

Research on the Legislation of the Law of Marine Science and Technology from the Strategic Perspective of China's Maritime Power

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Abstract: The legislation of science and technology is an important content of the construction of our legal system. The ocean has become the stage of international competition in the 21st century. The competition among the oceans is ultimately the competition of scientific and technological strength, and advanced marine science and technology is the important guarantee to realize the great goal of maritime power in an all-round way, the development of marine science and technology depends on the perfect legal system of marine science and technology. On the basis of studying the present situation and deficiency of the legislation of marine science and technology legal system, this paper puts forward the corresponding countermeasures to provide legal guarantee for the development of our country's marine science and technology innovation.

1. Introduction

Born by the sea, thriving towards the sea, the history of human society has proved this. Over the past decades, the rise of China has constantly taught us that only by focusing on the use and development of the sea can the Chinese nation gain a foothold in the competition of countries all over the world. On this basis, China pointed out the great strategic goal of a maritime power. However, with the rapid development of globalization, science and technology play an increasingly important role in developing marine economy, maintaining marine security and improving the marine environment, and marine science and technology must become an important strategy for China to establish a maritime power. The legislation of marine science and technology innovation reflects people's expectation and yearning for the value of the law of science and technology[1].

2. Proposal for the Legislation of Marine Science and Technology

The basic goal of developing marine science and technology is to use increasingly advanced technological tools and scientific knowledge to continue researching, exploring and acquiring new marine knowledge, as well as finding new available resources and researching new methods and technologies to support China's marine public welfare and military use of the ocean. At the same time to enhance the national marine knowledge and awareness for the sustainable development of

China's marine economy. Especially in the 21st century, which is a new era of marine development, it is necessary to continuously formulate policies and strategies for the development of marine science and technology. China is the most populous coastal country, and our comprehensive capacity is also increasing day by day. If we want to realize the goal of becoming a maritime power as soon as possible, we must continuously innovate our own marine science and technology, enhance our core competitiveness in the development of international maritime undertakings and make more contributions to the world's maritime undertakings. However, the development of marine science and technology in China started later than that in other countries, and the "Visionary Plan for Marine Science" [2] completed in 1956 was the starting period of marine science and technology in China. The perfection of marine science and technology law system is a long-term dynamic process. It is still in the initial stage of construction because of the short time of research on marine science and technology legislation in China [3]. The level of marine science and technology plays a pivotal role in the competition among countries, and even determines whether a country can stand out in the fierce competition among countries. Therefore, we should strengthen the construction of marine science and technology legal system, promote the process of legal institutionalization of marine science and technology and continuously improve the legal system of marine science and technology in China under the guidance of the goal of a maritime power.

3. Analysis on the Legislation of Marine Science and Technology

3.1 The Content of Marine Science and Technology Law is Relatively Lagging Behind

By revising the existing legislation of marine science and technology in China, we can see that not only are there a limited number of relevant laws, but their content is also relatively backward. The provisions of most existing laws are so general that they cannot be used to solve urgent problems in a timely manner. For example, the "Management Measures of Youth Marine Science Fund of State Oceanic Administration" does not stipulate the strict procedures and conditions for project approval, funding sources and fund management [4]. The "Provisional Regulation of Marine Scientific and technological publications" has no provisions on the decision to punish violations or prosecute violations. In recent years, as the country has attached more and more importance to the development of marine undertakings, the national investment in its scientific research has also increased significantly and some regulations related to the law of marine science and technology are no longer adapted to the current social development situation.

3.2 The Environment of Marine Scientific and Technological Innovation is Insufficient

At present, China's marine science and technology innovation environment still has many deficiencies, mainly including the imperfect resource allocation, lack of feasible policies and measures and the lack of sufficient funds for scientific and technological companies, etc, which hinder the development of marine scientific and technological innovation. Marine scientific and technological innovation has not yet played its due role in optimizing marine industrial institutions and developing emerging marine industries[5]. The content of science and technology investment is reflected in many laws and regulations in China, but most of them are general and lack of pertinence and usually insufficient to provide strong legal guarantee for the development of the law of China's marine science and technology[6]. China's investment in marine science and technology has yet to be increased compared with that of the ocean powers, and the sources of China's investment in marine science and technology are also relatively small. With more national and local financial support, however, social and business participation mechanisms and financing mechanisms have not yet been established.

3.3 The Personnel Training System for Marine Science and Technology is Not Perfect

“The essence of innovation-driven is talent-driven”. Because the current development of marine science is relatively short, the technical reserve is not sufficient, China's marine science and technology personnel training is unreasonable and imperfect, the countries with advanced development of marine science and technology attach importance to the training of scientific and technological personnel, thus there is a great gap between our country and them. At present, our country has increased its investment in marine scientific and technological research from various aspects, but marine scientific research is still in a state of weakness, and marine scientific research still lacks overall strategic thinking, systematic perspective and long-term, specific marine scientific observations. At the same time, a sound policy of retaining talents of marine science and technology innovation is also crucial to the development of China's marine cause. Although the number of talents of marine science and technology innovation is increasing year by year, however, the people involved in the construction of marine science and technology still cannot meet the needs of the country, and the corresponding number of marine scientific research institutions is also decreasing. It is precisely because China has fewer marine-related platforms and fewer professionals, the vast majority of marine science and technology achievements do not meet the needs of social development for marine science and Technology Innovation[7], therefore, it is urgent to perfect the personnel training system of marine science and technology.

4. Countermeasures and Suggestions on Perfecting Legislation of Marine Science and Technology

4.1 Improving the Current Marine Science and Technology Regulations and Specific Implementing Regulations

According to the reality of the International law of marine science and technology, and based on related policies and plans of China's marine science and technology, in view of the new problems and new situations in theory and practice, we should review our country's current marine science and technology laws and regulations in a timely manner. These include, first, timely revision of legislative documents that do not meet the needs of the actual development of society, timely improvement of outdated documents, so that the revised law is cutting-edge and operable. Second, in addition to legislation at the national level, local government departments can also formulate feasible and appropriate regulations for local management in accordance with the actual needs of the construction of national marine science and technology. While with the legislation of science and technology, most of the provisions are limited to certain principles because they are general and not easy to implement, therefore it is often necessary to formulate a set of applicable rules, generally to develop a set of operational specific implementation regulations, which is also convenient for the public to abide by the law and use the law in accordance with the specific implementation regulations.

4.2 Improving the Environment of Marine Scientific and Technological Innovation

In terms of scientific and technological innovation, there are still relatively few patents in the field of marine science and technology in China, mainly because of insufficient scientific and technological innovation. Therefore, it is imperative to perfect the relevant Law of Marine Science and Technology Input. Innovation is the first productive force in the development of science and technology. Local Governments should accelerate the strategy of promoting innovation-driven development, implement and enforce local laws and regulations on science and technology, and

constantly improve the legal system concerning scientific and technological achievements and progress, the law of scientific and technological innovation plays an important role in the legal system of the whole country [8]. Firstly, increase financial support for innovation in marine science and technology, make full use of the policy guidance and influence of government departments on marine science and Technology and invest special funds into the field of marine science and technology to support major technological breakthroughs in the field of marine science and technology and improve the technology of marine enterprises. Secondly, the marine industry and marine-related enterprises have been continuously strengthened in terms of technology, and the environment of scientific and technological innovation has been continuously improved. It is also particularly important for marine-related enterprises to reduce the risk of starting new businesses through innovation. Thirdly, strengthen the cultivation of marine science and technology Innovation enterprises and research institutions. Strengthen the partnership among industries, academia, research institutes and innovation platforms, conduct innovative research on key technologies in industries where they have competitive advantages, with a focus on marine-dominated industries, and also strengthen international cooperation projects in science and technology.

4.3 Improving the Strategy for Training Personnel in Marine Science and Technology

“Talent is the first resource”. The development of marine science and technology has a higher demand and stricter requirements for scientific and technological personnel because marine science and technology is a science, technology and talent-intensive enterprise and having innovative marine science and technology capability is crucial to the development of China’s marine undertakings. To achieve the goal of becoming a maritime power, it is necessary to improve the quality of marine science and technology personnel training and provide intellectual support for the development of China’s marine science and technology. According to the strategic requirements of China’s marine undertakings and marine science and technology talents, China should further enhance the cultivation of the high-tech talents and speed up the construction of a high-quality and highly innovative talent team. First, formulate a set of mature planning for the development of marine science and technology personnel and pay attention to priority development of talents. Organize and coordinate the marine science and technology talents, plan as a whole according to their respective advantages and integrate the marine science and technology talents resources. Second, pay full attention to the policy guidance of government departments for marine science and technology talents, and continue to improve and perfect the integrated education system for marine science and technology. The government should play the role of leading and regulating the contents related to the marine science and technology education, allocate the educational resources reasonably while improving the structure of higher education, guiding the universities to continuously train the talents of marine science and technology in a cross-disciplinary mode, continuously exporting talents for the marine undertakings and implementing the strategy of developing innovative talents[9]. Third, reform the system and mechanism of marine scientific and technological talents to stimulate their enthusiasm and creativity. At the same time, provide a guarantee mechanism for innovative talents of marine science and technology, improve the competition and incentive mechanism for marine talents and set up a special fund to encourage marine talents with strong innovative ability. In order to encourage the majority of marine scientific and technological personnel to actively participate in scientific research. it is required that the law of science and technology should be incentive-based when stipulating the behavior pattern or legal consequence of people engaging in science and technology activities[10] , constantly providing sufficient talent reserves for the goal of China's maritime power.

5. Conclusion

Realizing the goal of maritime power depends on the advanced marine science and technology and it also needs the legal system of marine science and technology as the institutional support. Therefore, we should continuously strengthen the legislation of marine science and technology, improve the existing regulations of marine science and technology, improve the environment of marine scientific and technological innovation and enhance the strategy for training marine science and technology personnel to provide a solid institutional guarantee for achieving the goal of maritime power.

References

- [1] Liu Qizhan. *On the conflict of value orientation in legislation of science and technology* [J]. *Journal of Taiyuan Normal University Science (Social Sciences)* 2006(01): 52-55.
- [2] Cheng Na. *Research on the development of China's marine economy from the perspective of sustainable development* [D]. *JiLin University*, 2013.
- [3] Ni Guojiang. *Research on China's marine science and technology innovation strategy based on marine sustainable development* [D]. *Ocean University of China* 2010.
- [4] Zhu Jin. *Research on the legal system of China's marine culture* [D]. *Dalian Maritime University*, 2013.
- [5] Zhou Yuping, Wu Dingyuan. *Evaluation and analysis of the core competence of high-tech enterprises* [J]. *Technology and industry*, 2004(04): 1-5 + 24.
- [6] Liu Bin. *Research on the legal system of science and technology innovation in The United States* [D]. *Tianjin University*, 2008
- [7] He Defang, Tang Yuli, Zhou Huadong. *Construction and practice of science and technology innovation policy system* [J]. *Scientific Research* 2019, 37(01): 3-10 + 44.
- [8] Luo Yuzhong. *Strategic thinking on perfecting the legal system of science and technology in our country* [J]. *Technology and law*, 2003(01): 1-7.
- [9] Zhang Haoran, Liu Hui. *Study on the mechanism of production-study-research cooperation in cultivating marine science and technology talents in Shandong province* [J]. *Contemporary economics*, 2020(10): 119121.
- [10] Zhang Yurun, Wang Xuezhong. *Orientation and value objective of science and Technology Law* [J]. *Nanjing University Law Review*, 2006(02): 200-213.