

## **FISHING PORT MANAGEMENT, THE FORGOTTEN SUBJECT**

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## **Summary**

The choice of the title of this article reflects the absence of any guidelines for fishing port management in international professional literature. It is not surprising that very fundamental considerations of any modern management concept, such as planning, organization, management responsibility, etc., are still alien terms for present fishing port administrators and managers in most developing countries. This article attempts to provide a range of knowledge, which is compulsory for port managers, by stressing the importance of understanding the very basics on which the existence, function, performance and sustainability of operations of a modern fishing port depends. The complexity of external and internal conditions of the fishing port business environment demands a concept that is primarily able to recognize changes and risks in port management in order to make decisions which serve to secure a long term financial sustainability of port operations and ensure recovery of investment and operating costs from fishing port operation charges, rather than depending on government subsidies. The introduction to modern fishing port management and operation given provides rough guidelines for preparing fishing port managers to plan and implement systems of modern fishing port management and operation control, in consideration of the special features of the port's business environment. However, attention must be paid to the differentiation between the management guidelines given here and training units. Training units contain more comprehensive background knowledge to support the understanding of the contents of the relevant guideline sections. The contents of the article reflect the author's own experience gained during long-term direct involvement in fishing port management, planning of port management concepts, and advisory services to port authorities in all aspects of the kaleidoscopic features of a port's management.

## **1. Historical Development of Service Functions of Fishing Ports**

Traditionally, fishing harbors served more or less the local port based fishing fleet by provision of vessels orientated services such as mooring, unloading of fish, supplies of fuel, water and store provisions, and small vessels repairs, as well as simple fish

handling and transportation ashore. Forced by dynamic changes in fisheries operations and technologies, quality-conscious handling methods for fish, and the necessity for high throughputs, the role and functions of fishing ports actively developed to serve the changing requirements of port users. Important additional services were added because of the development of the business environment that required extended harbor facilities for bigger, more sophisticated fishing vessels, short and medium term storage of fish, ice supplies for fishing vessels and traders, accommodation of fish processing industries, statistical recording of port activities, and last not least, the need for consideration of environmental protection. In fishing ports with fish landings by international vessels, public services were added—customs, immigration, health services, and police.

Fishing port management has faced a rapidly changing sea and land borne volume of traffic, accompanied by deep structural changes in fishing fleet operations, fish handling and transport, and has had to cope with increased industrialization of originally traditional fish processing methods. Modern technology, equipment and work methods were introduced. Organization of port operations, as well as information processing and documentation, were increasingly directed by process computer application. Operational systems (as management tools) had to be changed and must be permanently adjusted to meet the requirements of transit of fish through the port—landing/unloading, handling, sales, temporary storage or warehousing processing, delivery, and distribution. Fishing ports had to react to the changing situations and they are still reacting

## **2. Definitions Applied**

The importance of the application of clearly formulated definitions for the purpose of policy setting and management planning is widely acknowledged. Therefore, most essential definitions are given below.

### **2.1 Fishing Port—System Approach**

A Fishing Port is a system combining infrastructure facilities, human resources, and management concepts, dedicated to the purpose of servicing the fishing fleet, the requirements of the fish industry and the development of the fisheries sector as a whole.

This definition describes the base parameter of a functional operation system and is generally applicable to all fishing ports. The size of the fishing port in terms of inputs (infrastructure, human resources, management concept) causes gradual differences in terms of outputs (services to the fishing fleet, fish industry and fisheries sector).

### **2.2 Fishing Port—Operational Approach**

The definition of port operations considers that a fishing port serves as an industrial zone for unloading, processing, storage and marketing of fish, as well as for maintaining and servicing the fishing fleet. In consequence, a fishing port is an integral part of the national fishing industry, an important element in promoting the fish industry, and an operation base for the viable and sustainable conduct of the fishing business.

Subsequent to this definition, port operations management embraces the entire range of operational and technical activities necessary to ensure an organized and efficient conduct of port functions and services, port maintenance and provision of public utilities, and port safety and security. The extent of port operations depends on purpose objectives and development targets as defined by the port management.

### **2.3 Fishing Port—Functional Approach**

The term port functions include all activities carried out by the port for operation and maintenance of the infrastructure facilities, for organization and conduct of port services required by vessels, fish processors and buyers, collection of port and service fees, and administration.

The fishing port provides dedicated port and supporting infrastructure facilities required by the fishing and fish processing industries for:

- the safe berthing of fishing vessels, where the vessels can discharge their catches, can take on bunker, water, ice and other necessary provisions, and can berth for idle times and repairs;
- the use of public utilities by provision of networks for distribution to port customers of electricity, water, as well as environmental protection facilities required for garbage collection and disposal, wastewater and sewage discharge and treatment, and oil reception from vessels and disposal, and
- the development of fish processing industries and markets and related highest hygienic standards by provision of land areas and optimized land use planning, including transportation and communication facilities.

## **3. Key Functions of a Modern Fishing Port**

Over the past decades of the twentieth century managements of fishing ports had to cope with substantial changes in the world's fishing business by adjusting the functions of fishing ports. Major causes were:

- the declining productivity of traditional fishing grounds, causing fishing fleets to operate in far away, new areas with subsequent operation of bigger vessels and improved fishing gear;
- increased public environmental awareness and consciousness of fish quality, demanding proper use of ice and refrigerated storage on vessels and in the fishing ports;
- changes in consumer behavior, with preference for processed fish, and
- tremendous expansion in world trade and changing modes of transport by refrigerated fish carriers, refrigerated container and air transportation.

### **3.1 General Management Function**

This function can be considered the umbrella of all functions and services of the fishing port. The function is subject to influence by national development policies, geographical and political priorities, and medium- and long-term policies and strategies for an

optimized port development. It has to safeguard the intentions of the government and private players in the fish business. It has to plan and supervise the administration, operation and maintenance of facilities. Comprehensive knowledge of all aspects and components of a fishing port's operation and service activities will enable the management to trace bottlenecks and to influence relevant parameters of the management process. The micro aspect of the management functions is mainly concentrated on the optimization of functional planning of the different services of the fishing port. Central parameters connected with the best possible methods to serve fishing vessels and fish passing through the port are rapidity, safety, cost efficiency and flexibility.

### **3.2 Operation Function**

Components of the operation function of a port are: provision of safe approaches, safe navigation, sheltered berthing within the port, control of vessel documentation, and fish transfer operations—unloading activities, additional services such as washing, icing, auctioning, weighing of fish, provision of traffic areas, roads (etc.) and skilled labor. The problems of coordinating the interface activities between fishing vessel and the unloading quay are most important in fishing ports serving a large fishing fleet but providing insufficient length of berthing facilities. Disposition and ownership of maritime approaches, land and hinterland approaches, have decisive influence on the development of fishing port activities and the general functioning.

### **3.3 Service Function**

The receiving and delivery function of a port represents the connecting link in the movement chain of fish from fishing vessel to customer. A smooth functioning of this function requires continuous and intensive coordination with all port users and individuals outside the direct control of the port. Lack of port infrastructure and required services may cause heavy disturbances of a smooth operation.

The storage function includes short-term storage, and protection against weather and pilferage. Insufficient storage facilities (with respect to both quantity and quality) are frequently a reason for deterioration of fish

With regard to the development function of a port, there is little doubt that optimized planning, organization and implementation of the whole range of activities of the different service functions can be realized by encouraging private initiative. Medium- and small-scale enterprises may be well suited to develop the best possible solution regarding flexibility and adaptability, as well as cost efficiency. Private competition will in most cases safeguard the adequacy of offers corresponding to the demands of customers.

## **4. Differentiation of Port Functions and Services**

Port functions means the provision of facilities and systems for discharge of:

- operative functions—infrastructure and public utility facilities;

- administrative functions—systems for management, development and control of the fisheries sector within the sphere of influence of the port, and
- authoritative functions—facilities and systems for observing national and international legal requirements are usually the responsibilities of fishing port management.

Port services means the actual conducting of service activities regardless of operational organization of responsibilities by (for example) port management, or private sector participants. Port services involve all activities within the port area which are carried out to serve the fishing fleet, port users and customers as well as the general public, including breakwaters to provide a safe and sheltered harbor basin for fishing and other boats and vessels.

#### **4.1 Port Infrastructure versus Suprastructure Facilities**

A fishing port should serve as an integrated fish industry with operational facilities, provision of repair and maintenance services for the fishing fleet and fish storage, and processing and sales activities. Consequently, the fishing port complex is subject to multipurpose use involving all functions and services directly and indirectly connected with the fishing and fish industry.

However, since the managing Port Authority itself should be to a large extent self-contained and financially self-sufficient, provision of operational infrastructure facilities is deemed to be the responsibility of the Port Authority, whereas conduct of all services required by vessels and industry should finally be transferred to private sector investors in facilities and operators of services. Therefore, a differentiation between infrastructure and suprastructure facilities is considered necessary.

##### **4.1.1 Port Infrastructure Facilities**

These include:

- Wharves for vessel berthing purposes, including the unloading of fish, provisioning, idle time mooring, and floating repairs. Design and alignment of the wharves, jetties and quay walls should provide all time safe navigation and berthing of vessels, safe access from vessels to shore, and should be equipped with appropriate fender systems, with shore to ship electrical power connection, a fuel and water bunkering system, and area lighting.
- Public utilities include electrical power distribution networks, water distribution networks for: potable water (including if necessary a water purification plant), water piping systems for wash down purposes and area cleaning, garbage and waste collection and disposal facilities, oil reception and disposal/recycling facilities, wastewater discharge and treatment plants, sewage discharge and treatment systems, and fire fighting alarm and hydrant networks.
- Transport areas include paved public traffic, parking and operation areas, with area lighting and surface water drainage systems to meet operational and hygienic requirements.

- Building include administration buildings, fish washing, sorting, packing, icing, and auctioning sheds, guard houses, a quality control laboratory, and fish market halls with refrigerated intermediate storage of fish.

#### **4.1.2 Port Suprastructure Facilities**

The port suprastructure facilities embrace all facilities within the port's area that are necessary for fish handling and quality maintenance, processing, storage, fish marketing and transportation. Such facilities should be subject to private investment and provided services. Suprastructure facilities, private or port owned, are major sources of the port revenue. The term includes commercial/industrial orientated facilities, such as: fish trading facilities, cold stores, ice plants, canning factories, smoking plants, salted fish processing plants, ships repair facilities, workshops, provision stores, and fuel bunker stations.

#### **4.2 Differentiation of Port Users and Customers**

Both terms are widely used without clear definitions. A differentiation is based on the location and importance of the port to the participants in fisheries:

The term port users includes the fishing fleet, service operators, and traders and fish processors located with facilities or based with their business venture within the port boundaries.

Port customers are mainly traders, transport operators, suppliers of auxiliary services and other non-port based businesses with temporary activities within the port.

### **5. Fishing Port Management Planning**

The development of fishing ports from simple fish landing sites, with little management involved, to minor and major fishing ports, more under government administration than management, to major “Nucleus and Plasma” ports, with professional and autonomous managements and an all embracing range of functions, to major “Landlord” ports with excessive private participation in fishing port functions and services, has required permanent changes in management functions.

Fishing port management is a most challenging task when considering that the port shall be the engine of growth for fisheries development as a whole under the “Nucleus and Plasma” concept. For the experienced, knowledgeable port manager, it is not an exceptionally difficult task.

It requires a full understanding of the way fisheries development works and how an efficient operating port has to react to serve the customers. Many operational and technological changes may occur in future. Therefore, it is of utmost importance that a port management is as flexible as possible in order to ensure a prompt response to changing demands.

## 5.1 Some Essential Considerations for Port Management Planning

The management and organization rules of a fishing port serve to clarify all aspects of port functions and operations, e.g., allocation of the various activities conducted in the port, planning and control functions, financial guidelines, and last not least, hierarchical competence structures and signatory authorities. However, despite its central importance, organization itself is only one of the tools used by a successful management. Organization can only offer a framework, while management and staff give life to this and make it work.

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### Biographical Sketch

**Roland B. Scheffczyk** graduated from University of Bremen, Nautical Academy, Bremerhaven, Germany, with a Diploma in Nautical Sciences and Captain Licenses for commercial and fishing vessels in unlimited trade. He is a university certified lecturer and holds commercial pilot licenses. He served as captain on vessels in worldwide trade and continued his studies in maritime law and economics at the University of Hamburg. His professional career has included building, reorganization and management of major companies in Saudi Arabia, Malaysia and Argentina. As manager of port development projects, he has designed and advised government agencies and private investors on management of more than hundred ports, dedicated terminals and fishing ports, successfully promoting privatization and public-private participation in port management. He is author of the first comprehensive Fishing Port Management and Training Manual financed under an Asian Development Bank project.