

## Planning of Fishing Ports (MARCOM WG 224)

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### Summary

PIANC PTCII Working Group 18 (WG18) published a guideline in 1998 to present the good practices for the construction a new fishing port or development of an existing port. However, considering the changes in circumstances and assumptions of that guideline (e.g. climate change, new trends in the fishing industry) it was necessary to develop a new guideline. Therefore, PIANC working group (WG) 224 was established to undertake this task. The new guideline will cover various aspects of the design and maintenance of the fishing ports while introducing the new technologies and best practices to design a resilient fishing port.

*Keywords: fishing ports, planning, climate change*

### Introduction

This paper aims to present the latest updates on the progress as well as highlighting some findings of the working group (WG) 224, which is responsible to review recently published technical information and lessons from recent efforts related to the development, management, and operation of fishing ports, and then incorporate useful information to the existing PIANC report and ultimately publish the new guideline for the planning of fishing ports.

### Background

In 1990's, the changes in the fishing industry, such as the declared 200-mile EEZ and overfishing, made it essential to plan effective fishing ports coordinated with organizations who represent the fishing industry. In 1998, PIANC PTCII Working Group 18 (WG18) published a supplement to Bulletin No. 97, "Planning of Fishing Ports", providing information and recommendations on good practices that must be considered when constructing a new fishing port or expanding an existing port.

At that time the report was the only one equivalent to a technical standard on fishing port planning and it hasn't been revised. The report has been used by a wide range of stakeholders including governments, councils, port authorities, fishermen's associations, fishing industries, design consultants, universities and research organizations.

Since publishing the WG18 report, circumstances in the fishing and fishing ports have significantly changed as follows:

- World trade and consumption of fish products have dramatically increased as well as the production of world fisheries and aquaculture.
- Implementation of Individual quota (IQ) systems and individual transferrable quota (ITQ) systems, which are more effective methods for fish resource management.

- The agreement on Port State Measures to combat illegal, unreported, and unregulated fishing has been enacted.
- Sustainable fisheries and aquaculture, as well as quality control, have widely expanded reflecting the public's growing concern.
- Natural disasters caused by high waves, tsunamis, earthquakes, etc. have become more frequent and greater in scale.

Therefore, it was proposed to update the WG18 report.

### Intended Product

The intended product will be an updated version of the PIANC WG18 report. The guideline will seek to cater to fishing ports of different scales, in the developed and developing world, and to expansions/redevelopments as well as greenfield facilities. A variety of stakeholders can use the new guideline, including governments, town councils, port authorities, fishermen's associations, fishing industries, consultants, universities and research organizations.

### Guideline breakdown

The new guideline will include the following main sections:

- A. Development of Fishing Port and Resource Planning Policies
- B. Planning Principles to Ensure Efficient Investment in Ports and Port Related Infrastructure
- C. Disaster-Resilient Ports
- D. Institutional Aspects of a Fishing Port
- E. Cost-Benefit Analysis
- F. Technology Development for Off-loading, Handling and Marketing of Fish
- G. General Guidelines for Auction Halls
- H. ICT, IoT Utilization in Fishing Port Operation
- I. Maintenance of Fishing Port and Port Facilities
- J. Training
- K. Environmental Aspects of the Planning of Fishing Ports

Chapters on Disaster Resilience and Maintenance have been added comparing to WG18. The brief

overview of the contents the above sections, which has been drafted so far, is presented below.

### **Section A. Development of Fishing Port and Resource Planning Policies**

In this section, the background of fishing industry as well as its importance and relation to the sustainable goals are presented. Moreover, the summary of the elements or facilities related to fishing ports (both landside and seaside) are presented to establish a common ground for other sections.

### **Section B. Planning Principles to Ensure Efficient Investment in Ports and Port Related Infrastructure**

The focus of this section is presenting the guidelines and recommendations regarding the planning of fishing ports, which will mainly include:

- Location and Site Selection
- Infrastructure Requirements for different types of Fishing Ports and/or Basins
- General Guidelines for Planning Onshore Infrastructure (such as Auctioning facilities, dispatching and shipping areas)

In addition, some mini-cases across the world are presented, which shares the information about harbour layout and background of various fishing ports and harbours.

### **Section C. Disaster-Resilient Ports**

Section C provide an overview about the effects of the climate change on the fishing ports and natural disasters causing frequent damage to fishing ports. Then, various recommendations regarding building fishing ports resilience and the risk assessment procedure are presented.

### **Section D. Institutional Aspects of a Fishing Port**

The purpose of this chapter is to present the main institutional aspects of a Fishing Port illustrating typical administration, marketing and organisational structures. Then, a review of different management strategies that could be followed and their relative advantages and disadvantages are discussed.

### **Section E. Cost-Benefit Analysis (CBA)**

The goal of the CBA chapter is to ensure that a well informed and balanced decision-making process would be undertaken based on financial, social and environmental grounds, to establish the correct investment priorities between competing projects or project options. This chapter is largely based on the 'Guideline to Cost-Benefit Analysis of investment Projects, Economic appraisal tool for Cohesion Policy 2014-2020', European Commission (December 2014).

### **Section F. Technology Development for Off-loading, Handling and Marketing of Fish**

It has become an increasingly common desire or requirement of ensuring the preservation of quality and thus value of the fish, regardless of the species and what the cargo is to be used for. Section F covers the most common methods/techniques for unloading and handling (such as offloading, Wet fish pump) as well as marketing practices.

### **Section G. General Guidelines for Auction Halls**

The auction hall shall be planed and designed to fully function to ensure the safe and efficient operation of the entire process from receiving to dispatching or transporting fish and fishery products under the appropriate hygiene management. Therefore, considering the importance of the auction halls in fishing ports, Section G covers this element of the fishing ports.

### **H. ICT, IoT Utilization in Fishing Port Operation**

This section presents the Information and Communication Technology (ICT) systems used in the fishing industry and harbor, such those applied for recording, reporting and transmitting information on the catch and trade of fish and fishery products.

### **I. Maintenance of Fishing Port and Port Facilities**

This chapter describes the maintenance of fishing port facilities so that they should be in service and maintain their functions at the appropriate levels for a long period of time. The focus of this section is the principles of the LCM-based maintenance (i.e. stock management) for maintaining the seaside and landside facilities of the fishing harbours.

### **Section J. Training**

Section J presents the general guidelines about the training of the resources and stakeholders involved in the management and operation of fishing ports.

### **Section K. Environmental Aspects of the Planning of Fishing Ports**

In general, this section will follow the processes proposed by the PIANC Environmental Commission (EnviCom) in their Work Group publications (e.g. WG 143 2014 and WG 176 2018).

### **Summary and Recommendation**

Currently, the first draft of the WG 224 has been completed and the team is seeking inputs from contributors beyond the members to help generate an improved document. The contribution of A-NZ companies and individuals will be largely welcomed.

### **References**

[1] PIANC Working Group 224. (2022). The first draft of the Planning of Fishing Ports (MARCOM WG 224).