THE ROLE OF FISHING PORTS IN THE SUSTAINABLE BLUE ECONOMY

ORIGINAL SCIENTIFIC PAPER

Gorana Jelić Mrčelić[1]✉, Luka Živanović, Vedrana Nerlović[2]

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[1]University of Split Faculty of Maritime Studies
[2]University of Split, University Department of Marine Studies

✉ gjelic@pfst.hr

ABSTRACT:
Fisheries and aquaculture play an important economic, environmental and social role. The development of fisheries and aquaculture depends on many factors, including adequately equipped ports and landing sites. The aim of this paper is to highlight the role of fishing ports in the sustainable blue economy. Fishing ports support the sustainable development of fisheries and aquaculture by promoting best practises for environmental protection, maintaining food quality, creating fair prices, supporting workers' rights, integrating local communities and ports, and more. The Food and Aquaculture (FAO) Blue Ports Initiative aims to strengthen the role of ports as drivers of sustainable development in coastal communities and promote the achievement of several key Sustainable Development Goals (SDGs), including SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 14 (Life Below Water). However, ports are also encouraged to adopt a blue economy approach to management to achieve long-term benefits for local communities. Port management, in collaboration with scientists, policy makers, the private sector, and civil society, should focus on inclusivity, competitiveness, greening, and process efficiency, and support collaborative actions to improve the quality of life of local communities.

KEYWORDS: fishery and aquaculture; ports; sustainability; blue economy; marine environment

INTRODUCTION

Since the 1960s, fishery and aquaculture have provided an important source of food, jobs, and income for millions of people, when shortages of aquatic organisms and rising demand stimulated especially aquaculture production. According to the Food and Agriculture Organization (FAO) of the United Nations (UN) [1], in 2020, fisheries and aquaculture produced 214 million tonnes of aquatic food valued at about $424 billion, and employed 58.5 million people (21% of whom were women), 35% of whom worked in aquaculture, a 60% increase in production since the 1990s. In 2020, global capture fisheries production was 90.3 million metric tonnes, with an estimated value of USD 141 billion, including 78.8 million metric tonnes from marine waters and 11.5 million metric tonnes from inland waters [1]. In 2020, global aquaculture production reached 122.6 million tonnes, with a total value of USD 281.5 billion [1]. According to the same source, in 2020, per capita aquatic food consumption was 20.2 kg, more than doubling since the 1970s. FAO forecasts that annual per capita consumption will increase from 20.2 kg in 2020 to 21.4 kg in 2030.

Aquatic foods are very important for food security and nutrition, not only as a source of protein in developing countries, but also as a highly diverse source of omega-3 essential fatty acids and micronutrients in developed countries. As demand for protein from marine organisms continues to grow and many stocks are overexploited, aquaculture remains important for feeding the world effectively, equitably, and sustainably [2]. Despite significant efforts and progress toward achieving the 2030 Sustainable Development Goals (SDGs), the world is still far from achieving many of the 17 SDGs, and fishery and aquaculture could promote the achievement of several key SDGs, such as SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 14 (Life Below Water) (UN, 2015). The United Nations Sustainable Development Goals (SDGs) set a clear target on fisheries (SDG Target 14.4): By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics [3].

According to [4], in 2019, fishery stocks within biologically sustainable levels decreased to 64.6 %, while stocks fished at biologically unsustainable levels increased to 35.4 %. Biologically sustainable stocks consist of the maximally sustainably fished (57.3 % in 2019) and underfished stocks (7.2 % in 2019).

According to the International Labour Organization (ILO) [5], fishing is among the most dangerous occupations of all, and decent working conditions are very important to prevent unsustainable practices. Illegal, unreported and unregulated (IUU) fishing is usually associated with modern slavery, forced labour, and other abuses, as well as inadequate working conditions, lack of social protection, social security or health care, and absence of formal employment relationships [4] [5].

In 1988, FAO introduced a definition of aquaculture that reduces confusion with capture fisheries: Aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms which are harvested by an individual or corporate body which has owned them throughout their rearing period contribute to aquaculture, while aquatic organisms which are exploitable by the public as a common property resources, with or without appropriate licenses, are the harvest of fisheries [6]. Mariculture or marine aquaculture occurs in species that rely on wild seed from the sea throughout the cycle in the sea or only during the rearing phase when a species is raised in a hatchery on land and sometimes in freshwater [4]. Offshore aquaculture is the rearing of marine organisms in water more than 50 m deep, at least 2 km from shore [7].

Fishing ports play an important social and economic role in the environment and are an important link for fisheries and aquaculture stakeholders. Because fishing ports can significantly support the sustainable development of fisheries and aquaculture by reducing pollution, promoting good practices to maintain food quality, and helping to create fair prices and integrate local communities and ports, FAO has launched the Blue Fishing Ports initiative (BFP initiative). The BFP initiative was launched following the 33rd Committee on Fisheries (COFI) Session in 2018.

The aim of this paper is to demonstrate the role of fishing ports in the sustainable blue economy.

BLUE TRANSFORMATION

Fisheries and aquaculture face numerous challenges, including economic, environmental, and social challenges. Following the 2021 Committee on Fisheries (COFI) Declaration for Sustainable Fisheries and Aquaculture [8], FAO launched the Blue Transformation roadmap, a priority programme under the FAO Strategic Framework 2022-2031. The Blue Transformation roadmap will help maximize the contribution of aquatic food systems to the SDGs in order to support employment, economic growth, social development and environmental recovery by efficient, inclusive, resilient and sustainable aquatic food systems for better production, better nutrition, a better environment, and a better life, leaving no one behind [4].

By 2030, aquatic food production will increase by a further 15 %, mainly by intensifying and expanding sustainable aquaculture production. Intensifying and expanding sustainable aquaculture production will require further technical innovation (digitalization), policy support, and incentives along the entire value chain, including access to water, optimization of carrying capacity, designation and allocation of aquaculture zones, licensing procedures with good environmental practices and monitoring, trained and skilled labour, production of high-quality seed and feed, regulation of chemical and antibiotic use, and strict biosecurity protocols [1]. The focus should be on genetic improvements in breeding programmes, feed, biosecurity, and disease control, along with coherent measures and appropriate incentives throughout the value chain.

According to [1], the Blue Transformation has three core objectives:

Sustainable expansion and intensification of aquaculture - to support global food security goals and meet global demand for nutritious aquatic food and equitable distribution of benefits.

Effective management of all fisheries to create healthy stocks and secure livelihoods.

Upgraded value chains - to ensure the social, economic, and environmental viability of aquatic food systems and to ensure food security.

THE BLUE PORTS INITIATIVE (BPI)

The Blue Growth Initiative (BGI) is an FAO model for the sustainable development of fisheries and aquaculture [9], that takes a strategic, innovative approach to aquatic resource use and increases social, economic, and environmental benefits to communities (FAO, 2021b). To meet the requirements of sustainable fishing and commercial ports, including

environmental protection, social equity, and economic growth, fishing ports should adopt the blue economy approach as a strategy [10].

In 2019, FAO launched the Blue Ports Initiative (BPI) with the aim of strengthening the role of ports as drivers of sustainable development in coastal cities and communities and promoting positive and sustainable socio-economic growth, while reducing environmental impacts and poverty and supporting the enforcement of workers' rights and gender equality. The BPI has launched specific actions in collaboration with 20 port authorities, fisheries sector administrations and international organizations, including the Intergovernmental Oceanographic Commission of United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO), the World Bank, the ILO and the International Maritime Organization (IMO). This international consultation process with fishing ports consisted of three workshops that sought to better understand the role of ports in coastal development and identified the need for guidelines on how a port can become blue.

The BPI supports the sustainable development of coastal areas through Blue Ports Operations, which have the following objectives [10] [11]:

- Establish and operate the Blue Ports Network - an operational programme, baseline, and guidance to become a Blue Fishing Port.
- Capacity building for the management of Blue Ports as hubs for innovation and sustainable development - through workshops, seminars and training.
- Develop and implement innovative tools for knowledge management in fishing ports, including a digital platform and a data observatory.
- Designing and implementing port strategies and measures under a blue growth approach.
- Measuring the actual impact of ports in their region.

FAO promotes technology, innovation, data and complements (governance, human capital and institutions) through its projects. The BPI enables ports to become a source of added value for local development, and the commercial activities of ports should also be improved in terms of volume and revenues [11]. However, ports are also encouraged to implement a blue economy approach to management to achieve long-term benefits for the local community. Port management should include inclusiveness, competitiveness, greening, and process efficiency in collaboration with scientists, government agencies, the private sector, and civil society, and joint actions aim to improve the quality of life of the local community [11].

STRENGTHENING THE ROLE OF BLUE FISHING PORTS IN MARINE SPATIAL PLANNING

The MSP roadmap, a Joint Roadmap to accelerate Maritime/Marine Spatial Planning processes worldwide adopted by IOC-UNESCO and the Directorate-General for Maritime Affairs and Fisheries of the European Commission (DG MARE), was implemented under the MSP global Initiative project, which ended in October 2021. In 2021, IOC-UNESCO and FAO launched a programme Strengthening the role of Blue Fishing Ports in Marine Spatial Planning [12] with the goal that port authorities incorporate marine spatial planning (MSP) as part of strategic and operational processes. According to [13], MSP is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process. MSP is a practical way to rationally use marine space, balance the demands of development with the need to protect the environment, and achieve social and economic outcomes in an open and planned manner [13]. The programme also contributes to the goals of the UN Decade of Ocean Science for Sustainable Development (2021-2030), a common framework for marine research to achieve the Sustainable Development Goals (SDGs) of the 2030 Agenda.

THE ROLE OF FISHING PORTS IN COMBATING IUU FISHING

Illegal, unreported and unregulated (IUU) fishing is a well-organized business with lower operating costs and higher profits, often associated with substandard vessels and unfair working conditions. Losses in the global economy due to IUU fishing amount to approximately USD 23.5 billion [14]. Therefore, combating IUU fishing can contribute to achieving the SDGs and a sustainable blue economy. Port States can help eliminate IUU fishing by detecting substandard vessels and unfair working conditions. Vessel monitoring is easier in ports than at sea, and therefore Port States can monitor the port activities of vessels and crew, especially for foreign-flagged vessels. Port States can deny port entry and access to port services to known or suspected IUU fishing vessels, identify high-risk vessels, establish systems to reduce the risk of corruption, and improve maritime governance [14].

In 2016, the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal,

Unreported and Unregulated Fishing (PSMA), the first binding international agreement to combat IUU fishing, entered into force [15]. In 2017, the International Labour Organization (ILO) C188 Work in Fishing Convention entered into force to regulate the minimum age for working on a fishing vessel, medical standards, working arrangements, occupational safety and health, and social security [16]. In 2012, the International Maritime Organization (IMO) adopted the Cape Town Agreement (CTA) to contribute to safe, legal, and sustainable shipping, but it has not yet entered into force [17].

Through these three international instruments, FAO, IMO, and ILO seek not only to combat IUU, but also to improve vessel safety and labor standards through stricter port procedures and to increase benefits for legal operators. Cooperation between port authorities, maritime authorities, fisheries inspectors, maritime police, customs, immigration, labor authorities, the Coast Guard, and the Navy is also very important to curb IUU fishing [14].

CONCLUSION

Fishing ports support the sustainable development of fishery and aquaculture by promoting best practices for environmental protection, maintaining food quality, creating fair prices, supporting workers' rights, integrating local communities and ports, and more. The FAO Blue Ports Initiative aims to strengthen the role of ports as drivers of sustainable development in coastal communities and promote the achievement of several key Sustainable Development Goals (SDGs), including SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 14 (Life Below Water). However, ports are also encouraged to implement a blue economy approach to management to achieve long-term benefits for local communities. Port management, in collaboration with scientists, decision makers, the private sector, and civil society, should emphasize inclusiveness, competitiveness, greening, and process efficiency, and support joint actions to improve the quality of life of local communities.

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