

A Summary of the Literature on China Sea Area Value Assessment

GUO Xiaohong^{1,a} CHEN YU^{2,b}

¹Fujian JiangXia University, Fuzhou, China, 350108

²Fujian Agriculture and Forest University, Fuzhou, China, 35002

^a893861311@qq.com, ^b739995592@qq.com

Corresponding author GUO Xiaohong

Key words: Sea area use right benchmark price, sea area value assessment, sea area use gold

Abstract. The sea area belongs to natural resources. Life originates from the sea. The rational development and application of the sea area has a great impact on economic development and human progress. In China, the sea area value assessment refers to the sea area use right as a special commodity, and adopts the evaluation mode to reasonably reflect the value of the sea area resources. At present, the Chinese sea area value assessment market has just started. Because the sea area trading market system is not mature enough, the relevant supporting legal system is not perfect, and there are still many problems in the sea area value assessment work. The article mainly reviews the literature on the theory of the Chinese sea area assessment theory and practical research in the past ten years, and puts forward some suggestions for future research.

1. Introduction

The vast ocean is rich in resources and plays a pivotal role in human development. It has enormous economic value. China's coastline is twisted and twisted, with a total length of about 18,400 kilometers^[1]. On the stretch of the coastal zone, there are many rejuvenating century-old ports, such as Shanghai, Lushun, Quanzhou and so on. There are abundant resources outside the coastline, such as boiled sea for salt, aquaculture, oil and natural gas and other resources.

However, the spatial distribution of China's territorial water resources is uneven. For example, most of the marine oil and gas industry is concentrated in Tianjin, and the industrial structure of Zhejiang in marine mining is much higher than other provinces and cities^[2]. In addition, the differences in the quality of China's marine environment are also very different. For example, according to the 2017 Bulletin of China's marine ecological environment, the Jinzhou Bay and Hangzhou Bay ecosystems are in an unhealthy state, and the seawater is seriously polluted by oil or eutrophic^[3]. The economic and social development of coastal provinces and cities is also different, and these influencing factors are numerous. Therefore, it is very important to use appropriate evaluation methods to correctly assess the value of sea resources.

China is one of the first countries in the world to explore the ocean. During the Qin and Han Dynasties, China had already established a peaceful road in the sea, "the north wind sailed south wind back", "the morning burning burned high, only the waves turned into snow." With the vigorous development of China's economy since the reform and opening up, Chinese scholars have also turned their eyes to the sea, paying attention to the establishment and implementation of the sea area use right system. The research focuses on the following: sea area use rights system and benchmark price system, sea area value assessment method theory, sea area use gold accounting and sea area functional zoning research.

2. the study of the sea area use right system

2.1 The concept of sea area use rights

The Law of the People's Republic of China on the Use of Sea Areas is a law and regulation established by China specifically to regulate marine management regulations. It will be

implemented on January 1, 2002. According to Article 3 of its Administrative Law: the sea area is owned by the state, and anyone must legally obtain the right to use the sea area in order to use the sea area. Therefore, the right to use the sea area is a right of the sea area users to enjoy the use of the sea area and obtain income.

2.2 Development process of the sea area use right system

China's sea area use right system can be traced back to October 1991. The State Oceanic Administration proposed that the sea area be owned by the state and implement paid use; in 1993, the Ministry of Finance and the State Oceanic Administration officially confirmed the state's sole ownership of the sea area; On October 27, 2001, the Law of the People's Republic of China on the Use of Sea Areas was adopted, and the system of paid use of the sea area was formulated and the asset management of the sea area was implemented. In 2005, the State Oceanic Administration improved the national sea area use standard, in accordance with the use of the sea. The behavior changes the characteristics of the sea area, and the sea area is classified into sea areas, and the sea level is collected by means of comprehensive classification.

At present, the development and utilization of China's marine resources is no longer chaotic and disorderly, and has entered a new stage of comprehensiveness, precision and three-dimensionality. However, there are still many levies of extensive low-cost levy in the paid use of the Chinese seas. One of them is the "plane levy" used in the sea area. The sea area uses only one kind of sea function, and simply calculates "use". "Area" and neglecting its three-dimensionality and comprehensiveness to assess the amount of sea area use rights levy, there are large loopholes. Therefore, on the basis of ensuring the use of the sea in the dominant function of the sea area, the purpose of comprehensively utilizing the three-dimensional sea area is reached, and a new and perfect sea area use right system is established, which is necessary for how to scientifically, innovate and develop accurate sea area use right price evaluation. The theoretical basis.

2.3 Construction of the benchmark price system for sea area use rights

On March 1, 2007, China began to implement the benchmark price system for sea area use rights. In the past decade, various factors affecting the price of sea area use rights have undergone great changes, but the benchmark price of China's sea area use rights has not been updated. The current benchmark price of the sea area is not strong, and it is not compatible with China's rapid development of the marine economy. It has become an urgent problem to be solved in the price management of China's sea area use rights.

Zhang Wei and Wang Wei ^[4] (2016) constructed a benchmark price system for sea area use rights based on marine functional zoning. However, in the implementation process of the sea area, the use system of sea areas still needs to further improve the utilization efficiency of sea areas and reduce the use of sea area. We will improve the sea area use demonstration system and standardize the use of sea areas for water collection and management. Then they take Jiangsu Province as an example. After investigation, it is considered that the sea area use price assessment lacks normativeness. The use of sea areas also has error loopholes and normative inconsistency and the utilization efficiency of sea area resources needs to be improved. And other questions, and put forward corresponding opinions: Strict implementation of the paid sea procedures, compliance with sea area functional zoning, construction of sea area assessment management system, effective improvement of sea area utilization efficiency, rational planning of sea area development layout, and scientific and efficient use of sea areas should be implemented.

In the same year, Zhang Wei and Wang Wei ^[5] (2016) proposed that updating the benchmark price of sea area use rights is very important, and explains how to update the benchmark price based on the dynamic changes of market transaction price, sea area income and sea area price index. Then put forward the policy recommendations on the dynamic update institutionalization of the sea area use right benchmark price, the update process standardization, the dynamic monitoring intelligence and the update of information socialization; Yu Peili, Wang Wei ^[6] (2016) believes that the

establishment of a perfect sea three-dimensional The benchmark price system and the sea area dynamic rapid price assessment system are urgent tasks for China to explore the sea area.

3 the study of the theory of sea area price assessment

A system has been established, and detailed price assessments have been carried out. Chinese scholars continue to innovate on the basis of evaluation theories and study various evaluation criteria according to local conditions.

Jin Jianjun, Yan Caixing, and Zhang Lingjie ^[7] (2009) believe that the assessment of the value of coastal resources should be carried out on the basis of grading and grading, so as to reflect the difference between the quality of coastal resources and the difference in capital gains. Based on the analysis of the influencing factors of the value of coastal resources, in view of the shortcomings of current coastal resource value assessment methods, the detailed steps of the grading and evaluation of coastal resources are made according to the theory of productivity, location theory and land rent theory. The quantification of factors, the standardization of indicators, and the calculation of the comprehensive quality index of resources all guarantee the implementation of the management and use system of China's coastal resources, ensuring the sustainable development of coastal resources.

Chen Peixiong, Xiang Hui ^[8] (2015) and others introduced the research on the theory and method of China's sea area resource evaluation, and analyzed and compared the application scope characteristics of the five basic methods in the sea area assessment market and their respective advantages and disadvantages; and Yang Hui, Zhang et al. ^[9] (2015) took the case of a sea area in Dushan Port Area of Jiaying as an example, and evolved how the cost method is calculated in the price assessment of the primary market in the sea area. The current interest rate and risk adjustment method are used to calculate the current sea for transportation. The reduction rate, the analysis and measurement of the application of the cost method price assessment in the primary market of the sea resources and its defects, and proposed to make up for the defects. This research has important practical significance and reference for China to carry out the evaluation of the use price of the primary market of sea resources.

Wang Wenjun ^[10] (2015) proposed a new formula for sea area price assessment, which increased the urban development level impact coefficient and ecological compensation coefficient factor that were ignored in the previous sea area price assessment. These two factors are different with different regions. Using the new sea price evaluation formula, the author finally conducts empirical research on the price of Xiamen Wuyuanwan sea area. Through calculation, it is basically similar to the national sea area use gold collection standard. The feasibility and scientificity of the proposed sea area price assessment method.

In terms of sea area price assessment, Chinese scholars have established a variety of impact factors, various evaluation index systems and various qualitative models to ensure the balance of various elements in China's sea area assessment. Although the benchmark price assessment in China's sea areas is constantly improving, due to the variety and complexity of the influencing factors, there is still a lack of a highly compatible and widely applicable evaluation model. At present, the evaluation of the sea area value and the dynamic three-dimensional evaluation are not perfect. Chinese scholars are still continually exploring.

4 Research on the use of gold accounting and standard setting in the sea area

The use of sea area is the royal right collected by the state for the use of the sea area, and it is the actual performance of the sea area use right price.

In 2007, the relevant national marine authority formulated the national sea level grading plan and the sea area use gold collection standards and began to implement. For more than ten years since the implementation of the system, the rational use and development of China's marine resources have been steadily promoted, and the rights of state owners and sea area users have been effectively guaranteed. In 2018, China made a comprehensive adjustment to the gold use standard for sea areas for the first time.

Yue Qi ^[11] (2010) discusses the difference in the scope of use between the assessment of the use of sea areas and the value of the use of sea areas. The assessment of the use of sea areas is used in the secondary market, while the assessment of the use of sea areas is mainly used in the primary market. Then the relationship between the two is studied, and compared with other evaluation industries, the commonalities and differences of the sea area assessment theory are compared, and the current main sea area assessments in China are analyzed based on the evaluation theory basis and value influencing factors. method. Finally, taking Shandong Laizhou Port as an example, the sea area use gold is calculated by the sea area pure income adjustment coefficient method and the cash flow discount method. According to the results of the case analysis, suggestions for the development of China's sea area are put forward.

He Yixiong, Gou Weimin ^[12] (2015), taking the assessment of the use of sea area as the research object, based on the analysis of the relationship between the use of gold and sea use rights in the sea area, the theory and ocean of the sea area paid use system according to the classification of sea use. The functional area system is ingeniously linked, detailing three different assessments of the use of gold in the sea.

Scholars in the past ten years have already combined the use of sea areas with the use of sea areas. It is believed that the assessment of the use of sea areas needs to be tailored to local conditions. In the future, scholars can start to study more accurate, more flexible and dynamic evaluation standards. In the case of changing external environment, a dynamic sea area management mechanism that can be flexibly transformed according to changes in the external environment is formed.

5 Research on the right to use the sea area

For the study of the right to use the sea area, Jiang Budong ^[13] (2011) carried out an analysis and research on the status quo of the assessment of the right to use the sea area in China, and explored the economic characteristics of the right to use the sea area, and considered that the essence should be intangible assets, so it also has the general intangible assets. Characteristics; the insights into the application of the present value method in the assessment of the use of sea areas are also unique.

Zhang Weibiao, Xue Su ^[14] (2015) took the state-owned sea area use right as an example, and proposed a technical route and method for assessing the price of state-owned sea area use rights by cost approximation method, and the sea area acquisition fee and related expenses and term of payment. Amendments, regional amendments, etc., and finally measure the price of state-owned sea area use rights.

Zhang Tao and Wang Haixiao ^[15] (2016) based on the analysis and analysis of the sea area use right option, construct the BS option pricing model for the evaluation of the sea area use right value, and take the sea area use right of Lianyungang port as an example to carry out the sea area use right. The value assessment provides a reference for guiding the pricing of the trading market in China's sea area.

6 Research on marine functional zoning

Although the Chinese nation has long known that "the benefits of Xinghai Salt, the convenience of the boat." However, because our understanding of the marine environment is much shallower than that of the land, and China's use of the ocean, the development of resources lags, and it was not until 1989 that the marine functional zoning work started.

In the study of functional zoning, Miao Fengmin ^[16] (2008) comparatively analyzed the history and methods of marine functional zoning in many countries at home and abroad. Although the scope of foreign marine functional zoning is far less than that of China, its function and management The degree of refinement is worth learning and learning from China. China's first consideration of sea area functional zoning is its natural attributes, economic development and safety. Four levels of zoning and functional quality determination reflect China's full development of marine ecosystems, marine economic development, and coastal provinces and cities. Considering,

the smooth and sustained development of the marine economy is guaranteed.

Wang Quanming, Miao Fengmin, Li Shuyuan^[17] (2008) introduced the general situation of marine spatial planning work in Belgium, the Netherlands, Germany and other countries, and conducted a preliminary comparative analysis with the actuality of China's marine functional zoning, and proposed a marine functional zoning. Division, management research.

In the future, scholars' research can break through these weak links such as classification system, index system, method system and management system. For example, the hierarchy of marine functional area classification system is imperfect, indicators are not unique, and there is no quantitative model recommendation.

7 Research in other related fields

Other scholars have conducted in-depth research in other different fields and contributed to the vigorous development of China's sea economy.

Liang Xiangbo^[18] (2013) conducted an in-depth study on the value-added issue of the sea area. The increase in the sea area means that as the social economy grows rapidly, the income that people receive from the China Sea is also growing. The value-added of the sea area is composed of many aspects. Among them, Liang Xiangbo believes that the most important factor is caused by three factors: investment, supply and demand, and change in value. It also discusses the characteristics and effects of the differences and rises in the value-added of the sea area. In short, the value-added of the sea area can promote the economic development and rational use of the sea, but it can also lead to the environment and resources of the sea area, causing imbalances in the sea area market and causing social conflicts.

Wang Haizhuang and Yan Weixin^[19] (2009) refer to the United States on the other side of the ocean as a reference. From the three aspects of basic conditions, status quo and prospects, the basic conditions of China's marine economic development are relatively weak. Breaking through the limitations of its own conditions, expanding into a wider ocean space and exploring deeper areas of marine industry development are the future direction of China's marine economy.

Zhu Xiaomeng, Yan Weixin, Sun Aitian^[20] (2009) conducted a forecast analysis of China's marine economic prospects. Based on the analysis of the national marine economic development data from 2001 to 2007, the gray system GM (1,1) model, the trend analysis model and the Gopps growth curve method are used to calculate the value added of the three industries and related industries in China's marine economy. And predict the gross domestic product of China's marine economy for the next three years.

Cao Ke, Miao Fengmin and Zhao Jianhua^[21] (2012) believe that the comprehensive evaluation of the use of sea areas lacks uniform standards, resulting in large differences in the use of sea areas, and cannot objectively reflect the actual situation. They explored the content and methodologies of dynamic comprehensive evaluation of sea area use, standardized the comprehensive evaluation of sea area use, and provided unique insights for improving marine development, control and comprehensive management capabilities, and played a pivotal role in the development of China's marine economy.

8 summary

With the continuous development of science and technology, the development of the sea area is no longer disordered and inexhaustible, and the evaluation of the sea area will inevitably become a new development category for the assessment industry. Although the relevant system of China's sea area assessment industry is still in its infancy, with the deepening of the concept of sustainable development and the promotion of China's ecological civilization construction, the Ministry of Natural Resources of China was established and the preparation of the natural resources asset table was promoted. The Chinese government has attached great importance to the protection and utilization of the sea area. With the guidance of the Chinese government and the joint efforts of experts and scholars, China's sea area assessment work will be more standardized and perfect, and China's marine economic development will become more and more vigorous.

Acknowledgement

This research was financially supported by the Major Project of the Social Science Research Base of Fujian Province(Grant NO. FJ2018JDZ015), and the Research Project on Major Education and Teaching Reform of Universities in Fujian Province, (Grant NO.FBJG20190295) , and the Education Research Project of Fujian JiangXia University, (Grant NO. J2019A002)

References

- [1] State Oceanic Administration. China Ocean Statistical Yearbook (2015) [M]. Beijing: Marine Science Press, 2016.
- [2] State Oceanic Administration. China Ocean Statistical Yearbook (2016) [M]. Beijing: Marine Science Press, 2017.
- [3] State Oceanic Administration. 2017 Bulletin on the State of Ecological Environment in China [J]. Environmental Protection. 2018(14)
- [4] Zhang Wei, Wang Wei. Research on the Construction of China's Sea Area Use Right Benchmark Price System——Based on China's Ocean Power Deep Thinking of Regionalization[J]. Price Theory and Practice, 2016,(3):144-147.
- [5] Zhang Wei, Wang Wei. Research on Dynamic Update of Benchmark Price of China Sea Area Use Right[J]. Price Theory and Reality Practice, 2016, (8): 85-88.
- [6] Yu Peili, Wang Wei. Research progress and prospects of China's sea area benchmark price assessment system [J]. China Fisheries Economics Ji, 2016, (5): 99-106.
- [7] JIN Jianjun, ZHAI Caixing, ZHANG Lingjie. Research on the Evaluation Method of Coastal Resources Value Based on Grading[J]. Ocean Bulletin, 2009, (3): 86-91.
- [8] Chen Peixiong, Xiang Hui, Li Xinyu et al. A review of the research on the theory and methods of China's sea area resources evaluation[J].Ocean Information, 2015, (1): 52-57.
- [9] Xiang Hui, Chen Peixiong, Shen Jiafa et al. The cost method should be used in the evaluation of the primary market price of the sea area resource allocation Research [J]. Ocean Development and Management, 2015, (12): 20-24.
- [10] Wang Wenjun. Theory and empirical research on sea area price assessment [D]. Xiamen: Jimei University, 2015: 1-48.
- [11] Yue Qi. Research on the evaluation method of the use of gold in Laizhou Port [D]. Tianjin: Tianjin University, 2010: 1-61.
- [12] He Yixiong, Gou Xiongmin. Research on the assessment of sea use gold[J]. China Fisheries Economy, 2015,(4): 12-16.
- [13] Jiang Budong. On the application of the present value of income method in the valuation of sea area use rights [J]. Friends of Accounting, 2011,(14): 87-88.
- [14] Zhang Weibiao, Xue Su. Practical Research on the Evaluation of State-owned Sea Area Use Right by Cost Approximation Method[J].Modern Economic Letter Interest, 2015, (24): 114.
- [15] Zhang Tao, Wang Haixiao. Research on B-S Option Pricing Model for Value Evaluation of Sea Area Use Right——Taking Lianyungang Port sea area as an example [J]. Marine Economy, 2016, (1): 27-32.
- [16] Miao Fengmin. Research progress on functional zoning and related issues [J]. Marine Development and Management Theory, 2008, (6): 9-12.
- [17] Wang Quanming, Miao Fengmin, Li Shuyuan. Overview of foreign marine spatial planning and borrowing of China's marine functional zoning Jian [J]. Marine Development and Management, 2008, (9): 5-8.
- [18] Liang Xiangbo. On the value-added of sea areas and its regulation and control policies [J]. Marine Development and Management, 2013, (6): 10-12.

- [19] Wang Haizhuang, Zhai Weixin. Comparison and Enlightenment of Sino-US Marine Economic Development [A]. Marine Economics of China Oceanographic Society Chapter. 2009 China Ocean Forum Proceedings [C]. Ocean University of China Press, 2009.
- [20] ZHU Xiao-meng, ZHAI Wei-xin, SUN Ai-tian. Prediction and analysis of marine economic prospects [J]. Journal of Dalian Maritime University, 2009, (2): 5-8.
- [21] Cao Ke, Miao Fengmin, Zhao Jianhua. Discussion on the theory and technical methods of dynamic comprehensive evaluation of sea area use [J]. Marine Technology, 2012, (2): 86-90.