



Centurion  
UNIVERSITY



Centurion  
UNIVERSITY

# HANDLING OF FISH IN LANDING CENTRES, DEFECTS & MODIFICATION NEEDS



# INTRODUCTION

- Quality of the final products always depends on the Quality of Raw material.
- Flesh of live fish is free from bacteria. When the fish is dead, bacteria tend to penetrate in muscle & produces metabolites causing spoilage.
- Elevated temperatures, poor sanitary conditions, inadequate hygiene of workers speed up spoilage
- Protection of consumer against food borne diseases and maintenance of manufacturer.s reputation mainly based on sanitation applied to food product.

# HANDLING OF FISH ONBOARD

- Fishing shall not be done from polluted water.
- Fish hold & boat-deck shall be in such type which can be cleaned & disinfected.
- Fish handling surfaces shall be smooth, non-corrosive & free from cracks and crevices.
- Fish contact surfaces should be cleaned after every hauling.
- Ice should be from good quality potable water.
- Walking or standing over fish is not advisable.
- Fish flesh should not be damaged if using showels.
- After sorting immediately fish shall be mixed with ice.



# HANDLING OF FISH IN LANDING CENTRES

- Instead of Bamboo baskets, wooden boxes and similar container polythene boxes should be used



- During unloading fishes, fishes should not exposed to adverse elements of nature



- Washing the catch using coastal water is dangerous.



- Sorting the catch on sea beaches should be avoided.



- Fishes de-iced for weighing shall be re-iced & chilled below 20°C as quickly as possible.





- All the containers/contact surfaces used for unloading and weighing shall be cleaned & disinfected immediately.



- Precaution have to be taken to prevent the entry of flies, cats, dogs, rodents etc. in the fish handling premises.



- **Type of ice used**
- The type of ice used was crushed block ice. The amount of ice was not sufficient at all. Therefore the quality was not maintained upto the marked. The icing process was also not correct; they were just dumping the fishes and pouring some few numbers of ice pieces over it.



# MODIFICATION AREAS IN LANDING CENTRES FOR BETTER QUALITY FISH

## WATER SUPPLY

- **No water, no port.**
- Water is required at every stage of the fishing process, both on board the vessels (for rinsing and hosedown), And ashore in the port (for rinsing, ice production and hose-down of work areas and hygiene).
- Whereas a town or mains supply is the preferred option, many fishing ports depend on bore wells.

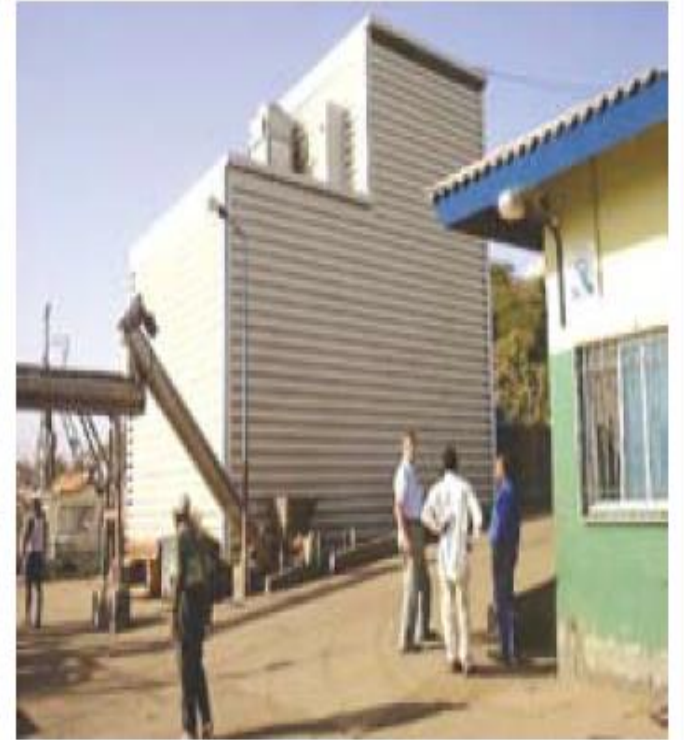
FIGURE 1  
Buffer tanks to even out fluctuations in town  
mains supply



# ICE SUPPLY



FIGURE 15  
Typical flake-ice plants located at the water's edge



# SORTING PLATFORM

**FIGURE 31**  
**Crouching-only sorting platforms under construction**



# AUCTION/MARKETING HALL



# COLD ROOM

- Refrigerated chill rooms are required for the temporary storage of freshly iced fish.
- The operating temperature inside a chill room is around 1 °C.





# COLD STORES

- Cold stores generally consist of a single-storey building having a single or a multiple Number of cold rooms operated at temperatures in the range  $-24^{\circ}\text{C}$  to  $-30^{\circ}\text{C}$ .



# SANITARY FACILITIES

- Adequate sanitary facilities should be provided for the staff, fishers, handlers and merchants working in or around the fish hall.

**FIGURE 37**  
**Wash-hand basins and showers**



# TRANSPORTATION FACILITIES



FIGURE 48  
A large truck picking up fish from a small fishing vessel



# FISH PROCESSING IN LANDING CENTRES



CONTD . . .

**FIGURE 32**  
**Net-covered metal framework suitable for**  
**fish drying or smoking**



# ADVANCE AREA OF NEEDS IN FISH LANDING CENTRES/HARBOURS

## Servicing Mariculture Facilities

- Fish cages or suspended shellfish growout systems,
- Port or harbour facility is often preferred, particularly where offshore fish farming is practiced. Thus, during a harbour planning exercise the mariculture sector should not be ignored and indeed special attention should be given.

FIGURE 1

Hatchery operation located within a harbour facility



# CONCLUSION

- Assuring fish quality and food safety in a fishing harbour is aimed at **reducing postharvest Losses** and to ensure the proper handling of fish at sea as well as on shore So that the fish leaving the fish landing centres is of an assured quality and safe for human Consumption.
- There are no specific regulations for the proper handling of fish on board Vessels and at the fish landing centres but guidelines exist on food safety **regulations covering cleanliness and sanitation of Food contact surfaces, transportation boxes and water used in the processing chain..**

# REFERENCES

- Good Manufacturing Practices In Fish Handling By T.S.G.IYER, CIFT
- **MARINE FISHERIES INFORMATION SERVICE, CENTRAL MARINE FISHERIES RESEARCH INSTITUTE, COCHIN, INDIA**
- Fishing Harbour planning, construction & Management, FAO Fisheries & Aquaculture Technical Paper,539
- GANSBAAI FISHING HARBOUR - THE DESIGN AND CONSTRUCTION OF A BREAKWATER
- ON A HOSTILE COAST By W S van Dijk, A P M Vonk, G de F Retief
- Domestic Fish Marketing in India – Changing Structure, Conduct,
- Performance and Policies By B. Ganesh Kumar\*a, K.K. Dattaa, P.K. Joshia, P.K. Katihab, R. Sureshc, T. Ravisankard, K. Ravindranathe and Muktha Menona



