



Analysis on the Development Trend of Marine Fishery Governance

Zhi Chen, Chaojie Yang*, Wubo Wan, Yongzhen Liu, Zhenbo Chen, Fang Guo

Hainan Tropical Ocean University, Sanya 572022, Hainan, China. E-mail: yangchaojie1986@163.com

Project: Supported by Scientific Research Foundation of Hainan Tropical Ocean University(Project number: RH-DRC201907); Hainan University Education and Teaching Reform Research Project(Project number: Hnjg2020-87)

Abstract: Marine fishery is an important part of China's economic development. Marine fishery is not only related to the development of marine economy, but also the marine ecological environment. It is very important to promote the competitiveness of marine fisheries, protect marine ecology, and explore the sustainable development of marine fisheries. In this regard, this article analyzes the development trend of marine fisheries, analyzes the current problems in marine fishery governance, and explores effective countermeasures for the development of marine fishery governance, hoping to provide some ideas for promoting marine fishery governance and enhancing the benefits of marine fishery development.

Keywords: Marine Fishery; Governance; Development Trend

At present, the government attaches great importance to the development of fisheries. Since the 13th Five-Year Plan, a request has been made to actively adjust the structure of fishery production, promote the construction of ecological fishery development models, actively develop the facility aquaculture industry, and promote the development and upgrading of coastal fishery ecology and industry. This has achieved certain results. However, there are also some constraints that affect the sustainable development of marine fisheries. In this regard, it is necessary to grasp the current development trend of marine fishery governance and determine the countermeasures for marine fishery ecological development.

1. Current problems in the governance of marine fisheries

1.1 Weak awareness of marine economy

In the current multi-regional marine fisheries, many regions pay more attention to coastal industry and port construction, and ignore the outstanding problems in the development of marine fisheries. This results in the development of regional marine economy are still at the expense of the marine ecological environment, ignoring the application of the ecological development concept, which is not conducive to the long-term development of marine ecology.

1.2 Insufficient space for mariculture and insufficient scientific aquaculture structure

At present, in the development of marine ecological fishery, marine aquaculture is a relatively popular industry. However, the overall sea area scale of the current marine fishery development in the region is insufficient, and the scale of the development of the aquaculture industry is lack of standardization. In addition, the current rapid economic development in many coastal areas has led to a further increase in the urban construction area, and the space for shallow sea aquaculture and tidal flat aquaculture is gradually shrinking, which is not conducive to the coordinated development of regional fisheries. In addition, the current standards for coastal aquaculture ponds in some areas are relatively low, the aquaculture efficiency is not ideal, and the marine aquaculture is not fully realized, resulting in the continuous reduction of excellent fishery species, and the related epidemic prevention system construction is not perfect. As a result, diseases in the aquaculture industry frequently occur, which seriously affects the overall development benefits of marine aquaculture.

1.3 The marine fishery industry chain is short and it is difficult to achieve high-level

Copyright © 2020 Zhi Chen *et al.*

doi: 10.18282/le.v9i7.1462

This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License

(<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

development

At present, in the development of marine fisheries, the fishing industry is mainly carried out in offshore locations. With the continuous increase of catches, the fishery resources in offshore areas are gradually decreasing, and some unscientific fishing methods are used, resulting in the insufficient overall output of offshore fisheries. The main catch products are low-quality fish, shrimp and shellfish. The overall aquatic deep processing industry has developed relatively slowly, and the related development model is still mainly rough processing. At present, the relevant fishery resources have not been fully developed, leading to low-end consumption of products, and the fishery industry chain is relatively simple and not strong.

1.4 Underdeveloped marine fishery technology

At present, in the development of marine fishery, relevant fishery technology innovation lacks effective platform construction, professional industry-university-research integration is not in place, and there is no effective transformation of scientific and technological achievements. Service platform constructions are lacking, and coastal township fishery service stations have insufficient service capabilities and basic technology. The low level of personnel and technology has seriously hindered the high-level development of marine fisheries. In addition, in the development of related fisheries, the capacity for technological innovation is insufficient, and the application of new technologies, new equipment, and new models is insufficient. The traditional fishery business model is dominated, which is not conducive to the improvement of the overall level of regional fishery production.

2. Sustainable development strategies for marine fishery governance

2.1 Establish awareness of ecological fishery development and promote sustainable development

Based on the current development status of marine fisheries, in the development of marine fisheries everywhere, it is necessary to establish the concept of sustainable development, enhance the awareness of ecological fishery development, and actively compile and implement the regional Marine Ranch Demonstration Zone Plan, Marine Fishery Industry Development Plan, and Marine Fishery Industry Development Plan. These plans and related policies clarify the development thinking and overall layout of marine fisheries. It is necessary to take the lead in launching the construction of a national marine pasture demonstration area project, put artificial reefs in the construction of relevant sea areas and bays to form artificial reef areas, proliferate and release fish, shrimp, crabs and shellfish, carry out joint breeding and release conservation activities for fishery resources, and further publicize, restore and protect good marine ecological environment and fishery resources. It is necessary to speed up the construction of autonomous region-level modern agriculture (core) demonstration areas with fishery as the leading industry, and build aquatic healthy breeding demonstration farms, aquatic breeding farms, national recreational fishery demonstration bases, and recreational fishery demonstration bases of the Ministry of Agriculture and Rural Affairs. By actively developing ecological fisheries, it is possible to promote the effectiveness of marine fishery governance and boost the development and transformation of the regional marine fishery industry.

2.2 Extend the industrial chain and promote the sustainable development of marine fisheries

In response to the current deficiencies in the development of marine fisheries, the relevant regional marine and fishery bureaus should actively recognize, adapt to, and lead the reform, be problem-solving oriented, make overall plans, and promote overall, and continue to make the ocean fishery bigger, stronger and more comprehensive. They should actively cultivate new highlights in the supply-side structural reform of marine fisheries, and make new and greater contributions to the construction of a modern marine fishery economy. In this regard, it is necessary to explore a circular economy road suitable for local development for marine fisheries, and create an industrial chain of green development of the marine economy. For example, Lubei Group uses seawater as the circulating cooling water of the generator set. The waste heat generated by the generator set heats the seawater. Part of the hot water enters the local farm for prawns and other “off-season farming”, and the other part of the hot water can enter the North Lubei water desalination project. Hot seawater not only saves a lot of costs for desalination of seawater in winter for desalination projects, but also save the remaining high-concentration seawater to be sent to local saltworks... In addition, the ash and desulfurized gypsum produced after coal combustion can be made into a large number of building materials. The mother liquor of salt production enters the chemical production process to produce chemical products that are in short supply in

the market such as bromine, potassium chloride, magnesium chloride, and magnesium sulfate.

By building a scientific and ecological marine fishery development model, the level of marine fishery development can be significantly improved.

2.3 Develop science and technology to improve the technical level of marine fisheries

Fishery development must focus on the goal of creating a model and leading the way, adhere to systematic thinking, standardized thinking, holistic thinking and economic thinking, adhere to the supply-side structural reform as the mainline, and comprehensively build a modern fishery industry system and production system. The management system requires scientific and technological workers to concentrate their wisdom on high-quality development and make greater contributions to the development of efficient ecological fishery. In marine fishery governance, it is necessary to try to unite and gather outstanding scientific and technological workers and producers and operators in a wider range of fields. In order to promote the innovative development of fishery technology and industry, it is necessary to be good at making use of the extensive scientific and technological resource base and industrial development information base of the region. Focusing on the mainline of advancing the high-quality development of the marine economy, extensively carry out academic exchanges, disseminate scientific ideas, put forward development suggestions, and provide technical support for the development of the marine industry.

2.4 Do a good job in marine ecological governance and build a sustainable environment

At present, marine ecological pollution is one of the important obstacles in the development of marine fisheries. To this end, it is necessary to deepen marine ecological governance. All localities should conduct comprehensive investigations of marine aquaculture, establish and improve the list of marine aquaculture, clean up and rectify the problem of illegal marine aquaculture, and actively guide and urge aquaculture enterprises to carry out environmental protection floating ball upgrades. The pollution of marine aquaculture has been effectively improved and marine living resources have been effectively conserved. It is a must to strictly control the intensity of marine fishing, continuously reduce the number and power of fishing boats, and reduce marine fishing output.

In marine ecological governance, it is necessary to persist in implementing the “strictest Fuxiu system” and “the strictest management measures.” Focusing on harbors, inshore waters, and aquatic product transportation vehicles, the government should focus on investigating and dealing with illegal fishing boats, loading and using prohibited fishing gear, illegal trading of catches, and hidden safety hazards in fishing boats and ports, and destroying illegal nets on site. In addition, the regional law enforcement team can also distribute publicity materials in the inspection area, explain relevant laws and regulations to fishermen, and ensure that fishermen are fully aware of the ocean summer fishing suspension system and the special resource management system for jellyfish fishing. By increasing law enforcement and governance, joint law enforcement actions have been used to eliminate hidden dangers in fishing boats and fishing ports to a large extent, to deter violations of regulations and laws, and strengthen the management of summer fishing moratoriums and pilot jellyfish fishing.

3. Conclusion

The development of marine fishery governance is a necessary condition for the sustainable development of marine fisheries. At present, there are still many problems in the development of marine fisheries. It is needed to deal with related issues to manage marine fisheries, develop ecological fisheries, and promote fishery development technology.

References

1. Chen Q, Xu Y. Analysis of the influencing factors of the fragility of the marine fishery society-ecosystem in China-based on the ISM model. *Science and Technology and Management* 2019; 21(01): 21-26+32.
2. Zhang J, Song D, Chu J, *et al.* Research on the current situation of sea area use based on data mining—Take the coastal waters of Liaoning province as an example. *Marine Environmental Science* 2020; 39(03): 407 -412.
3. Gao Y, Wang J. Analysis of the temporal and spatial evolution and influencing factors of the vulnerability of marine fishery ecosystems in the Bohai Sea Rim. *Economic Forum* 2020; (04): 95-102.
4. Tong C, Wu K. Multiple goals, internal contradictions and governance failures: China’s marine fishery governance system and its logical analysis. *China Fishery Economics* 2019; 37(02): 1-9.