.