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WORLD MARITIME UNIVERSITY

Dalian, China

**PROTECTION ON THE RIGHTS AND INTERESTS
OF CHINESE SEAFARERS UNDER MLC 2006**

By

PAN HAIXIA

The People's Republic of China

A dissertation submitted to the World Maritime University in partial
fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

(MARITIME SAFETY AND ENVIRONMENTAL MANAGEMENT)

2021

DECLARATION

I certify that all the material in this dissertation that are not my own work have been identified, and no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the university.

Signature: Pan Haixia

Date: 28 June 2021

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ABSTRACT

Title of Dissertation: **Protection on the Rights and Interests of
Chinese Seafarers under MLC 2006**

Degree: **MSc**

This dissertation starts from combing the development of Chinese seafarers and the implementation of MLC2006, comprehensively using literature analysis, case analysis and analytical synthesis methods to study the current status and existing deficiencies of the protection of Chinese seafarers' rights and interest.

Seafarers are the key promoters of economic and trade, but the society pays little attention to Chinese seafarers. The attractiveness of the seafarer profession in China has decreased, and the willingness of maritime graduates to work as seafarers has decreased. The analysis mainly analyzes specific problems in salary, living conditions on board, onboard medical care and social security, etc., especially the difficulties encountered by the seafarers during the COVID-19, such as crew changes, anxiety and medical treatment.

The reasons for the insufficient protection of seafarers' rights and interests are complex, mainly due to the imperfections and insufficient of the legal system, safeguard mechanism, policy support and market mechanism.

Suggestions are put forward to strengthen the protection of seafarers' rights and interests from the government, enterprises and educational institutions. It is

recommended that all stakeholders actively promote seafarer legislation, establish a seafarer rights protection and supervision center, increase tax and social insurance preferential policies, improve working and living conditions, and enhance the psychological education of seafarers, etc., thus further improving seafarers' welfare benefits and social status.

KEY WORDS: Chinese seafarers; rights and interests; countermeasures; MLC 2006;
COVID-19

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LIST OF ABBREVIATIONS

AB	Able Bodied seaman
COVID-19	Corona Virus Disease 2019
CIMRC	China International Maritime Research Center
CE	Chief Engineer
CO	Chief Officer
IMO	International Maritime Organization
ILO	International Labour Organization
ISM	International Safety Management
MA	Master
MARPOL	The International Convention for the Prevention of Pollution From Ships
MLC	Maritime Labour Convention
MoU	Memorandum of Understanding
MOT	Ministry of Transport of the People's Republic of China
MSA	Maritime Safety Administration
NPC	National People's Congress
NPCSC	Standing Committee of National People's Congress
PSC	Port State Control
SOLAS	International Convention for the Safety of Life at Sea
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
2O	Second Officer
2E	Second Engineer
3O	Third Officer
3E	Third Engineer
4E	Fourth Engineer
USD	United States Dollar

Chapter 1 Introduction

1.1 Background

As of June 2021, China had a total of over 1.77 million registered seafarers, ranking first in the world (Shou, 2021). But for such a large group, the attention received in China is very low. According to a survey by Seafarers International Research Centre in 2012, Chinese seafarers complained more about working and living conditions on board (Ellis et al, 2012). As a “bill of rights” for seafarers, the Maritime Labour Convention 2006 (MLC 2006) aims to improve working and living conditions, and promote “decent work” for seafarers. In November 2016, China began to fully implement the Convention. Although the Convention has entered into force in China, the status quo of Chinese seafarers has not been significantly improved. Due to the COVID-19 pandemic, the implementation of maritime labour conditions inspections, originally scheduled to begin in May 2020, has been delayed until May 2021.

As China’s economy developed, the wage advantage of seafarers over shore-based occupations diminished. However, the working and living conditions of seafarers are still relatively bad, and the rights and interests are difficult to be guaranteed. So some

seafarers choose to give up work on ships. To make matters worse, graduates from maritime schools are less willing to work on board. According to the Chinese Seafarers Supply and Demand Index 2020, the supply of seafarers in coastal shipping areas is smaller than the demand in the past five years (CIMRC, 2020). Chinese seafarers have a high demand for raising wages, improving working and living conditions on board, port welfare facilities, social security and gaining respect.

In March 2021, “High-Level Forum on High-Quality Development of Chinese Seafarers” was held for the first time, which pointed out that practical problem such as the decline of seafarers’ occupational attractiveness, lack of the sense of belonging and shortcomings in social security posed severe challenges to the sustainable development of seafarers. In particular, the world is now facing the test of the COVID-19 pandemic, and the crew changes, shore leave, access to medical care and other issues are more important tests. Therefore, more attention should be paid to the protection of the rights and interests of Chinese seafarers. While promoting the high-quality development of Chinese seafarers, it is essential to take the opportunity of earnestly implementing the MLC 2006 to improve the status of Chinese seafarers, enhance the protection of rights and interests, and promote their sense of happiness.

1.2 Research purpose and significance

1.2.1 Research purpose

The rights and interests of seafarers are related to the quality of Chinese seafarers and the development of China as a maritime power. Although China has implemented the Convention for more than 4 years, there is still a gap among the laws and regulations, mechanisms, management and supervision on the protection of

seafarers' rights and interests in China and the MLC 2006. This, coupled with the ongoing COVID-19 pandemic, has put the rights and interests of seafarers at risk. Therefore, this topic will comb the problems existing in the Chinese seafarers' rights and interests, from the perspective of strengthening the implementation of MLC 2006, discuss how to better safeguard the rights and interests of Chinese seafarers for the sustainable and high quality development of the Chinese seafarers.

1.2.2 Research significance

(a) Theoretical significance

The newly revised Maritime Traffic Safety Law of China was promulgated on April 29, 2021, which for the first time included the protection of seafarers' rights and interests in a domestic law. And the Seamen Regulation, Maritime Law and some departmental regulations in China have done basic protection to the legitimate rights and interests of seafarers. However, they cannot fully protect the rights and interests of seafarers. The provisions of MLC 2006 on the rights and well-being of seafarers are mandatory, but the implementation of the international convention needs the guarantee of domestic laws and regulations, and a series of supervision and inspection mechanisms need to be established. This paper will refer to the experiences of domestic scholars, and from the perspective of strengthening the implementation of the Convention, suggest the introduction of a seafarer law that suits China's national conditions, which meets the requirements of the Convention and protection of seafarer's rights and interests, and in an attempt to provide ideas for China to submit the proposed amendment of MLC 2006 in the future.

(b) Practical application value

With the development of society, individuals pay more and more attention to the protection of their own rights. Seafarers work in a special environment at sea, and shipowners tend to ignore the rights and interests of seafarers for the first purpose of making profits. This paper starts with the analysis of the current situation of the protection of the rights and interests of seafarers, and puts forward countermeasures from the perspectives of the government, enterprises, educational institutions and seafarers. The ultimate goal is to promote the protection of the rights and interests of Chinese seafarers, promote decent work, improve the seafarers' sense of honor, sense of belonging and sense of responsibility, and solve the problem of loss of high-quality seafarers and lack of motivation for seafarer development, which has certain practical significance.

1.3 Literature review

Since the MLC 2006 came into force worldwide in 2013, many scholars at home and abroad have put forward their views on the implementation, problems and countermeasures of the Convention as well as the better protection of the rights and interests of seafarers. Those researchers are mainly focus on four aspects: the implementation of the MLC 2006 and countermeasures; the impacts of the MLC 2006; the countermeasures to enhance the protection of the rights and interests of seafarers; the protection of the rights and interests of seafarers during the COVID-19.

(a) Study on the implementation problems and countermeasures of the MLC 2006

Li (2015) made an in-depth analysis of the impacts of the entry into force of the MLC 2006 on China, studied several difficult problems in the implementation of the

Convention, such as the division of duties of the implementing departments, the coordination of legal relations on seafarers' employment, the improvement of the seafarers' social security system, and the establishment of seafarers' labour dispute settlement mechanism. Given that the defects in the seafarers' employment agreements always rank first in the inspection of MLC 2006, Fang & Wang (2019) analyzed in detail the requirements for SEA renewal in MLC 2006 through PSC inspection cases, and provided suggestions for flag states, shipping companies and seafarers to implement the conventions. Cao & Ma (2020) believes that China's laws do not specify the nature of the right of crew repatriation, which leads to the inconsistent identification of the issue of crew repatriation in judicial practice, and suggests that the "right of repatriation" be included in the Maritime Law to make it clear that the "right of repatriation" is a legal right.

(b) Study on the impacts of the MLC 2006

Since the MLC 2006 has only come into force for 4 years in China, there are few studies on the impacts of the Convention after its entry into force in China, most of which are foreign studies. The research mainly adopts two ways. The first is to directly collect seafarers' opinions on MLC 2006, including that most seafarers in developed and developing countries believe that MLC 2006 needs to be improved in protecting seafarers' rights and interests. Fotteler et al. (2018) had an interview with Danish seafarers on the MLC 2006 impact on their living and working conditions, a third of respondents said no improvement, but the main increased paperwork, while 43.6% of respondents said MLC 2006 to a certain extent, improve their working and living conditions. Saeed's (2015) survey of seafarers in Pakistan found that the welfare of seafarers in developing countries is still inadequate and that the administration's enforcement under MLC 2006 is essential to the welfare of seafarers.

Zhang & Zhao (2017) studied the health of Chinese seafarers, who face challenges with health issues such as long working hours, inadequate nutrition, lack of entertainment and poor mental health. The second is to analyze the influence of MLC 2006 through the PSC inspection data. The inspection data showed that port states have strengthened the inspection of the implementation of MLC 2006, and the PSC MoUs have effectively improved the working conditions of the port, but the enforcement procedures of the PSC need to be coordinated (Fotteler et al., 2020).

(c) Study on the protection of rights and interests of seafarers

Cao & Wang (2020) believed that the rights and interests of Chinese seafarers are not adequately protected, the duties of seafarers are not attractive, and the loss of seafarers is serious. It is suggested that when amending the Maritime Law, attention should be paid to clarify seafarers' various labour rights and increasing legal protection of seafarers' legal rights. Mao et al. (2019) combined with the global seafarer industry present situation and development prospects and seafarers structure in our country at present situation, problems and future development were analyzed, and the member for recruiting and retaining the feasibility of seafarers measures were put forward, such as strengthening the career planning of seafarers, providing more ashore job opportunities for seafarers, improving the living conditions on board, fully implementing MLC 2006, etc. Piñeiro & Kitada (2020) analyzed the current situation of female seafarers being sexually harassed but not daring to complain, and strongly suggested increasing gender diversity on ships, strengthening education and training, and raising awareness among seafarers. Nittari et al. (2019) described an improvement in telemedicine medical assistance to seafarers on board ships with the progressive introduction of advanced technology. However, since there is no direct contact between patients and physicians, the ethical issues related to consent and care

are important to safeguard the interests of both patients and physicians. Zhan (2020) suggested that a “standard contract for seafarers” should be formulated to meet the requirements of Chinese shipowners in accordance with the MLC 2006 and the laws and regulations of the flag states.

(d) Study on the rights and interests protection of seafarers during the pandemic

The issue of the protection of the rights and interests of seafarers under the COVID-19 pandemic is the current hot spot, but also the difficulty. Stannard (2020) summarized the challenges for seafarers including but not limited to: crew changes, access to medical and welfare services in port, shore leave and contract extension. Henry (2020) described the response of governments and United Nations agencies, in particular WHO, IMO, ILO and ICAO to facilitate seafarers, and called for joint protection of the rights and well-being of seafarers. Chen (2020) proposed to reflect on the protection of the rights and interests of seafarers during the epidemic, and proposed to improve laws and regulations, improve the anti-epidemic deployment on board, strengthen the training of seafarers to deal with emergencies, and deepen the remote government affairs and other suggestions.

Based on the research literatures, there are abundant researches on the protection of seafarers’ rights and interests and the countermeasures and effects of the implementation of MLC 2006. The research on the comprehensive effect of MLC 2006 on the protection of seafarers’ rights and interests started earlier in foreign countries, which will provide some valuable references for the research of this topic. However, domestic scholars are good at analyzing the issue of the rights and interests of Chinese seafarers from the perspective of law, focusing on the social security system, and putting forward corresponding countermeasures for a specific problem

alone, instead of comprehensively analyzing the problems existing in the rights and interests of Chinese seafarers. This provides a direction for the writing of this paper.

This topic attempts to comb through the urgent problems faced by Chinese seafarers in terms of rights and interests by referring to some provisions of MLC 2006, and proposes how to enhance the rights and well-being of the seafarers and improve the sense of happiness of Chinese seafarers in combination with the sudden situation of the pandemic.

1.4 Contents of dissertation

This dissertation contains the following contents:

- (a) The requirements of MLC 2006 and domestic regulations on the rights and interests protection of seafarers.
- (b) The present situation of the protection of seafarers' rights and interests in China.
- (c) The inadequacy of the protection of seafarers' rights and interests in China.
- (d) Difficulties faced by Chinese seafarers during COVID-19.
- (e) Countermeasures to strengthen the protection of the rights and interests of Chinese seafarers.

1.5 Research methods and technical route

1.5.1 Research methods

(a) Literature analysis method. Through the search of CNKI and ScienceDirect, domestic and foreign research reports, such as protection of rights and interests of seafarers, implementation countermeasures of MLC 2006, and the impacts of MLC 2006 on seafarers, are searched and sorted. The research contents are analyzed and summarized, and valuable parts are selected as literature references in this paper.

(b) Case analysis method. Through interviews and literature review, analyzing the typical cases of infringement of the rights and interests of Chinese seafarers, including during the pandemic, the deficiencies in the implementation of the MLC 2006, the reasons for this situation are analyzed, and the solutions and approaches are further explored, enhance the operability and scientific nature of the research results.

(c) Analytical synthesis method. This paper analyzes the current situation of the protection of Chinese seafarers' rights and interests, the relevant legislation and the implementation of MLC 2006. Combined with the typical problems of weak links in the protection of Chinese seafarers' rights and interests, this paper comprehensively studies how to safeguard seafarers' rights and interests, and seeks for clear and effective countermeasures.

1.5.2 Technical route

The technical route of this paper is the process of collecting materials and data, asking questions, analyzing problems, and solving problems. The technical route is

shown in Figure 1.

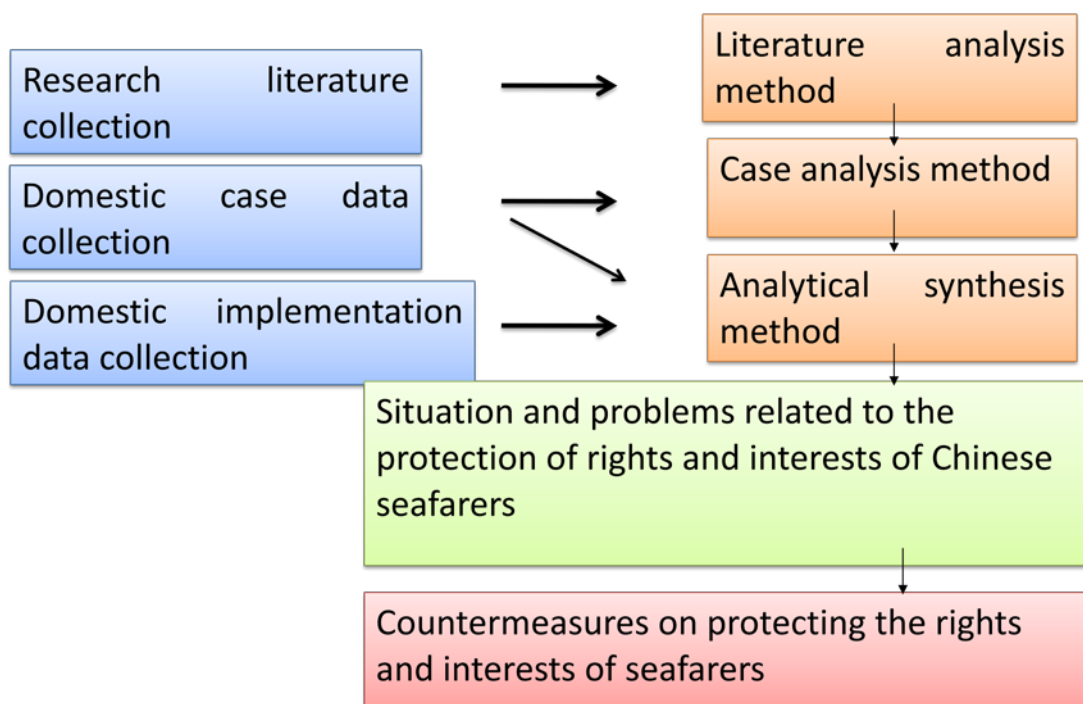


Figure 1 - Technical route

Source: the author

Chapter 2 Seafarers' rights and interests protection in the MLC 2006 and domestic regulations

2.1 Related concepts

When studying the protection of the rights and interests of seafarers, it is necessary to clarify the meaning of the seafarers and the rights and interests of seafarers. At the same time, it is important to comb out how to describe the rights and interests of seafarers in MLC 2006.

2.1.1 Seafarers

It is customary in China to refer to those working on a ship as crew or seamen, and less often as seafarers. In the Maritime Law of the People's Republic of China (hereinafter, Maritime Law), "crew" refers to all personnel on a ship, including the master (NPCSC, 1993). This definition is broad and similar to the definition of seafarer in MLC 2006, where "seafarer" is any person who is employed or practices

or works in any position (ILO, 2006). MLC 2006 is applicable to Chinese international sailing vessels and domestic coastal sailing vessels and the crew on these vessels. While in the regulation of the People's Republic of China on Seamen (2020 Revision) (hereinafter, Seamen Regulation), "seamen" means the personnel who have obtained the certificate of competency for seamen, including the master, officers and ratings (Seamen Regulation, 2020).

Since this paper mainly discusses the rights and interests of seafarers under MLC 2006, considering that MLC 2006 is mainly aimed at seafarers of international sailing ships and coastal navigation ships, and the situation faced by the seafarers of inland river ships is more complex and special, therefore, seafarers in this paper refer to seafarers of sea-going vessels except those on inland waterway navigation vessels.

2.1.2 Rights and interests of seafarers

Rights and interests refer to the rights and interests of citizens protected by law, including the legal rights and interests that can be obtained. It can be derived that the rights and interests of seafarers are the legal rights and interests that citizens should enjoy as seafarers. Seafarers' rights are the basic rights obtained by the seafarers as legal subjects and have a strong legal binding force. Article IV of the MLC 2006 defines the employment and social rights of seafarers, including safe workplace, fair conditions of employment, decent working and living conditions on board, health protection, medical treatment and other social protection (ILO, 2006). Seafarers' interests refer to the interests in the process of working, which is not directly stipulated by the law. It is usually the result of negotiation between seafarers and shipowners through seafarers' organizations or institutions. Domestic seafarers

related laws do not separate the rights and interests, but usually combine them. Both the Seamen Regulation and Maritime Traffic Safety Law of the People's Republic of China (2021 Revision) (hereinafter, Maritime Traffic Safety Law) explicitly state that the legitimate rights and interests of seafarers should be protected. However, domestic regulations, including those newly amended do not specify what the rights and interests of seafarers are covered.

2.2 Seafarer's rights in MLC 2006

In 2006, MLC 2006 was voted through at the Geneva Conference and came into force in 2013. MLC 2006 aims to promote “decent work” for seafarers and is known as the “Bill of Rights” for seafarers around the world. Together with the three IMO conventions SOLAS, MARPOL and STCW, MLC 2006 forms the four pillars of the international maritime legal system. According to the ILO on May 28, Mozambique has become the 98th member country to ratify the MLC 2006 (ILO, 2021). The MLC 2006 consists of three parts, articles, regulations and codes, which set out the most basic requirements for the working and living conditions of seafarers. In addition to Article V, which stipulates the rights of seafarers, the MLC 2006 also protects the rights of seafarers through title 1 to 5, of which title 1 is the minimum requirements for seafarers to work on a ship, and title 2 is the conditions of employment. Title 3 refers to accommodation, recreational facilities, and catering, title 4 is health protection, medical, welfare and social security protection, and title 5 is compliance and enforcement (ILO, 2006). Meanwhile, the MLC 2006 imposes responsibilities on flag states, port states, labour supplier states and shipowners.

2.3 Domestic laws to implement MLC 2006

China is one of the founding members of the ILO and one of the initiators of the MLC 2006. MLC 2006 came into effect in China in 2016. Over the years, China has carried out a great deal of work on the formulation and implementation of the Convention, which has laid a good foundation for promoting the early integration of Chinese seafarers' rights protection mechanism with the international community and ensuring the smooth implementation of the Convention in China.

Unlike other international conventions, MLC 2006 cannot be applied directly to shipowners, ships and seafarers, and must be enforced by member states through domestic laws or other means. At the national level, some laws and regulations applicable to the protection of rights and interests of all citizens are applicable to Chinese seafarers, such as the Constitution of the People's Republic of China and the Labour Law of the People's Republic of China, etc. Detailed laws and regulations are shown in Table 1.

Table 1- Comprehensive laws and regulations for Chinese seafarers

Issuing Authority	Laws/ Regulations	Main Contents	Date Issued
NPC	Constitution	The rights and duties of citizens	2018
NPCSC	Maritime Traffic Safety Law	Seafarers' rights and interests	2021
NPC	Trade Union Law	The rights and obligations of trade unions	2009

NPCSC	Labour Law	The legitimate rights and interests of workers	2018
Ministry of Labour & Social Security	Provisions on Collective Contracts	Contracts	2004
Ministry of Labour & Social Security	Trial Measures for Collective Wage Negotiation	Wage	2000
State Council	Regulation on Labour Security Supervision	Labour security	2004
NPCSC	Labour Contract Law	Labour relation	2012
NPCSC	Social Insurance Law	Social security	2018
NPC	Civil Code	Citizen rights and interests	2020

Source: the author

According to the Legislation Law of the People’s Republic of China, the NPC and the Standing Committee of the NPC exercise the legislative power of the state, and the State Council formulates administrative regulations, which have higher authority than administrative regulations, local regulations and rules, and administrative regulations have higher authority than local regulations and rules (NPC, 2015). China has no national laws specifically for seafarers, and the level of regulations regarding seafarers is relatively low (Zhang & Zhao, 2015). See Table 2 for China’s current and effective administrative regulations and departmental normative documents on seafarers’ issues.

Table 2- Special regulations for Chinese seafarers

Issuing Authority	Regulations/Departmental normative document	Main Contents	Date Issued
MOT	Rules for Watchkeeping of Seafarers on Sea-going Ships	Watchkeeping	2020
State Council	Seamen Regulation	Registration, appointment, training, job security	2020
MOT	Rules for the Administration of Seaman Training	Training	2019
Ministry of Commerce & MOT	Notice on Matters Related to Strengthening Administration of Foreign Labour Service Cooperation by Assigning Seafarers to Foreign Countries	Assigning seafarers	2010
MOT	Provisions on the Administration of Overseas Assignment of Seamen	Assigning seafarers	2019
MOT	Seafarers competency examination and certification rules	Seafarers certification	2020
MSA	Notice concerning the compliance of the MLC	Catering service personnel on board	2013

	2006 by the catering service personnel on board		
MOT	Measures for the control of working and living conditions of seafarers on board	Seafarers' working and living conditions	2018
MSA	Procedures for handling seafarers emergencies abroad	Seafarers emergencies abroad	2017
MSA	Procedures for handling seafarers complaints on board	Seafarers complaints	2018
Ministry of Finance	Announcement on Individual Income Tax Policy for Ocean Seafarers	Seafarers' tax	2019

Source: the author

China's implementation of the domestic laws and regulations of MLC 2006 involves the working and living conditions of seafarers, social security, training and complaints, etc., which meet the requirements of the implementation of the Convention, but the protection of seafarers' rights and interests is relatively scattered. The Maritime Traffic Safety Law, which was revised on April 29, 2021, includes protection of the rights and interests of seafarers for the first time in this law. Article 6 of this law stipulates that the state protects the labour safety and occupational health of seafarers and protects their legitimate rights and interests. The law also specifies the handling of emergencies abroad and the measures to prevent and cure

infectious diseases among seafarers (NPCSC, 2021).

2.4 Summary

Chapter 2 introduces the concept of seafarers and seafarers' rights and interests. The Chinese seafarers studied in this paper especially refer to seafarers on sea-going ships. Their rights and interests are the legal rights enjoyed as seafarers and the benefits gained from their work. As the "Bill of Rights" of seafarers, MLC 2006 stipulates the rights of seafarers, and makes the most basic requirements on the working and living conditions of seafarers. At the same time, it clarifies the responsibilities and obligations of flag states, port states and other parties to implement the Convention. China began to implement MLC 2006 in 2016. After sorting out China's domestic laws and regulations concerning the implementation of MLC 2006, it is found that the contents related to the protection of seafarers' rights and interests are scattered, with a low legal level and no special legal protection of seafarers' rights and interests.

Chapter 3 Current situation of Chinese seafarers' rights and interests

protection

3.1 Chinese seafarers development status

Shipping is the most economical and energy-saving mode of transportation. The world cannot do without shipping and shipping cannot do without seafarers. Seafarers have played an important role in promoting world economic development and ensuring people's normal life. By the end of June 2021, China had more than 1.77 million registered seafarers, ranking first in the world. Therefore, protecting the rights and interests of seafarers is of great significance to the development of China's shipping, economic development and the strategy of "Maritime Power". However, the occupation of seafarers has become less attractive and seafarers have suffered serious loss. The rights and interests of seafarers in China have not been properly protected (Cao & Wang, 2020).

The Ministry of Transport classifies seafarers into three categories, namely seafarers of international sailing ships, coastal navigation ships and inland river ships. The numbers of the three types of seafarers are 613,000, 235,000 and 926,000 respectively (Shou, 2021). Thus, the total number of seafarers discussed in this paper is 848,000. The number of three types of seafarers is shown in Figure 2.

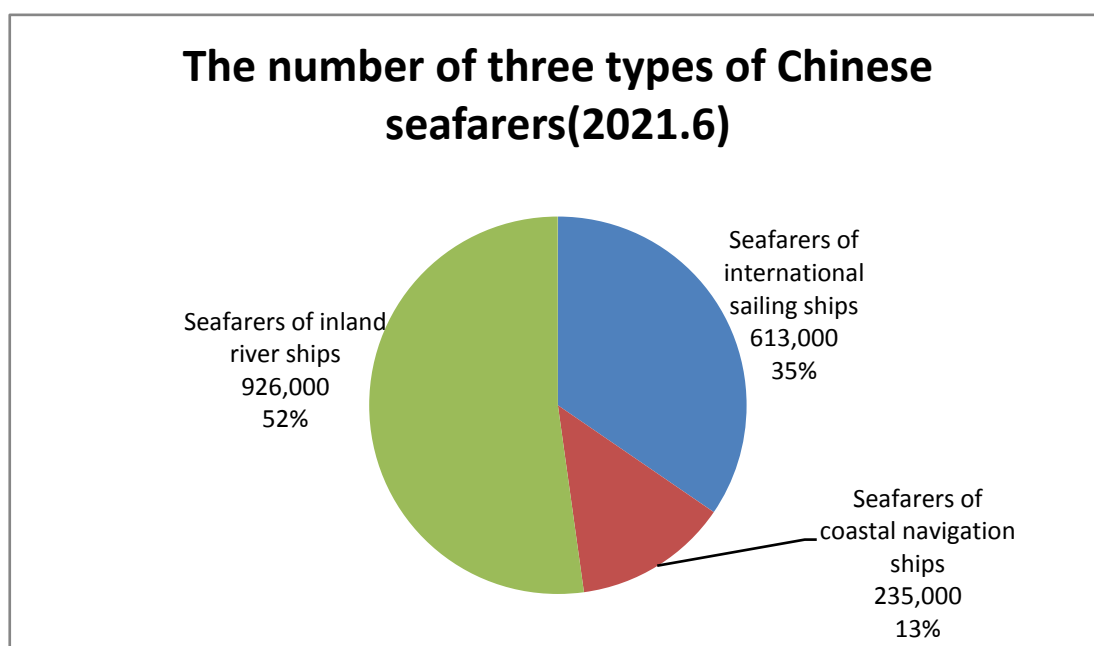


Figure 2 - The number of three types of Chinese seafarers
Source: Shou,T. (2021).

The number of registered seafarers is not the number of people actually engaged in ship work in China. According to the Regulations on the Administration of Seaman Registration, the seafarers' registration will be cancelled only in the four cases of "death or disappearance", "loss of civil capacity", "revocation of the seafarer's service book according to law" and "application for cancellation of registration by himself". An analysis of registered seafarers in 2018 found that only about half actually worked on ships (Yao, 2020). As a result, there will be an annual increase in registered seafarers but a "crew shortage" in the industry. As can be seen from Figure

3, in recent years, the number of Chinese seafarers for international navigation and coastal navigation has been increasing annually, but the number of the former is obviously more than the latter. For many years, there has been an oversupply of seafarers for international navigation ships, while the supply of seafarers for coastal navigation ships has not met the demand (CIMRC, 2020).

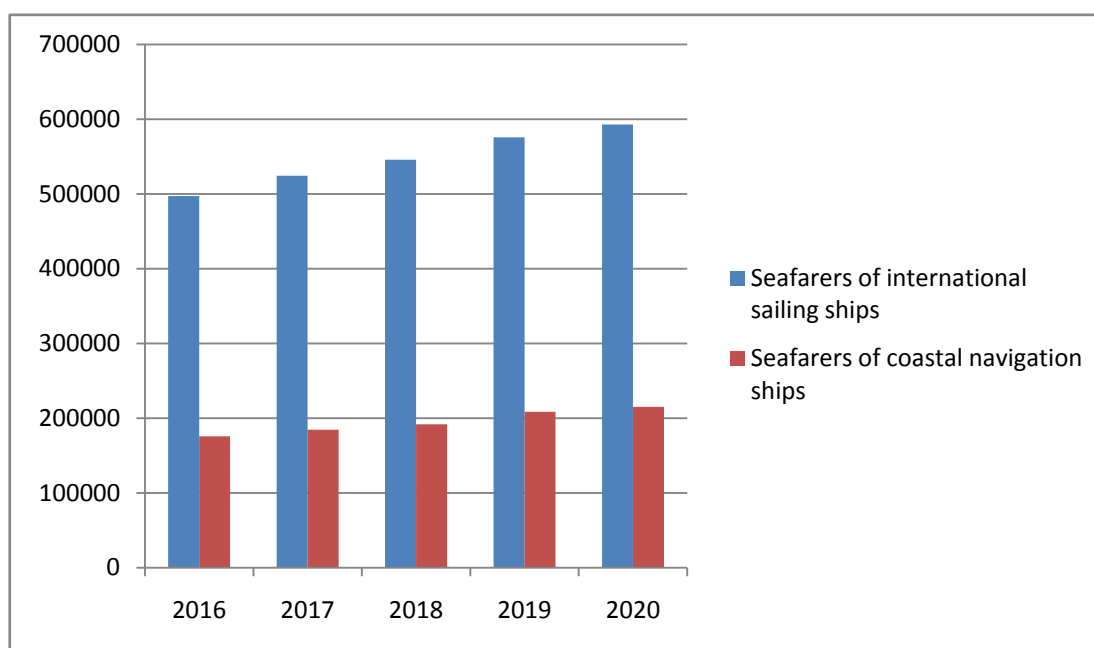


Figure 3 - The number of Chinese seafarers from 2016 to 2020
Source: MOT. (2021).

According to the Chinese Seafarers Development Report in 2020, the number of students enrolled in marine majors in education and training institutions for seafarers increased from 15,335 in 2016 to 19,184 in 2020, an increase of 25.1%(MOT,2021). In addition, from the analysis and statistics of the top 10 universities in the enrollment of marine majors, the boarding rate of graduates was 36.5% in 2017, and it dropped to 28% in 2019 (Wu et al., 2020). It can be seen that, since the number of seafarers exported by maritime colleges and universities is in a state of decrease, the supply and demand relationship of the third officer and AB engine of coastal

seafarers is relatively tense (CIMRC, 2020).

3.2 Protection of seafarers' rights and interests

In the investigation of the status quo of the protection of the rights and interests of Chinese seafarers, the author interviewed 10 employees of the MSA between the ages of 25 and 35. All of them had served as seafarers on ships on international voyages or coastal voyages. They were transferred to the MSA from 2018 to 2020. The interviewees were selected on the basis that they had worked on the ship in recent years; on the basis that they had chosen to give up their careers as seafarers, so that the interview would be more objective; and on the basis that they were currently in the MSA, one of the performance departments of MLC 2006, and had a certain understanding of seafarers rights as stipulated in MLC 2006. Based on the results of the interview, the interviewees were most concerned about the wages, food, entertainment facilities, medical and social security issues of the Chinese seafarers.

3.2.1 Wages

Study showed that the higher the seafarer's income, the higher the sense of gain and the stronger the identity of the seafarer's profession (Li & Bao, 2020). According to the survey on the occupational health status of 668 Chinese seafarers from 2019 to 2020, only 37% of them were satisfied with their wages (Song et al., 2021). The author's interviewees all claimed that seafarers' wages are higher than those currently paid by the MSA, but they all agreed that seafarers' wages do not match the intensity of seafarers' work.

(a) Seafarers' wages and onshore employees' wages

Seafarers are a very hard technical profession, and they need to face the complicated marine environment. Day and night shifts, ship shaking, high temperature and noise have impacts on physical health, and long distances from family and friends can also affect mental health. Seafarers should therefore be paid higher wages than shore-based occupations in terms of working conditions and difficulty. Pan Xinxiang, president of Guangdong Ocean University, commented that in the 1990s, Chinese seafarers' wages were generally 5 to 10 times that of shore-based workers. At that time, the captain's salary was 10 times that of the middle level of the company, while now the middle level of the company is 10 times that of the captain (Pan, 2021).

Based on the data from the Internet, this paper compares the wages of seafarers with those of non-private workers in urban areas since 1995. The average salary of seafarers is represented by the middle income third officer and fourth engineer, and it is assumed that seafarers work for 9 months per year. As can be seen from Table 3, the average annual salary of seafarers in 1995 was about 34,200 yuan, and that of urban residents was 5,500 yuan, 6.2 times that of urban residents. But by 2020, seafarers' annual income (170,000 yuan) was only 1.74 times that of urban residents (97,379 yuan). As a result, the wage gap between seafarers and shore-based occupations is narrowing. In the past, the annual income of urban residents was low, and the seafarer's job was attractive with high salary. Now, the job risk and difficulty remain unchanged, and the seafarer's salary has become less attractive.

Table 3 - Average annual income of seafarers and urban residents from 1995 to 2020(yuan / per year)

Items\Year	1995	2005	2015	2020
Seafarers	34,200	58,500	58,500	170,000

Urban residents	5,500	18,200	62,029	97,379
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Source: Shanghai Shipping Exchange & National Bureau of Statistics. (2021).

(b) Chinese seafarers' wages and foreign seafarers' wages

Chinese seafarers are the main force in the international shipping market. In 2019, a total of 155,000 seafarers were dispatched. (MOT, 2020). In the early years, Chinese seafarers were at a disadvantage in the international seafarers market because of their poor English skills. At present, major maritime education schools are vigorously promoting English teaching to improve students' seafaring English ability. The quality and ability of Chinese seafarers have met the needs of the international shipping market and are on a par with those of other countries. Table 4 shows the wage level of international dry bulk ship seafarers in 2020. It can be seen that the wages of Chinese seafarers are basically lower than those of Eastern Europeans, EU Nationals and US Nationals, and the wages of most positions are also lower than those of Philippine. "Even on the same ship and in the same position, Chinese seafarers are paid less than their Filipino counterparts", says a captain working for Orient Overseas Container Line.

Table 4 - Seafarers' wages of bulk carriers in various countries in 2020 (USD / per month)

Rank	China	Philippines	Eastern Europeans	EU Nationals	US Nationals
AB/Oiler	1,678	1,387-1,400	800-1,200	-	-
Cook	1,820	1,600-1,988	1,800-2,500	-	-
Bosun/Fitter	2,067	1,600-1,900	2,000-2,200	-	-

Electrician	3,494	4,000-5,600	2,000-5,000	3,500-6,000	3,500-6,500
3O /4E	3,065	2,100-3,495	1,300-2,900	2,000-4,000	2,400-4,200
2O /3E	3,441	2,600-3,750	2,000-4,000	3,800-4,800	4,000-5,000
CO /2E	6,445	6,350-9,500	3,800-7,000	4,200-8,500	5,500-11,000
MA/CE	8,004	8,100-12,100	5,500-9,500	7,000-11,000	8,000-12,000

Source: Shanghai Shipping Exchange.(2021).

3.2.2 Living conditions on board

Seafarers work and live on board ships, and living conditions on board are important for the protection of seafarers’ rights, specifically accommodation, entertainment facilities and food. The interviewees showed that Chinese seafarers’ eating habits are difficult to change, and that they generally like fresh vegetables, but vegetables are rarely available on international voyages. One interviewee who got off the ship in 2020 said he no longer wanted to eat the food on board, which was fresh for the first few days, followed by “less fresh” and repetitive dishes for the next few months. Among 668 seafarers, 20% thought the food on board was super, 71% thought it’s OK and 9% thought terrible (Song et al., 2021). This suggests that the food on board needs to be improved.

The work of the seafarers on the ship belongs to the physical labour, the food quality is very important for the physical labour. Especially for seafarers serving on international sailing ships, who stay on board for months at a time, three meals a day is more important. In China, seafarers generally come from underdeveloped or poor areas, such as rural areas, and they have the quality of bearing hardships and standing hard work. A study found that Chinese seafarers received \$4-8 per day for food from

shipowners, and Chinese seafarers would share two-thirds of this money equally to increase their personal income (Zhang & Zhao, 2017). It is because they are not satisfied with their income that they take part of the money from their meals to increase their income, resulting in poor food quality.

Recreational facilities can effectively eliminate seafarers' loneliness and relieve work pressure (Sekhon & Srivastava, 2021). However, 10 interviewees said that there were basically no recreational facilities on board, only televisions that could receive signals occasionally when docking at the port, table tennis tables were not available on every ship, and Internet access of mobile phones and computers during the voyage was very expensive, so they basically only used the Internet when docking at the port. They downloaded a lot of movies and TV shows at home and took them to the boat to kill time. The lack of protection of recreational rights and interests is also reflected in the survey of 668 seafarers. The number of recreational facilities in which there are no facilities accounted for 42%, that in which there are 1-2 facilities accounted for 54%, that in which there are 3-4 facilities accounted for 3%, and that in which there are more than 4 facilities accounted for 1% (Song et al., 2021).

3.2.3 Onboard medical care

The author's interviewees expressed urgent concerns about the medical situation on board, with three of them stating that there had been seafarers suffered from acute illness on board and were unable to receive adequate medical care, which was manifested by the lack of a ship doctor and medicines. Shipboard medical care conditions are important to the physical and mental health of seafarers, and MLC 2006 Title IV makes it clear that seafarers' health should be protected and ensured prompt access to onboard and ashore medical care (ILO, 2006). In response to the

requirements of MLC 2006, the Measures for the Management of Working and Living Conditions on Seafarers Shipboard issued by China in 2013 clearly stipulates that international ships with more than 100 passengers and a voyage of more than 3 days shall be equipped with a ship doctor, and those without a doctor shall have at least one seafarer responsible for medical care on board (MOT, 2013). The actual situation in China is that the captains and chief officers are responsible for the simple medical care on board.

MLC 2006 and the current regulations of China have a low standard for onboard medical care. For example, China has more than 2,000 dry bulk carriers, making it the third largest shipowner in the world. However, there is no need for a ship doctor with a crew of less than 100 people (Cao & Wang, 2019). These ships spend a long time at sea, and once the seafarers become ill, it is difficult to get professional help on board, and it will delay the illness if the seafarers are sent to the hospital after arriving at the port. Standard A4.1 of MLC 2006 clearly states that the competent authority shall ensure that medical guidance is available to ships at sea within 24 hours a day (ILO, 2006). However, only 28.28% of the seafarers reported that they could get adequate telemedicine guidance on ship, while 72.72% reported that they could not get or have adequate telemedicine guidance on board (Cao & Wang, 2019).

3.2.4 Social security

Social insurance is an important element of seafarers' social security. In the Decision of the Standing Committee of the National People's Congress on Ratifying the MLC 2006, it is stated that according to paragraph 10 of the Standard A4.5 of MLC 2006, the categories of social insurance applicable in China are: old-age insurance, medical

insurance, employment injury insurance, unemployment insurance and maternity insurance(NPCSC, 2015). The Seamen Regulation also stipulates that the employing units and seafarers shall, in accordance with state regulations, participate in industrial injury, medical treatment, pension and unemployment insurance. The employing unit of the seafarers shall also handle special personal and health insurance for the seafarers who sail through the epidemic area or carry toxic and harmful substances (State Council, 2020). However, statistics on the social insurance enjoyed by seafarers showed that 22% of seafarers still do not participate in insurance, 69% of seafarers are insured by the company and 9% of seafarers buy insurance by themselves (Song et al., 2021). In the event of an accident, uninsured seafarers will suffer a great deal of financial stress and will not be able to receive a pension after retirement.

Compared with shore personnel, seafarers have a higher rate of casualty and disease, with a higher incidence of gastrointestinal, skin and skeletal diseases (Sagaro et al., 2021). In addition, seafarers are far away from relatives and friends, so they are prone to loneliness, depression and other emotions on board, and are more likely to smoke, drink and take drugs than people on shore (Zhang & Zhao, 2017). These bad living habits can seriously affect one's health. Therefore, seafarers deserve better social security. The author's respondents indicated that the implementation of social security for seafarers was not as good as for those on shore. For example, People on shore can go to hospital at any time and enjoy medical insurance, but seafarers can only enjoy medical insurance when they are on shore leave. In addition, where the company has purchased insurance for the seafarers, the cost of insurance for the period of the seafarers' leave is also borne by the seafarers themselves. This is one reason why many seafarers do not have insurance, preferring to keep the money as family income.

3.3 Reasons for insufficient protection of seafarers' rights and interests

The last section analyzed the current situation of the protection of Chinese seafarers' rights and interests, among which the deficiencies are also the problems that seafarers are very concerned about and urgently need to be solved. After MLC 2006 took effect in China, these problems have always existed. The reasons are as follows:

3.3.1 The legal system still needs improvement

China's socialist legal system has been more and more comprehensive, the new revision of the Maritime Traffic Safety Law for the first time, added the contents of seafarers' rights protection. It means that seafarers' rights protection has risen to the law level. However, the relevant content is only general, and does not specify which rights and interests to protect and how to protect. The Labour Law for all citizens guarantees the rights and interests of seafarers as ordinary workers, but it does not accord with the reality of seafarers as a special profession, and seafarers need special protection. As administrative regulations and normative documents, Seamen Regulation and Measures for the management of seafarers' work and life on board have a lower level of legal effect. In general, whether the new revision of the Maritime Traffic Safety Law, Seamen Regulation and other laws and regulations, the contents of the protection of the rights and interests of seafarers are not specific, and the pertinence and operability are not strong.

3.3.2 The safeguard mechanism is far from being sound

According to the Announcement of the Ministry of Transport and the Ministry of Human Resources and Social Security on the Implementation of the MLC 2006, the

Ministry of Transport and the Ministry of Human Resources and Social Security jointly protect the legitimate rights and interests of the seafarers. Specifically, the Ministry of Transport is responsible for the supervision and inspection of the accommodation, onboard entertainment facilities, food and catering services, health and safety and accident prevention, onboard complaint procedures, etc. The department of human resources and social security is responsible for the supervision and inspection of minimum wage, labour contract, wage payment, work and rest time, vacation and social insurance, etc. There is bound to be crossover between the two agencies' inspections, such as Ministry of Transport needs to consider seafarers' work and rest time when inspecting safety and preventing accidents. But in practice, the two agencies failed to establish an effective coordination mechanism and carry out unified supervision and inspection operations. When the rights and interests of seafarers are infringed, seafarers do not even know to which department to apply for rights and interests.

3.3.3 The policy support is insufficient

The contribution of seafarers to the economy is obvious to us all, but the government does not pay enough attention to seafarers and there are few preferential measures. In terms of tax incentives, seafarers are exempt from income tax in many countries, such as Sweden, Singapore, and the Philippines. But China does not stipulate until 2019 that on January 1, 2019 solstice on December 31, 2023, for oceangoing seafarers who sail more than 183 days in a year on the ship, their wages will be calculated at 50% personal income tax. This policy only halves income tax, which is a long way from a total exemption. The policy is very strict and only applies to oceangoing seafarers who have sailed for more than 183 days. There is no preference

for coastal seafarers. In terms of port welfare facilities, shore leave plays an important role in reducing the work pressure and relaxing the mood of seafarers. Most ports in China are built in remote suburbs with inconvenient transportation, and there is a lack of basic shore welfare facilities and services in ports (Duan & Yin, 2011). The survey in 2020 showed that most of China's port-based welfare services are provided through market mechanism, and seafarers are in urgent need of non-profit port-based welfare service (Zhao et al., 2020).

3.3.4 The market mechanism is not sound

There is a huge market for seafarers in China, and the orderly competition, honest management and high degree of self-discipline of shipowners and seafarers' intermediary organizations are of positive significance to the protection of seafarers' rights and interests. In China's seafarer labour market, there are three concepts: seafarer assignment agency, seafarer service agency and seafarer intermediary agency, with ambiguous responsibilities and rights (Cao, 2020). In reality, some shipowners recruit seafarers through seafarer intermediary agencies, instead of treating seafarers as talents for the development of the company, they only regard seafarers as tools to make money, which affects the development of seafarers' rights protection. In addition, since the crew management market is a market behavior, there will be uneven intermediary agencies without effective supervision. In order to win the shipowner's market, some "black intermediaries" took advantage of the loopholes in the seafarer management market to deduct seafarers' wages and deposits and obtain improper profits.

3.4 Seafarers' rights protection during COVID-19

Starting in 2020, the COVID-19 broke out globally and is still spreading today. Seafarers supplying countries such as India, Pakistan and Philippines are also in the suffering of the pandemic. It has a huge impact on the world from all walks of life, the shipping industry has also been a strong shock, and seafarers suffered the biggest crisis. On the one hand, seafarers keep working during the pandemic to meet the needs of people around the world. On the other hand, the rights and interests of seafarers themselves are difficult to be guaranteed. It is very difficult to carry out self-protection in the relatively closed and crowded space of the ship, and there are unprecedented difficulties in crew changes, receiving ashore medical treatment and port facilities, repatriation and other aspects (Stannard, 2020).

In May 2021, 17 Chinese seafarers boarded a ship in South Korea where there were cases of COVID-19 without being informed. Seafarers appointed lawyers, sought help from all parties and waited anxiously on board for 11 days before being repatriated (Yi, 2021). The incident has attracted wide attention from people. The 17 Chinese seafarers had spent 14 days in quarantine in South Korea before they boarded the ship. Due to the secrecy of the crew management company, they had to stay in quarantine for 11 days on the ship with the risk of infection. After they got off the ship, they had to stay in quarantine for another 14 days and could only return home after being tested for health. According to MLC 2006, Labour Law and the Seamen Regulation, their rights to information, health and repatriation are not well preserved.

Kitack Lim, secretary-general of the IMO, has repeatedly pointed out that seafarers

are at the heart of the global supply chain and that their rights should be protected, suggesting that seafarers be identified as “key workers” and given priority for vaccination. Although IMO has issued 41 Circular letters since January 2020 to support and solve the epidemic problems faced by the shipping industry and seafarers, and constantly calls on member states to do a good job in crew changes, due to the uncontrolled global epidemic, various countries have different approaches to solving the problems of ship docking and crew landing, etc. During the COVID-19, the rights and interests of Chinese seafarers are mainly impacted as follows:

3.4.1 Difficulty in crew changes

In order to prevent the spread of COVID-19, many countries have imposed restrictions on foreign entry, affecting travel at ports and airports. Ships on international voyages need to call at different ports in different countries. Seafarers whose contract expires could have been replaced, but could not get off the ship because of the epidemic prevention restrictions of the local country. If seafarers work on a ship for more than 11 months, their rights will be seriously affected (Henry, 2020). Even if the ship can be disembarked, it may be difficult to repatriate to China due to border or airport controls. The IMO calls the failure in crew changes as a humanitarian, safety and economic crisis. As of March 2021, 200,000 seafarers have been on the ship for more than the time stipulated in the contract and cannot disembark and rest. The similar number of seafarers are waiting to board the ship (IMO, 2021). Data in June from the Neptune Declaration Crew Change Indicator showed that 7.4% of seafarers had overworked their contracts.

3.4.2 Impairment to mental health

MLC 2006 stipulates that seafarers can work on a ship for a maximum of 11 months. Seafarers who are unable to disembark due to crew changes difficulties will face the extension of their contracts and continue to work on the ship after negotiation with the company, even if some have already worked on the ship for 18 months (“Crew Changes”, 2021). A survey conducted by the World Maritime University on seafarers’ experiences during the epidemic showed that more than half of the surveyed seafarers believed that the epidemic increased their workload (Pauksztat et al., 2020). “Crew changes” is a necessary process for seafarers’ physical and mental rest. Seafarers whose contracts had expired could disembark, but they had to stay on board to work because of the epidemic. Long working hours and separation from family and friends incurred psychological problems to many seafarers (Stannard, 2020). The seafarers are anxious and depressed because they have been worried about being unable to go home. More than 40% of the respondents experienced depressive symptoms repeatedly, and more than half felt anxious and experienced fatigue and sleep problems (Pauksztat et al., 2020).

3.4.3 Inaccessibility to port medical care

Under normal circumstances, seafarers have limited access to shore-based medical care and can only receive port medical care when they are in port. Under COVID-19, it is more difficult for seafarers to receive shore-based medical care because of the unusual difficulty of crew changes. For example, on February 13, 2021, a Chinese seafarer on a Panamanian-registered ship berthing in Quanzhou port had an acute kidney stone. The local MSA initiated the emergency response procedures for the

crew during the epidemic, and through multiple quarantine procedures in conjunction with the local government, border inspection and customs, the seafarer was successfully sent to the hospital for treatment (Zhang & Zeng, 2021). There are also many cases similar to those of seafarers in need of hospital emergency treatment. During the epidemic, the overall coordination of various government departments is required, which undoubtedly increases the time cost. If the treatment is not in time, there will be incurable consequences to the health of seafarers.

3.4.4 Reduction in income

There are no restrictions on crew changes for Chinese seafarers at Chinese ports, but according to the Chinese government's quarantine requirements for entry personnel, the entry seafarers will be quarantined for 14 days. An official in charge of seafarers' quarantine said that the seafarers would be sent to designated quarantine hotels immediately after landing, and the cost of accommodation and meals during the quarantine should be borne by the seafarers themselves. According to the practice of the Chinese shipowner, the seafarers will not be paid during the holiday off the ship, so it is even more difficult for the seafarers to pay for the accommodation and food for the 14-day isolation, and their income will be reduced by thousands of RMB.

3.5 Summary

China boasts the world's largest number of registered seafarers, totaling more than 1.77 million. The willingness of graduates from maritime colleges to board ships has decreased, and the phenomenon of seafarer resignation is prominent. The reason is that the rights and interests of seafarers are not fully protected. In terms of wages,

Chinese seafarers' wages do not match the working intensity, and the wage gap with shore-based occupations is narrowed, lower than that of foreign seafarers. In terms of living and medical conditions on board, Chinese seafarers will save food expenses to increase their personal income, resulting in worse food on board. There are few recreational facilities on board, the standard of onboard doctors is high and onboard medical care needs to be greatly improved. With regard to social insurance, about 22 percent of seafarers are not insured and 69 percent are insured by the company, but the cost of insurance during vacation is not covered by the company. The sudden outbreak of COVID-19 has also affected Chinese seafarers' crew changes, mental health, onshore medical treatment and income. The root cause of these problems lies in the imperfect legal system, imperfect safeguard mechanism, insufficient policy support and imperfect market mechanism for the protection of seafarers' rights and interests.

Chapter 4 Countermeasures to seafarers' rights and interests protection

Shipping is the link of the operation of the world economy, and seafarers are the cores of shipping. Merchant ships in the 19th century could carry only a few thousand tons of cargo and should be manned with more than 200 seafarers. The huge container ship that ran aground in the Suez Canal was carrying more than 200,000 tons of cargo worth 3.5 billion dollars and manned with just over 20 seafarers. It shows that the value created by a single seafarer is increasing, and the importance of seafarer is incomparable to other professions. The protection of the rights and interests of seafarers involves multiple stakeholders, which requires the joint efforts made by the government, society, enterprises, education and training institutions, etc.

4.1 Government exalts seafarers' social status

In China, shipping carries more than 50 percent of domestic trade and 90 percent of the international trade. It can be seen from the rise and fall of British shipping that to promote the development of shipping and seafarers, it is necessary for the state to issue policies to provide financial and tax support to shipping and vigorously train

seafarers (Shan, 2017). Chinese soldiers, teachers and doctors are noble professions that are widely respected by the society, and the government has issued special laws to protect their rights and interests. Chinese seafarers, on the other hand, are not widely noticed by society because they are far from land. To improve the protection level of Chinese seafarers' rights and interests, we should fundamentally start from improving the social status of seafarers and make their profession full of pride, attraction and honor.

4.1.1 Promotion of seafarers' legislation

MLC 2006 proposes that Member States ensure that the rights of seafarers to decent employment, as well as employment and social rights, are fully implemented (ILO, 2006). Studies suggest that continuous revision of maritime legislation can reduce unfair treatment of seafarers (Exarchopoulos et al., 2018). At present, developed shipping countries in the world generally formulate special "Seafarers Law" to protect the rights and interests of seafarers. For example, Japan formulated the Seafarers Law in 1899 (Cao, 2020). In China, the Maritime Traffic Safety Law, the Maritime Law and the Seamen Regulation simply mentioned "protecting the legitimate rights and interests of seafarers". As early as 2012, Wang Zuwen, the former president of Dalian Maritime University, proposed that the establishment of the Seafarers Law is important to improve seafarer' rights and interests (Cui, 2012). In the legislation of the Seafarers Law, full consideration should be given to the rights of seafarers as stipulated in MLC 2006, and how to solve the problems of infectious diseases, piracy, repatriation and other issues faced by seafarers in recent years. At the same time, compensation measures should be provided for the acts violating seafarers' rights and interests.

4.1.2 Strengthen implementation of the MLC 2006

A study on the impact of MLC 2006 on seafarers showed that although MLC 2006 and international maritime conventions have their impacts, the law enforcement by administrative authorities has the greatest impact (Saeed, 2015). Therefore, the implementation of MLC 2006 is extremely important. China has made concrete efforts to implement the MLC 2006, publicizing and implementing the Convention between shipping companies and seafarers. In 2016, the Measures for Inspection of Maritime Labour Conditions were issued and implemented jointly by the Ministry of Transport and the Ministry of Human Resources and Social Security. However, due to various reasons, the inspection of maritime labour conditions carried out by the MSA was not formally implemented until May 1, 2021. In order to reduce the burden on ships and seafarers, the implementation departments of the Ministry of Transport and the Ministry of Human Resources and Social Security should strengthen coordination, carry out joint inspections as much as possible, and realize real-time sharing of inspection results. In addition, all international conventions should be kept up to date, including MLC 2006. In particular, when seafarers are concerned about certain rights and obligations, they should consider making corrections (Aguda, 2017). All implementing departments should take the initiative to participate in the revision of the Convention, actively write proposals, improve the quality of proposals, and speak up for the protection of the rights and interests of Chinese seafarers.

4.1.3 Increase policy support

The government's increased preferential policies for seafarers can easily promote the whole society to enhance the understanding of seafarers, improve the awareness of

seafarers as a profession, and also enhance the sense of happiness and honor of seafarers. But for now, China's preferential policies for seafarers are only reflected in tax preferences, which are far less favorable than those of other shipping developed countries. Firstly, it is suggested that the government should popularize the tax incentives among all Chinese seafarers as soon as possible and increase the incentives correspondingly. It is better to exempt seafarers from individual income tax. Secondly, government should strive to give preferential treatment to seafarers in terms of medical treatment, transfer of jobs, family members' accompanying on the ship, as well as education, medical treatment, household registration and employment of seafarers' families, reduce social insurance premiums for seafarers and promote full coverage of social insurance for seafarers. Thirdly, the communication service for seafarers on board is very important. Using the Internet on board is not only for entertainment's sake, but can also enhance the connection with family and friends, which is of great significance for mental relaxation (Zhang et al., 2020). However, the cost of communication during the voyage of the ship is expensive, and it is impossible for the shipowner to bear all the cost of communication. Seafarers are eager to be connected to the Internet, download at fast speeds without worrying about the cost of access (Mission to Seafarers, 2021). The only viable solution would be for the government to coordinate with communication carriers to lower rates for onboard communications, or to subsidize the use of the Internet by seafarers on board. Fourthly, strengthen the construction of port welfare facilities. The government should give full consideration to the increase of port welfare facilities in port planning to meet the needs of seafarers for shore leave.

4.1.4 Strengthen supervision

The relationship between shipowner and seafarer can be explained by the relationship between employer and employee. If the seafarer service company or seafarer intermediary company is added, the seafarer labour relationship becomes more complicated. With the development of market economy, more and more free seafarers who do not belong to any company appear in the seafarers market. The short-term labour relationship makes it more difficult to protect the rights and interests of free seafarers (Devereux & Wadsworth, 2021). Therefore, for the seafarer labour market, the government should carry out unified management, formulate unified reward and punishment measures; it is suggested to establish a supervision center for the protection of seafarers' rights and interests, solve the phenomenon of multiple management of various departments, standardize the labour relations of seafarers, and strengthen the supervision and management of shipowners and seafarers' intermediary companies under the market economy; encourage honest operation and publish the list of honest shipowners and intermediary companies to the public. A survey conducted by the World Maritime University showed that seafarers often work overtime, but for the benefit of the company, they fake work and rest time to avoid inspections (Baumler et al., 2020). Therefore, it is necessary to establish an effective supervision mechanism for the seafarers' work and rest on the ship to ensure the seafarers' rest time.

4.2 Enterprises enhance sense of responsibility to seafarers

Enterprises, including shipping companies, various seafarer-management companies, seafarer-service agencies and seafarer-intermediary companies are the entities having

the closest contact with seafarers and the providing basic guarantee for seafarers. Enterprises should enhance sense of responsibility for seafarers, fulfill their due obligations, assume more social responsibilities, and effectively protect the legitimate rights and interests of seafarers.

4.2.1 Improve seafarers' welfare benefits

Less than one-third of maritime graduates are willing to work as seafarers, the main reason being high wages, and the main reason for being unwilling to work as seafarers is the working mode of seafarers (Wang & Shu, 2021). The particularity of occupation makes it difficult for seafarers to achieve work-life balance (Sekhon & Srivastava, 2021). Therefore, reducing work pressure, increasing remuneration, and improving working and living conditions can attract more graduates to become seafarers, and play a key role in improving seafarers' job satisfaction and job performance. Firstly, in terms of wages, every 1 yuan increase in salary can increase 0.027 ocean-going officers for China (Wang & Chang, 2021). Shipowners should give full consideration to the particularity of seafarers' work and increase the range of wages. Seafarers' intermediary companies operate in a standardized way and do not charge seafarers agency fees or security deposits, and gradually narrow the wage gap with seafarers from developed shipping countries. Secondly, in terms of food, accommodation and entertainment, shipowners should earnestly fulfill the relevant provisions of MLC 2006 and meet the minimum requirements of the Convention, so as to improve the standard of seafarers' food, accommodation and entertainment facilities as much as possible. Thirdly, in terms of social insurance, enterprises should take the initiative to undertake the responsibility of paying social insurance for seafarers, especially to ensure that the social insurance is uninterrupted during the

leave of seafarers. Fourthly, to ensure the rights of seafarers to repatriate, formulate and improve the operational procedures for seafarers' repatriation, especially in the event of force majeure such as COVID-19, piracy or war, to ensure the repatriation of seafarers is the top priority in the protection of rights and interests.

4.2.2 Care for seafarers' mental health

Surveys of seafarers during the COVID-19 showed that their main support came from shipping companies, family, friends and social media (Pauksztat et al., 2020). In fact, the company's support for seafarers at all time is beneficial to their physical and mental health. Firstly, the company should reasonably plan the shipping schedule, reserve sufficient loading and unloading time, reduce the workload of administrative documents on board, and ensure that every seafarer has sufficient rest time. Secondly, to improve the standard of medical investment in ships, telemedicine can be used to improve the quality of medical service for seafarers (Nittari et al., 2019). The third is that psychological capital has a direct positive effect on seafarers' safety behavior and an indirect positive effect on reducing seafarers' burnout (Yuen et al., 2020). Company management personnel should communicate with seafarers regularly, listen to the wishes and demands of seafarers, understand and motivate them. Strengthening psychological counseling for seafarers is also conducive to better integration of seafarers into life on land (Wang & Shu, 2021). Fourthly, addressing family needs has a positive impact on seafarers' peace of mind when working on board (Yuen et al., 2020). The company should regularly show concern and condolences to the seafarers' family members and establish a support system to help seafarers solve their family difficulties.

4.2.3 Support seafarers' training

Modern shipping has entered the high-tech era, and ships are gradually becoming larger and more intelligent. The updating speed of international conventions is constantly accelerating. ISM rules and PSC inspection have put forward stricter requirements on ships and seafarers, and seafarers should be sophisticatedly equipped to meet the needs of safe navigation. Studies have shown that seafarers lacking in theoretical knowledge and maritime experience are more liable to accidents of serious consequences (Wang et al., 2021). The Company shall actively formulate education and training plans for seafarers, organize special trainings on a regular basis, strengthen seafarers' nautical knowledge and professional ability training, including updating training on international conventions, and improving ship operation level, safety awareness and environmental protection awareness. Secondly, companies should strengthen the training of seafarers to deal with emergencies (Chen, 2020), such as how to deal with infectious diseases such as COVID-19, so as to further improve the ability of seafarers to maintain their own safety and health.

4.2.4 Expand seafarers' career promotion channels

In recent years, the career attraction of seafarers has declined, and the phenomenon of seafarers transferring to other posts is prominent. Data showed that the average annual loss rate of maritime graduates is about 42% (Wang, 2019). Detailed career planning is very important for job hunting and stable employment for maritime graduates (Wang & Shu, 2021). More and more seafarers are moving to non-shipping jobs, one reason being the narrow career promotion channels in companies. Companies should expand the career promotion channels of seafarers and solve the problem of shipping brain drain from various aspects. Firstly, companies should

assist seafarers in career planning when recruiting seafarers, and makes timely adjustments according to the seafarers' work development. The second is to encourage seafarers to improve their personal level step by step. Thirdly, strengthen the internal rotation of the company to enhance the ability of seafarers to adapt to different positions. Fourthly, shore-based management positions should focus on the recruitment of experienced seafarers in their own ships.

4.3 Educational institutions should nurture high-quality seafarers

Education and training institutions are the first threshold for seafarers to be exported. When the threshold is raised, the quality of Chinese seafarers will also be improved. China's education authorities have long subsidized tuition fees for navigation programs to encourage maritime colleges to train more high-quality seafarers.

4.3.1 Strengthen school and enterprise cooperation

China's higher maritime education focuses on management, but less on practical operation. Seafarers are occupations that require high operational ability, but the theoretical and practical operation education in schools can't meet the needs of actual navigation. Moreover, at present, only a few colleges and universities have their own sailing teaching practice ships, and the practice time is generally only 1-2 months, which is also very different from the general merchant ships. Maritime students want to participate in more practical activities (Wang & Shu, 2021). Therefore, in order to enhance students' understanding of ships and seafarers' working and living conditions, and to pinpoint the gap between what they have learned and what they need in practical operation, it is necessary to increase students' internship time on ships. At the "High-Level Forum on High-Quality Development of Chinese Seafarers"

held in March 2021, experts and scholars also proposed to strengthen cooperation between universities and enterprises in running schools and jointly cultivate high-quality seafarers to meet the needs of shipping development.

4.3.2 Strengthen psychological education

Seafarers are more prone to psychological complaints when they are faced with the status of being away from family and friends for a long time, working and living in a relatively confined space, higher work pressure and less entertainment space (Song et al., 2021). The mental health status of seafaring students is directly related to the mental quality and working status of future seafarers. In view of the particularity of seafarers' work, it is necessary to carry out necessary psychological construction for seafaring students in advance, so as to have full psychological preparation for future work. It is suggested that education and training institutions should bring navigation psychological education into the learning course, carry out special mental health education and training, and carry out psychological stress exercise to help students acquire the psychological competency to meet the needs of work.

4.3.3 Strengthen education on the rights and interests

Whether seafarers have sufficient knowledge of individual rights and interests is the basis of protecting rights and interests. In fact, there has been very little education on citizens' rights and interests in China up till now, even if they are infringed upon in work and life. Therefore, it is suggested that education and training institutions carry out special rights protection education for seafarers, so that seafarers can understand the rights stipulated in MLC 2006 and domestic laws and regulations, and have a

clear understanding of the rights and interests they should enjoy as seafarers. During an epidemic, for example, seafarers who are stranded abroad without a shift should be aware that their right to repatriate is being violated.

4.4 Seafarers safeguard individual rights and interests

In addition to the help and win the support from the outside world, the protection of individual rights and interests by seafarers is also essential. However, a survey showed that only about 50% of seafarers choose to protect their rights when labour disputes occur (Xia, 2015). Therefore, seafarers should pay more attention to individual rights and interests.

4.4.1 Enhance professional identity

First of all, seafarers should have a clear understanding of the occupation of seafarers, and sufficient psychological expectation of the working environment and work pressure. Secondly, only by complying with the development of the market and fully improving the personal quality and ability can seafarers increase the bargaining chips of discussing welfare benefits with shipowners in the market competition. Finally, seafarers must fully identify with the seafarers' profession, enhance their confidence in the industry, and actively present the work and life scenes of seafarers to all walks of life through text, pictures, and videos, and show the contributions and good images made by seafarers.

4.4.2 Enhance the consciousness of safeguarding rights

Seafarers should increase their awareness of employment risk prevention, and identify regular seafarer service agencies or intermediary agencies when seeking employment; actively study MLC 2006, pay attention to the updated status of the Convention, and be familiar with the legal rights and interests enjoyed by individuals. When personal rights and interests are infringed, they must firmly safeguard them. Firstly, seafarers should learn to use the onboard complaint procedure of MLC 2006 Rule 5.1.5 to complain to the captain or external authorities for violations of the requirements of the convention (ILO, 2006). Secondly, seafarers can complain to the department that conducts maritime labour conditions inspection, such as complaints to the MSA for issues such as food, accommodation and entertainment on board, and complaints to the human resources and social security department for wages, vacations, social insurance and other issues. Finally, for issues that still cannot be resolved after the complaint, seafarers should sue the court or maritime court for illegal acts, and use legal weapons to safeguard the rights and interests of seafarers.

4.4.3 Improve self-psychological counseling ability

Seafarers are prone to negative emotions on board, which will not only affect personal health, but also affect the safety of navigation. Seafarers should make full use of on-board entertainment facilities, increase communication and interaction with other seafarers, and timely relieve negative emotions. At the same time, it is necessary to cultivate positive personal hobbies, such as sports, music, photography, calligraphy, etc., to exercise the body, cultivate the mind, and try to distinguish the work and life on board.

4.5 Countermeasures to rights and interests protection during COVID-19

During the outbreak of COVID-19, seafarers around the world are faced with high risk of infection and huge pressures of difficulty in crew changes and repatriation, ensuring the continuous stability of basic production and life in the world. Seafarers' safety and rights should be protected throughout the world. As IMO Secretary General Kitack Lim put it "Seafarers continue to deliver for all of us. Now, let's ensure that we deliver for them" (Stannard, 2020). COVID-19 may become an infectious disease that coexists with human beings for a long time (Zhang, 2020). Therefore, it is important to strengthen the protection of the rights and interests of seafarers during the COVID-19. The main suggestions are as follows:

The government should formulate policies to support seafarers and facilitate the crew changes of Chinese seafarers and give seafarers a priority in vaccinations. The "green channel" should be opened for seafarers to seek medical treatment on shore, giving priority to those who are not infected with the COVID-19 before going through immigration or customs clearance procedures.

Enterprises should establish and improve the epidemic prevention and control management system in accordance with the requirements of the Operational Guide for COVID-19 Epidemics Prevention and Control for Ships and Seafarers issued by the MSA, and provide ships with sufficient epidemic prevention materials. At the same time, it is important for enterprises to take the initiative to shift and repatriate seafarers, and provide logistical support to those who are temporarily unable to do so because of the epidemic, and suggest providing subsidies to them. For seafarers who need to be quarantined on boarding or disembarkation, it is recommended that the

cost of accommodation and food during the period of quarantine be borne by the enterprise.

Seafarers must actively implement epidemic prevention and control measures on ships and do well in personal protection. The degree of importance the seafarers attach to their personal rights and interests affects the protection of the rights and interests of them. Therefore, seafarers need to strengthen positive psychological guidance, realize the great role played in ensuring the supply chain and the delivery of epidemic prevention materials during the epidemic, and enhance the sense of self-worth and professional pride.

4.6 Summary

The protection of the rights and interests of seafarers needs the efforts of the government, enterprises, educational and training institutions and seafarers themselves. The government should improve the social status of seafarers, promote seafarers' legislation, strengthen the implementation of MLC 2006, increase the policy support such as tax incentives, and set up the supervision and protection center for seafarers' rights and interests. Enterprises should enhance their sense of responsibility to seafarers, improve the welfare of seafarers, care for seafarers' mental health, support seafarers' education and training, and broaden the channels for seafarers' career promotion. Educational institutions should enhance cooperation between schools and enterprises, strengthen the education and training on psychological and the protection of rights and interests of seafarers, and cultivate high-quality seafarers. Seafarers should enhance their sense of professional identity and consciousness of safeguarding rights, and improve their ability of psychological

counseling. During the COVID-19, the government and enterprises should ensure crew changes and strive to give priority to the vaccination of seafarers.

Chapter 5 Conclusion

Seafarers are the cores of the global supply chain and the key facilitator of China's external and internal trade. In particular, in the current COVID-19 epidemic, seafarers are at the forefront, ensuring the stability of global production and life and the normal operation of the global economy. China is a big supply country of seafarers, but the protection of rights and interests of its 1.77 million seafarers has not been given sufficient attention. This dissertation studied the deficiencies in the protection of the rights and interests of Chinese seafarers through interviews with personnel who gave up their work as seafarers, combined with literature analysis, case analysis, and comprehensive analysis methods.

The career risk of seafarers is high, but the salary of seafarers is not as competitive as it used to be. The wage gap between seafarers and shore workers is getting smaller and smaller, and it is also lower than that of seafarers in other developed shipping countries. The food, entertainment, and medical conditions of Chinese seafarers on the ship need to be further improved. Seafarers do not pay enough attention to social insurance, and one in five seafarers still do not buy insurance. Due to the particularity of seafarers' work, they have less chance to enjoy medical insurance

treatment.

Strengthening the protection of the rights and interests of Chinese seafarers is urgent and requires the joint efforts of all relevant stakeholders. Firstly, the government should improve the social status of seafarers by promoting seafarers' legislation, strengthening the implementation of MLC 2006, increasing tax incentives, reducing ship network costs, lowering social insurance premiums, giving preferential treatment to seafarers' families, and setting up a supervision center for the protection of seafarers' rights and interests. Secondly, enterprises should further improve the welfare of seafarers, increase wages, improve food and entertainment conditions, concern about the mental health of seafarers, provide more opportunities for seafarers to update their knowledge and skills training. Thirdly, education and training institutions should pay attention to cultivating high-quality seafarers, strengthen school and enterprise cooperation, strengthen psychological education and rights protection education for seafarers. Finally, seafarers should enhance sense of professional identity, take the initiative to learn MLC 2006, improve awareness of employment risk prevention, enhance awareness of safeguarding rights and improve psychological quality.

During the COVID-19, Chinese seafarers, like global seafarers, suffered from difficulties in crew changes, mental exhaustion, difficulties in getting medical care on shore, and reduced income. It is recommended that the government formulate a seafarer support policy in a special period to facilitate the crew changes of Chinese seafarers and open a "green channel" for seafarers to seek medical treatment. Enterprises should offer adequate protection against epidemics for seafarers, provide seafarers with subsidies that cannot be changed or repatriated on time, and bear all expenses during the medical isolation. Seafarers should face the epidemic and work

with a positive attitude, and increase professional pride and sense of mission.

Due to the limitations of the research, the problems and countermeasures in this paper are not comprehensive. For example, there is no special study on crew fatigue, which is regarded as a silent long-term killer. In the future, the author will continue to pay attention to the protection of the rights and interests of seafarers, and make a small contribution to promoting a fair future for seafarers.

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