



A Study on Japan's Arctic Policy and the Possibility of China-Japan Arctic Cooperation and Governance

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Abstract. Taking The Arctic is a valuable common asset of mankind and of great significance to the building of a community with a shared future for mankind. Due to its rich natural resources and significant strategic significance, with the development of the Arctic Ocean shipping routes, countries' attention to the Arctic continues to heat up. Japan has paid close attention to Arctic affairs since the 1950s. In recent years, it has issued the Japan Arctic Policy (2015) and the Japan Arctic 2015-2020 Study Report (2020). By sorting out the characteristics and development trend of Japan's Arctic policy, this paper discusses the possibility of Cooperation between China and Japan in Arctic governance from three aspects: climate, cooperative development of Arctic shipping routes, and cooperation and exchange among researchers. It is expected to provide valuable reference for China and Northeast Asia to jointly build the "Ice Silk Road".

Keywords: Arctic ; China ; Japan ; Cooperation Component.

1 Introduction

In the 1980s, the decreasing trend of sea ice in the Arctic Ocean symbolizes the beginning of rapid changes in the Arctic environment. It brings infinite possibilities to the development of ice-free ocean routes and resources, and at the same time, it also brings environmental issues and security issues to the whole world. Therefore, both Arctic countries and non-Arctic countries have a strong interest in the Arctic region, which has aroused great concern of the international community. In this context, in October 2015, the Japanese government formulated its first and comprehensive Arctic policy, namely "Japan Arctic Policy"[1].

2 Main Contents of Japan's Arctic Policy

The main purpose of "Japan's Arctic Policy" is to "ensure Japan's prestige and lead the international community's efforts around the Arctic by indicating the national intention to contribute to various Arctic issues"[2]. Therefore, the Arctic policy stipulates that

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while maintaining a cross-disciplinary perspective, it should strategically promote the solution of the Arctic problem. Through the measures in this policy, Japan, as a major member of the Arctic issue, contributes its strength to the international community. For the above purposes, Japan's Arctic Policy has decided seven basic policies, namely:

(1) In terms of science and technology, Japan's strong science and technology should be applied to the maximum extent from the perspective of globalization.

(2) In terms of environment, give full consideration to the fragile and low resilience of the Arctic environment and ecosystem.

(3) In terms of international cooperation, ensure the rule of law, statistics and peaceful and orderly international cooperation.

(4) For Aborigines, respect the sustainability of Aborigines' traditional economic and social foundation.

(5) In terms of security, pay close attention to security activities around the Arctic.

(6) Economic and social adaptation, aiming at economic and social adaptation to the impacts of climate and environmental change.

(7) In the aspect of the Arctic Ocean route and resource development, the economic possibilities related to the Arctic Ocean route and resource development are discussed.

Based on the above seven basic principles, Japan has implemented three specific measures. First, research and development. Although climate change in the Arctic is a global issue, there are still many unsolved issues. Japan will investigate what happened in the Arctic and its impact on the Earth's environment through the five-year scientific project "Arctic Research Promotion" (hereinafter referred to as "ArCS") related to the Arctic. In addition, the strengthening of observation and analysis systems, the development of the most advanced observation machines, and the establishment of research bases in Japan and Arctic countries are also the key contents. Second, the sustainable utilization of the Arctic. In order to promote the preparation of the utilization environment of the Arctic cold current such as Japanese shipping enterprises, Japan has defined the natural, technical, institutional and economic issues of the Arctic Ocean route and is promoting the construction of a navigation support system for ships sailing in the Arctic Ocean. At the same time, with the goal of expanding economic activities in the Arctic, especially participation in the field of natural resources development, Japan is committed to the development of biological resources and jointly builds a conservation and management framework for sustainable utilization with relevant countries. Third, international cooperation. Japan is fully aware of the importance of participating in the formulation of international rules on issues related to the Arctic region. Therefore, in addition to participating in AC activities, Japan also attaches importance to expanding bilateral or multilateral cooperation with Arctic countries by promoting scientific cooperation and international joint research.

From the above Japanese Arctic policy, we can see that Japan has formulated meticulous and meticulous policies for the Arctic region in a comprehensive and three-dimensional way from scientific research, shipping, legislation, resources, economy and personnel training, so as to maximize its interests in the Arctic. From the Research Report on Arctic Research from 2015 to 2020 published by the Japanese government, we can see that Japan has indeed made certain achievements in participating in Arctic affairs, and the specific achievements are as follows.

3 Main Achievements of Japan's Arctic Policy

ArCS completed the investigation of the implementation of Japan's Arctic Policy published in 2005, and published the 2015-2020 Research Report on Arctic Research on February 29, 2020. The report summarized Japan's research results on the Arctic from eight aspects, including (1) meteorological, sea ice and wave prediction research; (2) Research on information related to the operation of Arctic routes; (3) Study on the changes of ice bed, glacier and marine environment in Greenland; (4) Arctic environmental observation and prediction research; (5) Research on atmospheric materials related to Arctic climate; (6) Study on the response of Arctic ecosystem to biodiversity and environmental changes; (7) Research on the sustainable development of human beings and society in the Arctic; (8) Research on the development of Arctic regional data file system.

From the report, we can see that Japan attaches great importance to scientific investigation in the Arctic region and pays close attention to climate change in the Arctic region. For the first time, Japan has successfully quantitatively demonstrated the impact of meltwater runoff from glacial ice sheets on the oceans, especially in providing nutrients to fjords, especially with regard to Greenland ice bed, glaciers, oceans and environmental changes. In addition, the Japanese research results also show the role of glaciers in fjord ecosystems from animals and plants plankton to seabirds and marine mammals. The occurrence mechanism and future prospects of natural disasters such as glacier river floods and landslides that frequently occur in recent years are clarified. It also reveals the distribution of atmospheric material transport, snow, sea ice and icebergs, and quantitatively shows the environmental variability of Greenland coastal zones[3].

At the same time, to tie in with the research results of natural science, Japan has also held many international seminars on the utilization and resource development of Arctic Ocean routes, the interaction between environment and people, and Arctic governance. Moreover, in order to promote interdisciplinary joint research, Japan has also established an Arctic regional data file system, developed a data analysis platform and an information distribution system using the output of the Arctic Ocean observation data model [4].

4 Possibility Analysis of Sino-Japanese Cooperative Governance of the Arctic

Although China and Japan are both big maritime countries, they are not Arctic countries, and they have neither territory nor sovereignty in the Arctic. However, due to the rapid change of Arctic climate, the development and utilization of Arctic Ocean waterways have an expanding impact on China and Japan in climate and economy, and both China and Japan are actively striving for the right to speak on Arctic affairs. China and Japan face common challenges and opportunities in Arctic affairs, so win-win cooperation is the best choice for both countries. Therefore, there is great room for cooperation between the two countries on the issue of Arctic governance. The specific analysis is as follows:

4.1 Climate

Japan has begun to observe and study the Arctic region since the 1950 s. In 1991, it established an observation base in the Arctic. Up to now, it has continued to carry out satellite observation, ocean observation, land observation and simulation experiments with high standards from a global perspective, and fully grasped the first-hand information about Arctic environmental changes. Similarly, Chinese polar scientists investigated the ice quantity, climate and environment after arriving at the North Pole in 1995, and then investigated the Arctic Ocean in 1999, 2003 and 2008 respectively. In July 2004, China's initial Arctic scientific research station "Yellow River" was set up in Svalbard, Norway [5]. It can be seen that both China and Japan have a solid foundation, high-level investigation ability and rich investigation experience for scientific investigation in the Arctic. Therefore, if China and Japan cooperate in scientific investigation, learn from each other's experience and learn from each other's strong points, they will surely open up a new situation in Arctic scientific investigation[6].

4.2 Cooperative Development of Arctic Waterways

As a traditional shipbuilding country, Japan has advanced shipbuilding experience. Similarly, China, which takes "maritime power" as its development direction, has made obvious achievements in shipbuilding in recent years. Therefore, in the development and utilization of Arctic waterways, China and Japan have broad prospects for cooperation in shipbuilding, and this cooperation started in 2014. In July, 2014, Mitsui, a Japanese merchant ship, announced that it would participate in the transportation of LNG. Among the 16 crushed ice LNG carriers finally needed for the whole project, 3 were built with China Shipping (China) at 50% investment each, and Mitsui, a merchant ship, was responsible for the transportation [7].

In addition, the most important route from China to the Arctic Ocean is the route from the Sea of Japan via the Kuril Islands [8]. Japan's Sankei Shimbun pointed out in 2011: Because China and Russia are developed by enterprises in the Arctic Circle of Russia, the route from the Sea of Japan to the Arctic Ocean is very important[9]. In 2010, Japan's Asahi Shimbun used the title "Nine Gates of the Sea Dragon". By analyzing Chinese reports, it was concluded that as an export to the ocean, China was ensuring and analyzing the route of TU JIANG MEN (Korea)-Sea of Japan-Kuril Islands-Western Pacific [10]. In 2011, Japan's Sankei Shimbun also pointed out that although TU JIANG MEN area belonged to North Korea, Chinese enterprises had obtained the right to use LUO JIN Port for 10 years, and recently China has used the port to transport coal from Northeast China to Shanghai [11]. Obviously, all walks of life in Japan are very concerned about the development and utilization of China's Arctic waterway. Therefore, although there is competition between China and Japan in the development and utilization of Arctic waterways, compared with pure competition, if China and Japan can work together, they will achieve a win-win situation. Therefore, there is great room for cooperation between the two sides in the development and utilization of Arctic waterways in the future.

4.3 The Cooperation and Exchange of Researchers

The "Report on Research Results of Japan Arctic Project Promotion Project 2015-2020" clearly pointed out that during the five years from 2015 to 2020, Japan realized the overseas dispatch of 52 researchers, including 22 short-term researchers and 30 medium-and long-term researchers; There are 42 scientific research personnel dispatched from 8 countries in the Arctic Circle, accounting for 80% of all dispatched personnel; In addition to Arctic countries, Japan has also sent three researchers to the German Alfred Wigner Polar Ocean Research Institute (AWI), which is in the sub-zero world in Arctic research[12]. In addition, during the five years from 2015 to 2020, Japan participated in 19 kinds of AC working group meetings, expert group meetings and international conferences for 65 times, and sent 86 participating experts [13].

In the study of Arctic affairs, Japan's training and support for young researchers and its frequent sending of Arctic affairs experts to high-level Arctic-related conferences provide some enlightenment for China. In this regard, China can promote the training of Arctic researchers, especially young researchers, while increasing cooperation and exchanges with Japanese researchers, like Japan, we will send experts and scholars to the High-level Conference on Arctic Affairs to exchange and cooperate with international experts, actively promote China's participation in Arctic affairs, and enhance China's right to speak on Arctic affairs in the international arena.

5 Empirical Conclusion

The Arctic is a precious resource endowed by nature. The ice-covered Arctic region not only occupies an important strategic position, but also contains various rich natural resources and biological resources. As a precious common resource of mankind, we should actively explore, strengthen cooperation, rationally utilize and standardize development. China and Japan have fully realized this. So far, China, Japan and South Korea have held three rounds of high-level dialogues on Arctic affairs. As big maritime countries, China and Japan have a fuller and broader cooperation space in meteorological investigation, Arctic waterway development and utilization, and academic exchanges. At the same time, from the Arctic policy and scientific research achievements published by Japan, it can be seen that Japan's research on the Arctic region is omnidirectional, meticulous and positive, which has a certain reference role for further improving the Arctic planning in China. At the same time, it also suggests that there is more room for cooperation between China and Japan in Arctic affairs.

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