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RECEIVED 18 October 2023

ACCEPTED 12 December 2023

PUBLISHED 29 December 2023

CITATION

Xu Q, Zhang M and Guo P (2023) Reflections on Japan's participation in negotiations of the global plastic pollution instrument under international environmental law.
Front. Mar. Sci. 10:1323748.
doi: 10.3389/fmars.2023.1323748

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Reflections on Japan's participation in negotiations of the global plastic pollution instrument under international environmental law

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International negotiations towards a legally binding instrument on the global plastic pollution have obtained wide-ranging attention from international community. It is revealed that Japan has taken a conservative but proactive stance during negotiations. This study overviews Japan's current legal framework on the management of plastic pollution including land and the sea. On this basis, the paper then analyzes Japan's stance in the negotiations to examine the issues that are of most concern to Japan in international cooperation towards ending plastic pollution. It will further analyze Japan's views on the legally binding instrument's framework, operational mechanism and key components from the perspective of international environmental law. And it will also summarize Japan's specific claims and objectives in the negotiations, and provide an evaluation of Japan's stance.

KEYWORDS

international environmental law, plastic pollution, sustainable development, full lifecycle approach, environmental diplomacy

1 Introduction

The prevalence of plastic products has led to their extensive use, resulting in severe environmental pollution. From 2000 to 2019, the global amount of plastic waste increased from 156 million tons to 353 million tons globally, with just 9% recycled (OECD, 2022). More than 8 million tons of pandemic-associated plastic waste were generated during the COVID-19 outbreak, of which only 10% were recycled (Peng et al., 2021). In the same year, greenhouse gas emissions attributable to plastics amounted to 1.8 billion tons (UNEP, 2018) and are forecast to reach 6.5 billion tons by 2050, accounting for 15% of the worldwide carbon budget (Charlton-Howard et al., 2023). The global increase in plastic waste poses a significant environmental challenge that is exacerbated by its low recycling rate (Wright et al., 2013). This results in a

substantial quantity of plastics entering ecosystem and degrading into microplastics, causing persistent contamination of the environment. According to d'Ambrières' (2019) research, marine plastic pollution accounts for the greatest amount of damage, with approximately 4 to 12 million metric tons of plastics ending up in the oceans annually. There is evidence that marine plastic pollution has negatively compromised the safety of over 500 marine species (Gall and Thompson, 2015). It is also worth noting that plastics are extremely resistant to degradation and can persist in the environment for hundreds or even thousands of years (Zhang et al., 2021). With their transboundary nature (Oral, 2021) and long-lasting environmental implications, (Eriksen et al., 2014) plastics are likely to continue to permeate ecosystem for an extended period of time.

In the current international governance framework, a number of international agreements, such as the United Nations Convention on the Law of the Sea (UNCLOS), the Stockholm Convention, and the Basel Convention have addressed marine plastic pollution. Additionally, the United Nations Environment Assembly (UNEA) has held numerous meetings on this topic between 2014 and 2022. Whilst the G20, G7, and the European Union also enacted regulations and policies to govern plastic waste at the regional level (Nyka, 2019). Nonetheless, the previous governance system separated plastic pollution from the sea and land with frequent references to the concepts of marine litter, marine plastic and marine plastic pollution, while the plastic pollution from land-based sources has not received sufficient management and there is a significant lack of international hard law confronting this issue (Vince and Hardesty, 2018).

Several shortcomings have been identified in the existing international legal framework, including the prevalence of soft-law instruments and the fragmentation of the international governance framework (Ferraro and Failler, 2020). Moreover, attempts to achieve new rules by applying any procedural option for international law-making in isolation may be impractical (Chen and Xu, 2022a). Thus, the resumed 5th United Nations Environment Assembly (UNEA-5.2) concluded with a resolution geared towards ending plastic pollution and completing a legally binding international instrument (referred to as "the instrument") in 2022, making a turning point in the battle against plastic pollution (UNEP, 2022). In September 2023, the essential zero draft was launched with an alternative scenario for an overall target year-2040, which fits in with the "Osaka Blue Ocean Vision" that Japan has been advocating. Subsequently, states engaged in a more in-depth discussion of the zero draft with a view to providing the textual basis for the instrument at the third committee.

Limited to its location and scarce resources, Japan is quite sensitive to environmental problems and is one of the representative countries that has vigorously implemented the concept of sustainable development and has participated in environmental governance as an advocate. Specifically on the issue of plastic pollution, Japan has repeatedly introduced laws and plans related to plastic pollution, improved its administrative system and promoted the concept of recycling. For example, in view of the fact that marine plastic waste has been attracting international attention, Japan has set forth its policy on addressing this issue and

agreed to the "Osaka Blue Ocean Vision". However, considering the influence of plastics on daily life and economy, it's not easy to reduce the use of plastics. Plastic Recycling Association (2021) finds that Japan's plastic pollution is still severe and its annual volume of plastic waste has exceeded eight million tons since 2000. And Japan's coastal waters contain up to 3.74 microplastics per cubic meter, approximately 27 times higher than the global average, (Asahi, 2019) lasting impact on the surrounding environment. Due to the transboundary nature of marine plastic pollution, it is also unrealistic for Japan to solve plastic pollution alone. Therefore, Japan has focused more on international cooperation, expecting to solve plastic pollution through the common actions of all countries.

Against the backdrop of the negotiations, this paper overviews Japan's domestic policies and actions in order to have a preliminary understanding of Japan's environmental governance. Following that, this paper investigates and evaluates Japan's claims for participation in the negotiations in light of international environmental law. It aims to identify Japan's top priorities for the negotiations. As a final point, a comparison is provided between Japan's claims and those of developed countries such as Europe and the United States, as well as China, a developing country and an importer of plastic waste from Japan until 2018, along with an assessment of Japan's potential role in future negotiations.

2 Overview of Japan's stance on plastic pollution before the negotiations

Given that the negotiations marked a turning point in the regulation of plastic pollution, it is necessary to analyze Japan's stance before and during the negotiations in order to identify its main concerns regarding the global plastic pollution instrument. Japan's stance on the governance of plastic pollution has been guided and shaped by a number of factors from the 1990s to now. Ultimately, it serves the national development strategy of building a resource-recycling society at the national level and increases its political influence through environmental diplomacy at the international level.

2.1 National guiding concepts and principles for plastic pollution governance

Constrained by its geographical location and the reality of resource scarcity, Japan has placed a high value on reducing and recycling resources and has gradually developed the concept of recycling and sustainable development with the 3Rs principle (Ministry of Economy, Trade and Industry, 2023), namely reduce, reuse and recycle, as its foundation.

2.1.1 National guiding concept for plastic pollution governance

A first point to note is the connection between environmental protection and economic development, and Japan's plastic pollution management framework is closely associated with and

mutually reinforces its economic development. Generally speaking, there is a pattern regarding environmental and technological innovations in Japan that is motivated by social concerns regarding environmental problems. Afterwards, the government implements regulations to meet these concerns (Yabar et al., 2013). Over the past century, Japan's economic boom has been accompanied by various environmental problems, especially the exposure of the Minamata disease (Ministry of Environment of Japan, 2005), which has brought Japan under international scrutiny. Consequently, Japan's economic prosperity has contributed to a greater awareness of environmental issues, and its waste management has evolved over the years from an end-of-pipe approach to a more proactive one that emphasizes quantity reduction and recycling (Hara and Yabar, 2012). In response to the persistent downturn in social conditions triggered by the economic crash in 1990s, Japan has shifted its focus towards sustainable development (Wang, 2020).

As part of Japan's commitment to sustainable development, the 3Rs principle is widely applied. It is generally recognized that 3R and waste management policies form the basis of developing a material cycles society (Sakai et al., 2011). And most of Japan's policies for plastic waste management are developed to address circular economy (Ono et al., 2023b). Through legislative activities, Japan has established a fundamental cognition of sustainable development as a pillar of the three significant areas of the economy, society and environment, and consequently formed two specific principles of plastic pollution governance: first, to clarify the priorities of plastic pollution management, emphasizing reduction and reuse instead of simple treatment. Specifically, Japanese industries are required to fully oversee the entire waste management process, thereby improving the efficiency of waste treatment. Second, applying extended producer responsibility (EPR) to the basic concepts for the development of 3Rs while establishing polluter pays principle (Cheng, 2019). The extended producer responsibility defined by OECD (2016) as an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle. By establishing ways in which consumers, municipalities and businesses are obliged to reduce plastic waste, (Plastic Waste Management Institute, 2019) Japan has covered the entire society in combating plastic pollution. As one of the central pillars for Japan's efforts leading towards a sustainable society, the Fundamental Law for Establishing a Sound Material-Cycle Society further emphasizes extended producer responsibility, which requires that municipalities, businesses and industrial associations to share responsibilities with other stakeholders (Kuan et al., 2022). In Japan, the EPR has two characteristics. It attempts to shift financial responsibility fully or partially from municipalities to producers and has incentivized producers to design products with environmental considerations in mind (Ono et al., 2023a).

There is also the concept of the polluter pays principle in Japan's waste management framework, which aims to manage plastic throughout its lifecycle. The Japanese Civil Code contains common tort provisions that entitle individuals to file actions to compel polluters to bear the responsibility of eliminating plastic waste (Bartsch, 1998). Meanwhile, Japan's environmental laws sets

standards that permit third party to bring claims where damage has resulted from a breach of the polluter pays principle. By passing laws and enforcing strict rules on plastic waste, Japan has made consumers responsible for part of the costs associated with waste disposal. In parallel, Japan encourages and supports producers to independently develop technologies for the recycling of plastic waste in order to increase its recycling rate. With the help of product safelists and partnerships with companies, Japan has also strengthened the supervision of business activities (Okubo et al., 2022).

2.1.2 Specific national government actions

It is imperative that the legal system for controlling plastic pollution be improved so that political policy discourages and ultimately eliminates environmentally harmful disposal, while encouraging the use of recycled plastics and fostering innovations in plastics (Van Berkel, 2018). Legislations has been frequently used to promote pollution management in Japan, which has established a legal system based on two fundamental laws and a series of regulations. Japan adopted the Basic Law for the Environment in 1993, which laid the legal groundwork for environmental protection. Following the enactment of the Fundamental Law for Establishing a Sound Material-Cycle Society issued in 2000, Japan implemented it to consolidate the framework of plastic pollution governance. On this basis, Japan has successively issued comprehensive laws such as the Waste Management and Public Cleaning Law, as well as a series of special laws that regulate kinds of plastic products in a comprehensive manner. In 2019, Japan had specially formulated its National Action Plan for Marine Plastic Litter to curb indiscriminate disposal of plastic waste and its flow into the oceans and enhance innovation in substitute materials (Akenji et al., 2020). Meanwhile, Japan has accepted principles of international environmental law into its domestic law. There are provisions on the precautionary principle in the Basic Act on Ocean Policy (2007) and the purpose of principle 15 of the Rio Declaration is reflected in Japan's domestic legislation (Yotova, 2017).

An improved administrative system is necessary to ensure plastic pollution regulations are implemented effectively. In response to plastic pollution, Japan has restructured its administrative system and developed an appropriate institutional design. Two levels of government operate within the system, the central government and the local governments. Together, they ensure the implementation of environmental regulations across the country. As part of its pollution management strategy, the Japanese government collaborates actively with the private sectors through public-private partnerships (Ono et al., 2023b). Furthermore, the government ensures that strict source regulations are adhered to overseeing the business system (Ono et al., 2023a) and is deeply involved in the full lifecycle of plastic products.

What's more, recycling is vigorously promoted and social practices are encouraged in Japan. It is through the introduction of the Plastic Restriction Order that Japan has sought to reduce the use of plastic products. In the meantime, Japan is taking active steps to raise public awareness about recycling and environmental protection through publicity campaigns and practical initiatives.

Japan also strongly encourages private think tanks and non-governmental organizations to participate in the management of plastic pollution. Given that the recycling of plastics relies strongly on innovations in the area of technology, business and policy practices, (Fadeeva and Van Berkel, 2021) Japan has invested heavily in promoting technological advances, research and development of alternative products, as well as expanding the demand for renewable materials and bioplastics, resulting in the recycling of up to 80% of plastics in Japan (Keiichi, 2022).

2.2 Japan's stance and actions on international plastic pollution governance

Japan is not confined to its domestic plastic wastes but actively participates in international cooperation. The Japanese government has vigorously promoted its national policies in line with its international development strategy. Especially by spearheading the "Osaka Blue Ocean Vision" in the G20 (2019), Japan has made a unique move from being a "participant" to a "pioneer" in global plastic pollution governance.

2.2.1 Japan's stance on international plastic pollution governance

A prominent manifestation of Japan's approach to plastic pollution governance is its use of environmental policy as a diplomatic instrument, which is essentially a profit-making strategy (Sun, 2023). The fundamental intention is to accomplish Japan's political goal and to enhance its status in international community. As Wang (2020) stated, the Japanese government declared in the Basic Act on Ocean Policy that the Japanese international partnership was "aiming at bearing the leading role for the formation and development of the international order", setting the tone for its involvement in global ocean governance in 2017. Then, Japan set the ambitious goal of demonstrating its leadership through international contributions to the Fifth Basic Plan for the Environment within the following year (Ministry of the Environment, 2018). Japan's Third Phase of the Marine Basic Plan laid out its strategic foundation for ocean statehood in May of 2018 (Cabinet Office, 2018). In order to achieve its goals, Japan has played as a "participant" in international cooperation and has earned the appreciation of the international community. Then, Japan kept reiterating the gravity of plastic pollution in its 2019 New Year's address, at the WEF Forum and elsewhere, stating, "Japan will work with the world to address plastic pollution" (Tao, 2019). In May 2019, Japan launched the Plastic Resource Circulation Strategy, followed by the G20 Osaka Summit in June, where Japan made the marine plastic pollution a vital issue and contributed to the establishment of the "Osaka Blue Ocean Vision". This series of actions has made Japan a "pioneer" in plastic pollution management. It can be said that every step of Japan's environmental diplomacy has accounted for the "mainstream discourse" and "political correctness" in the international political arena (Cui, 2020) and has effectively elevated Japan's status in international environmental governance.

The fundamental spirit of Japan's stance is to maximize its national interests. As an isolated nation, Japan's survival and development are hampered by the quality of its resource acquisition and utilization. As early as the 1980s, Japan had already signed the Basel Convention banning the transboundary movement of waste. However, to ensure the cleanliness of its domestic environment and alleviate the burden of dealing with plastic waste, Japan still exported plastic waste to neighboring countries such as China and Vietnam. At the G7 Summit in 2018, considering the public's daily use of plastic products and the development of related industries, Japan ultimately refused to sign the "Ocean Plastics Charter", which was aimed at reducing the use of plastics as one main target. And the "Osaka Blue Ocean Vision" advocated by Japan did not impose plastic usage reduction targets, but committed to collecting plastic waste and promoting waste management. Moreover, as concerns over plastic pollution has grown both internationally and nationally, Japan gradually cut down on plastics through the reduction of packaging plastics and utilization rates. In general, based on the economic benefits and convenience of life that plastics have brought, Japan has attempted to deal with plastics through a promotion approach.

Japan's participation in international governance is contingent upon its promotion of the 3Rs principle. By vigorously promoting the 3Rs principle and circular economy, Japan has extensively cooperated with countries at the international and regional levels. At the international level, Japan and other nations reached a consensus on the "Osaka Blue Ocean Vision", which was proposed by Japan as a blueprint for reducing marine plastic pollution. At the end of 2022, the Ministry of the Environment (2022) issued the white paper, stating that Japan would take the 2023 G7 Summit in Hiroshima as an opportunity to publicize its experience and measures of pollution management to the world, with a particular focus on Japan's efforts to promote the international framework for ending plastic pollution based on the "Osaka Blue Ocean Vision". At the regional level, Japan had taken the lead in establishing regional cooperation platforms, such as the Regional 3R Forum in Asia, and has promoted the 3Rs as the basic principle of cooperation. Japan also demonstrated its leadership by launching ocean initiatives, which sought to improve the management of plastic waste and the recycling of marine waste (Atsushi, 2019). With the ratification of the "Bangkok 3R Declaration" in the Regional 3Rs Forum in Asia and the Pacific (2022), the 3Rs principle has gradually become the consensus of the countries concerned. In addition, Japan has made it possible for recipient countries to put the 3Rs principle into practice through its official development assistance.

2.2.2 Japanese actions on international cooperation

At the hard law level, Japan has participated in a number of international conventions and treaties. Japan has met its international obligations by adhering to the International Convention for the Prevention of Pollution from Ships in 1983 and amending its domestic Water Pollution Control Law twice to domesticate the Convention's contents and obligations.

Correspondingly, these obligations from international law can also be a lever for politicians to overcome domestic political resistance and populist challenges (Chen et al., 2023). While the Basel Convention does not explicitly codify the polluter pays principle, it does expressly support the general principles of international environmental law, which do include the polluter pays principle (Fidler, 2001). Again, international recognition of the polluter pays principle certainly encourages Japan to incorporate this principle into its domestic environmental law. Meanwhile, Japan has taken the initiative to partake in revising and implementing international agreements and has asserted its rights actively. In response to the severe marine plastic pollution, Japan and Norway have proposed a revision program for the amendment of the Basel Convention in 2019, calling for the inclusion of contaminated waste plastics on the list of prohibited import and export controls. In addition, Japan has paid close attention to the role of the United Nations in expanding Japan's presence and appeal in the international community through its programs and ideas.

At the level of soft law, Japan has taken an active lead in regional cooperation. On the one hand, Japan has engaged in extensive official cooperation with various countries or regions. At the ASEAN 10 + 3 Leaders' Meeting in 2018, Japan put forward an initiative, which provided ASEAN nations with a certain amount of government development assistance to improve their capacity of plastic waste treatment, and promoted the smooth progress of regional cooperation. In June 2019, Japan hosted the G20 Osaka Summit and pushed for a consensus on the "Osaka Blue Ocean Vision" and ratified the "G20 Implementation Framework for Actions on Marine Plastic Litter", a practical guide for plastic management. At the 21st ASEAN Plus Summit Meeting, Japan made the management of marine plastics debris one of the topics. On the other hand, Japan has engaged in cooperation and dialogue with many civil society organizations and research institutes and has supported Southeast Asian countries such as Vietnam and Laos in the form of "public-private initiatives" (Zhang and Jin, 2020). While promoting its own experience, Japan also assisted developing countries in improving their capacity to deal with plastic pollution. Through above actions, Japan has become an indispensable force in international cooperation in dealing with plastic pollution and has effectively promoted the pollution governance process.

3 Analysis of Japan's stance in the negotiations from the perspective of international environmental law

In the context of globalization, Japan, as a member of the international community, is integrated into the international community and regulated by the rules and principles of international law and customary international law. This chapter will analyze Japan's negotiating claims and considerations and discover the extent to which international environmental law and customary international law have influenced Japan's stance. Or in other words, this chapter will discuss whether Japan's negotiating stance comply with the principles of international environmental law and customary international law.

3.1 Sustainable development

Focusing on the relationship between the carrying capacity of the natural systems and economic and social development, (de Sadeleer, 2023) the principle of sustainable development was forged to reconcile development needs with environmental protection (Bosselmann, 2012). Sustainable development can be defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" by the *World Commission on Environment and Development* (1987), including substantive elements, such as the integration of environmental protection and economic development and the polluter pays principle, and procedural elements, such as public participation and environmental impact assessment. In general, it is accepted that the concept of sustainable development is based on three pillars: environmental protection, economic development and social concerns (Fitzmaurice et al., 2022). Japan has championed the concept of sustainable development, which is entirely reflected in its advocacy in the negotiations. As a mechanism for implementing sustainable development, science is necessary to legal decision-making processes (Sipiorski, 2023). In light of the pervasive use of plastics in everyday life and the high disposal rate, Japan suggests to increase the use of recycled materials and reduce the production of primary plastic products by constructing a scientific system. Since the production, manufacturing and disposal of plastics are commonly dispersed, (Tessnow-von Wysocki and Le Billon, 2019) Japan accordingly proposes establishing a full-lifecycle management framework for plastics (Japan, 2023c) and adopting appropriate measures at each stage to achieve quantitative control of plastics. In order to prevent harmful effects on future generations by plastic pollution, Japan (2023c) also notes that it is necessary to consider and implement measures to address them as the responsibility of current generation. In addition, Japan's proposal also includes the following requirements for the instrument's content.

3.1.1 Principle of public participation

Japan attaches great importance to public participation, views non-governmental organizations (NGOs), research institutions and the general public as important forces in the governance of plastic pollution, and assigns each of these groups with distinct responsibilities. As industry actors have played a key role in shaping the types of policies implemented worldwide, (Knoblauch et al., 2018) Japan firmly encourages non-governmental organizations to participate in the negotiations as stakeholders to ensure that the instrument maximizes its international interests. NGOs often reference Principle 10 of the Rio Declaration, asserting that this principle formally empowers them as public participants in environmental protection (Batt and Short, 1992). And the increasing involvement of NGOs in the environmental governance has played an equally pivotal role in encouraging and demanding the adoption of the principles of international environmental law, such as the polluter pays principle, as legal tools to combat plastic pollution in Japan. Japan also places a premium on the influence of science, such as research institutions and independent experts, and proposes the establishment of an expert group to ensure that the instrument's

content is linked to scientific knowledge and technology. Due to science can catalyze cooperation at the international level among states, (Koppelman et al., 2010) Japan, therefore, asserts to promote the implementation mechanism of the instrument by developing international scientific standards for plastics. As for the public, Japan sees it as one of the central forces in the fight against plastic pollution. Besides, Japan advocates education and awareness-raising as one of the instrument's core obligations (Japan, 2022b). In conclusion, Japan believes that the global objective of ending plastic pollution is inextricably related to the participation of a wide range of stakeholders.

3.1.2 Polluter pays principle

The polluter pays principle first appeared in a legal context prepared by the OECD (1972). In 1992, it was included in the Rio Declaration as an “instrument of international jurisprudence that articulates policies and prescriptions directed at the achievement of worldwide sustainable development” (Batt and Short, 1992). This principle is founded on a sensible approach to mitigating environmental degradation, (Bell et al., 2013) and enforced by internalizing environmental costs through the use of economic instruments, which are implemented through economic incentives, combined with market and non-market mechanisms and private sector pollution and environmental cost-spreading investments (Fitzmaurice et al., 2022). It means that when public authorities take measures to prevent potential and actual environmental damage, those responsible for the pollution should bear the expenses incurred (Smets, 1994). Since plastic pollution stems from the production-consumption pattern of societies and the manner in which countries dispose of their waste, (Chen, 2015) the role of manufacturers and consumers in ending plastic pollution must be addressed. As mentioned previously, the polluter pays principle has developed a parallel trend with the producer pays principle in Japan, which requires producers to be responsible for resolving plastic pollution and is increasingly used to maintain fairness and equity in economic and social development. In general, Japan not only requires polluters to bear pollution management costs, but has also gradually increased the categories of post-cleanup costs, remedial costs, etc. Likewise, as Popp (2006) points that regulations can trigger technological innovation, Japan attempts to stimulate producers to design alternative products by increasing prices. Japan puts emphasis on the implementation of the polluter pays principle throughout the full-lifecycle of plastics by making a series of claims during negotiations, such as improving production technology, bolstering collection and recycling capacity, prohibiting illegal dumping and so on (Japan, 2023b). Japan also urges that measures should be taken prior to the damage occurs to ensure that enterprises and individuals shoulder responsibility for preventing, reducing and eliminating pollution as early as possible.

3.2 The principle of common but differentiated responsibilities

In international environmental law, the principle of common but differentiated responsibilities underpins the international

obligations of states and encompasses both common responsibilities and differentiated responsibilities. Based on various socio-economic considerations, the applying of this principle results in different kinds of responsibilities. Generally speaking, this principle requires developed countries to shoulder a greater share of the burden than developing countries (Stone, 2004). Specifically, it is beneficial for countries to take action by discussing policy coherence in more general terms at the level of policy objectives, instruments and implementation practices (Nilsson et al., 2012). Most industrialized countries believe that this principle applies only in the context of global environmental problems, while developing countries accept responsibility in the context of the pressures their societies place on the global environment and the technologies and financial resources they possess (Fitzmaurice et al., 2022). In the negotiations, Japan prefers to emphasize the shared responsibilities that all states must undertake and to downplay the differentiated responsibilities. First, with regard to the objectives of the instrument, Japan (2023c) claims that plastic pollution is occurring throughout the global chain, and plastic leakage into the environment is not only from developed countries but also from developing countries, which means that plastic pollution is an issue that all states should address. Accordingly, Japan is in favor of setting global goals and timeframes to guarantee that countries effectively fulfill their common responsibilities, but this ignores the disparities between developed and developing countries' abilities to address pollution and places a disproportionate amount of international responsibility on developing nations which produce less plastic pollution. Second, concerning the implementation mechanism, Japan calls for national action plans to be formulated by countries on their own, underscoring that any measures should reflect national capacities and actual circumstances. Japan's argument seems to endorse differentiated responsibility. However, it is more of a defense of national discretion and blurs the differentiated responsibility between developed and developing countries, allowing developed countries that produce more plastic pollution to escape a greater proportion of responsibility. Moreover, given that the reporting mechanism of the existing international agreements has not yet been effectively implemented, Japan's claim diminishes the instrument's influence and binding force. In short, Japan's contention was more about defending national interests and avoiding the assumption of common but differentiated international responsibilities.

3.3 The precautionary principle

The Rio Declaration (1992) provides a typical definition of precautionary principle: where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used to postpone cost-effective measures to prevent environmental degradation. Then the precautionary principle has been confirmed by international judicial practice (Ma et al., 2023). The application of this principle requires two prerequisites: the scientific uncertainty of the risk posed by the activity and the risk threshold for its application (Gao and Sun, 2007). However, as its core factor is

scientific uncertainty, there is no explicit standard for the application of the precautionary principle in practice. In the Southern Bluefin Tuna case, the Tribunal makes clear that there was scientific uncertainty about the conservation measures for Bluefin tuna and that it was unable to assess whether the available evidence could prove that Japan's fishing practices posed a threat to the Bluefin tuna population (ITLOS, 1999). But the Tribunal also states that nations are under the due diligence to apply the precautionary approach, which requires them to take all appropriate measures to prevent damage. In the MOX Plant case (2001; *The MOX Plant Case (Ireland v. United Kingdom), Provisional Measures, NO.10 (ITLOS 2001)*), the Court more directly points out that the duty to cooperate is a fundamental principle in the prevention of pollution. The precautionary principle also states to take measures to protect the natural environment (Anton et al., 1993). For Japan, "take all measures necessary" means that it must, within its best capabilities, exhaust all possible measures to "prevent, reduce and control pollution" rather than using such rhetoric as a shield from international legal obligations (Chen and Xu, 2022b). Therefore, Japan has already formulated an environmental impact assessment system that conforms to the concept of the precautionary principle in its Environmental Impact Assessment Law in 1997, which requires that environmental impact assessment procedures should be adopted for businesses that may cause environmental impact (Ma et al., 2023). However, Japan also uses the term "precautionary approach" in practice to avoid overuse of the precautionary principle (Tadashi, 2010) and prefers to advocate that environmental protection should be carried out "to prevent a hindrance to the environmental conservation based on broad scientific knowledge" in its *Basic Environment Law (1993)*. In other words, although Japan has taken some preventive measures, this does not mean that Japan has fully fulfilled its obligation to achieve the precautionary principle (Ma et al., 2023). To prevent plastic pollution, Japan recommends taking necessary steps at the lifecycle of plastics in the negotiations, but Japan sets a lot of limitation before taking these steps through placing high priorities on scientific research and knowledge application. By recommending the adoption of science, such as expert groups and the timely introduction of scientific knowledge and technology, Japan holds the idea that the effectiveness of plastic pollution control can only be confirmed based on science. Generally speaking, Japan (2023c) recognizes the value of the precautionary principle (ICJ, 2015), but it further notes that this term lacks an internationally agreed definition and should not be used as a pre-set justification for restricting plastic products without solid scientific evidence.

3.4 Sovereignty over national environmental resources and the non-harm principle

The principle of national sovereignty over environmental resources materializes the national sovereignty theory (Zou, 2009) and is also one of the core principles of international environmental law. And Japan has been very protective of its sovereign rights. As

early as the Whaling in the Antarctic case, Japan (2013) has made clear that the Court cannot substitute its own appreciation for that of the contracting government. In other words, the Court shall show deference to the state's appreciation of the factual and legal conditions in environmental practice. By authorizing a "bottom-up" approach in negotiations, Japan demonstrates its high regard for the sovereignty of states before the negotiations (Planet Commons, 2023). Japan has also repeatedly stated that the instrument's content should be determined by the parties' own national plans in accordance with their national conditions. While global decision-making could potentially direct national incentives, national-level policy actions are the mechanisms for steering action (Vince and Hardesty, 2018). Japan believes that only by distinguishing between mandatory and voluntary measures in the instrument can it have faith that the states will actively implement the instrument's content at the national level.

Based on the concept of harmonization of rights and obligations, the principle of national sovereignty over environmental resources corresponds to the no-harm principle, which can be traced to the Trail Smelter arbitration that the tribunal provided an articulation of the requirement on states to prevent the infliction of transboundary environmental harm on neighboring states (Fitzmaurice et al., 2022). After a long period of practice with international subjects, the no-harm principle has developed over the course of the 20th century from an idea grounded in 'good neighborliness' into a general requirement of prevention of environmental harm. Boyle and Redgwell (2021) believe that the no-harm principle has been generally acknowledged as portion of customary international law. The no-harm principle illustrates that states exercise due diligence in controlling and regulating all private activities on their territory to prevent transboundary pollution (Koivurova, 2008) and is generally applicable to areas within and beyond the national jurisdiction (Boyle and Redgwell, 2021). According to the principle 2, 18 and 19 of *Rio Declaration (1992)*, the no-harm principle compels states to prevent, reduce and control environmental pollution and damage, as well as the obligations of notification, consultation and environmental impact assessment. During the negotiations, Japan stands for a stringent and transparent monitoring system and a listing system to make certain that states adhere to the non-harm principle.

3.4.1 Monitoring system

From the perspective of sustainable development, it is more important to prevent than cure in environmental protection. Just like the *Certain Activities Carried Out by Nicaragua in the Border Area Case (Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica))*, the ICJ claims that to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a state must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm. (Judgment, 1995) As an obligation of conduct, the no-harm principle requires states to act with due diligence (Koivurova, 2008). Accordingly, Japan has put forward several approaches during negotiations for ensuring

that countries will perform their obligations in good faith. The [International Law Commission \(2001\)](#) has stated: what would be considered a reasonable standard of care or due diligence may change with time. Hence, this due diligence requires a state to keep abreast of technological changes and scientific developments. At the international level, while encouraging countries to formulate national action plans independently, Japan also fosters evaluating and comparing the progress states have made in ending plastic pollution. And Japan proposes establishing a transparent and robust Plan-Do-Check-Act (PDCA) mechanism to evaluate countries' concrete actions to guarantee that they comply with due diligence. Therefore, countries need to make their actions visible through objective data and measures in national reports, ([Japan, 2023c](#)) which the instrument's Committee should review in a timely and consistent manner. Japan thinks that only through concrete data and measures, such as quantities and rates of waste generation, collection and recycling, as well as policy targets, can it be guaranteed that the global goals and international obligations outlined in the instrument are effectively implemented. At the state level, as private individuals are the primary actors involved in producing and discharging plastics, ([Finska, 2021](#)) Japan advocates a waste management system based on appropriate priorities for the classification, collection and recycling of plastics. On this basis, plastic waste should be handled sector-by-sector according to the phases of the lifecycle of plastics and measures should be taken accordingly, thus realizing a comprehensive and orderly process of plastic management in each country.

3.4.2 Inventory system

As establishing an effective compliance mechanism is a critical aspect of the instrument, ([Stöfen-O'Brien, 2022](#)) Japan considers national action plans to be a central element in assessing countries' implementation. In particular, Japan tends to utilize national targets, action plans and long-term strategies to motivate parties to meet their commitments, as these documents represent a high-level of political commitment that can penetrate and drive all policy sectors ([Chen, 2015](#)). Japan also notes that the content of national plans should cover certain common elements and requests the Committee to provide a standard template for countries. Meanwhile, due diligence does not mandate all states apply a same standard ([Koivurova, 2008](#)). As well as the effectiveness of international instrument on plastic pollution is mediated by national implementation, which is intertwined with different levels of extant national policies and organizations of waste management infrastructures ([Dauvergne, 2018](#)). Japan is of the opinion that the instrument should provide a list of practicable measures for parties to choose from, including both voluntary and mandatory measures, thereby facilitating the selection of appropriate measures by countries within their national capacities.

3.5 Principles of international cooperation

The principle of international environmental cooperation stipulates that when confronting environmental problems, all states should act cooperatively as opposed to aggressively. The

obligation to cooperate has been incorporated into a number of international instruments, with varying provisions depending on agreements ([Wolfrum, 2021](#)). Given practical constraints such as the absence of policy coordination and interstate dialogue in international plastic governance, ([Raubenheimer and McIlgorm, 2018](#)) Japan asserts that the duty to cooperation should be strengthened. The key step is to conduct environmental impact assessments (EIAs) in each nation, a procedure to detect environmental risks and integrate environmental concerns into the decision-making process, ([Boyle and Redgwell, 2021](#)) which leads to the sharing of information, such as product materials, pollution treatment etc., among countries and increases cooperation with stakeholders. EIAs are closely associated with the no-harm principle and the duty to cooperate with other states, including obligations to notify and consult prior to decisions being taken ([Craig, 2008](#)). Specifically speaking, EIAs endeavor to detect signs of future environmental risks of a proposed project ([Tanaka, 2021](#)). It is conducive to assisting countries determine the phases of plastic pollution governance and make appropriate adjustments so that plastic pollution can be adequately controlled. Another key step is to establish globalized standards and guidelines and to share information and technology for dealing with plastic pollution, thus contributing to the implementation of the instrument's project at all levels. Japan holds the belief that wide-ranging information exchange and harmonized standards of practice would both improve the level of comprehensive international governance and promote effective and high-quality action.

During the negotiations, Japan supports the implementation of principles of international environmental law in a flexible manner based on its national concerns. Emphasizing that plastic pollution is an issue that all countries should address, Japan advocates the principles of cooperation and sustainable development to address them in the present and prevent harmful effects on future generations. While recognizing that plastic pollution occurs throughout the global value chain, Japan also proposes the implementation of extended producer responsibility, the polluter pays principle, and public participation to ensure that relevant stakeholders share their roles and responsibilities at each stage of the plastic life cycle. However, Japan also applies some principles flexibly to safeguard its economic interests and national development. In order to protect its plastics industry, Japan opposes the direct application of the precautionary principle to control the production of plastic products and seeks to apply the principle of common but differentiated responsibilities by emphasizing common responsibilities at the expense of differentiated responsibilities, thereby reducing its international responsibilities. Through its flexible assertion, Japan selectively enforces environmental principles and customary international law in negotiations.

4 Comparative study of the stances of Japan and other major negotiating parties

During the negotiations, the proposals of states differed due to disparities in the environmental policies and national interests of

each country. This chapter compares Japan's stance with that of the European Union and the United States, as well as China, in terms of the scope of the instrument, objectives, core obligations, and control measures, in order to better grasp the characteristics of Japan's negotiating position. Through the comparisons, this paper evaluates Japan's stance and predicts its future negotiating position on this basis.

4.1 Comparison of negotiating stances with Europe and the United States

About the instrument's scope, countries presently hold divergent opinions regarding which segment should be given priority as the complete lifecycle of plastics involves several segments. (UNEP, 2023) For the EU, it is the key that priority should be given to the upstream parts, and that unnecessary, avoidable, and problematic plastics should be reduced, eliminated or banned (IISD, 2022a). Japan, however, contends that the instrument should focus on end-of-pipe waste management to develop circular economy (Japan, 2022b). As a major oil-exporting nation, the United States tends to take a conservative stance considering the instrument's impact on the petrochemical industry chain may affect it to a greater extent. So the United States (2023) has mainly called for a country-driven instrument with reservations on global prohibitions and import/export controls related to plastic products, with an emphasis on a voluntary basis. In the third session, the United States further calls for a possible need for exemptions for national security and public health (U.S., 2023a, p. 3).

Concerning the objectives of the instrument, the EU has proposed an "open mandate" resolution before the negotiations (IISD, 2022c), which would enable countries to work on a broad range of issues related to plastic pollution. In its proposal of zero draft, The EU (2023a) considers that the instrument should cover all forms of plastic pollution, including but not limited to the marine environment. Since Japan's resolution explicitly addresses "marine plastic pollution", it is primarily focusing on the management of marine plastic debris (Japan, 2022a). At the same time, Japan has repeatedly recommended that the objectives should include a timeline for achieving zero marine plastic debris by 2040 (Matsuzaki and Sato, 2018). The United States desires to avoid setting a time-bound target in the objective and has reservations about global targets on plastic products at first. However, it turned to support Japan's 2040 target in the third session (U.S., 2023b). And it prefers that countries retain the discretion to determine specific policies and measures for promoting sustainable production of plastics. In short, Japan assumes that established time targets could facilitate the implementation of the instrument, whilst the United States opposes overburdening states with excessive restrictions.

In the domain of control measures, which international law framework that the instrument should adopt is one of the focal points of the negotiations. As the European Union accentuates the obligatory nature of the instrument's control measures, Japan and the United States appeal to a compromise on control measures. Specifically speaking, the EU plays a leading role in sustainable

development and recycling (Seay and Ternes, 2022). As a consequence, it takes a relatively radical position in negotiations, expressly favoring a "top-down" hard law framework of binding force. Several EU members have stated a "preference for the instrument to be based on mandatory global measures" (Valerie Volcovici, 2022) In contrast to the EU, Japan's environmental policy relies more on a voluntary approach (Arimura et al., 2019) accomplished through negotiations with polluters. This model has also been applied to the negotiations by Japan, which supports a bottom-up soft law framework that permits states to develop their national plans based on national circumstances. Japan (2023d) advocates that consideration should be given on national circumstances and existing domestic measures rather than applying direct and uniform control measures at international level. The United States is the second largest exporter of plastic waste in the world (Law et al., 2020). The U.S. Environmental Protection Agency (2020) has reported that the whole country generated roughly 4.2 million tons of plastic waste in 2018, of which only 10 percent was recycled. Moreover, the U.S. federal government has largely been absent from the plastic management (Hannah, 2020). And the regulation of plastic pollution in the United States can be described as chaotic, incomplete and uncoordinated (Nagtzaam and Kourabas, 2022). Taking into account these domestic factors, the U.S. similarly supports the soft law framework in negotiations, which parties could implement their obligations through nationally determined policies and measures.

On core obligations, most states support the notion of considering national action plans as one of the instrument's core obligations. However, there are nuances regarding components among nations. According to IISD's news(2022c), the EU demands a mandatory monitoring and reporting framework, including at the stages of production, trade and waste leakage of plastic products, and emphasizes the importance of a joint monitoring framework to strengthen the binding nature of the instruments. Believing in a binding decision can impose a binding obligation upon disputing parties (Qi, 2023), the EU (2023b) stresses the need for a common framework of indicators and methods, not only at the national, but also at the regional and global level. While Japan suggests a standard template for countries and a set of mandatory and voluntary measures, which would weaken the mandatory force of the instrument accordingly. As Japan (2023e) suggests in its proposal, the choice of appropriate policies such as charging for plastics, taxation, and EPR systems should all be left to the countries, as it would be more effective to be tailored to the actual situation in each country. And parties could at any time adjust national action plans with a view to enhancing its level of ambition (Japan, 2023f). The United States takes a different view that states should enjoy greater discretion in determining the measures and policies of national action plans. In other words, the United States would like the instrument's content and structure to be more voluntary than mandatory.

For the instrument's potential elements, national claims have also highlighted different points. The principle of extended producer responsibility is a common legislative practice in Europe (Sachs, 2006) and promoted by the EU during negotiations. The EU

(2023b) recommends the establishment of a technical review committee in its submission of zero draft, which could be responsible of the assessment of the sustainability of alternatives and substitutes before authorizing the placement of any new product on the market. With the EU and Japan both prefer not including a separate article on principles, Japan notes that the precautionary principle is not appropriate for plastics regulations and the scope of EPR is a national consideration, that are the most appropriate to a specific region or country, taking into consideration national capabilities (Japan, 2023a). As for Japan, it supports common but differentiated responsibilities in some aspects of the instrument, but has weakened the differentiated responsibilities between developed and developing countries. In contrast, the United States argues for the same obligations for all parties and strongly opposes the application of common but differentiated responsibilities to technical assistance. Moreover, The United States objects developing globally agreed lists and universal standards advocated by Japan, and instead proposes the establishment of a voluntary certification scheme for plastic products at the global level. What's more, the United States (2023) posts a suggestion in its submission that the instrument should include a withdrawal provision that once a Party has decided to withdraw, it should be permitted to do so.

In summary, the EU is the most radical in its advocacy and urges to strengthen the binding effect of the instrument on states; whereas the United States' stance is more lenient and it opposes the inclusion of too many mandatory measures in the instrument. Japan takes a position in the middle and suggests that the instrument can play the role in urging and supervising the fulfillment of states' obligations, while also hoping that states can enjoy a certain degree of discretionary power.

4.2 Comparison with China's negotiating stance

Japan and China have some differences in core obligations, control measures and means of implementation of this global convention (Gao, 2022). While both of them support the concept of the full lifecycle of plastics, China focuses on the leakage of plastic wastes, with explicit references to the development of a timetable for the controlling measures on transboundary pollution, especially from the developed to developing countries (Ecology and Environment, 2021) whereas Japan concentrates on waste management and lacks attention to transboundary movements of wastes between countries as emphasized by China. Second, China (2022b) clarifies that the principle of common but differentiated responsibilities should be fully incorporated into the instrument, contending that the negotiations should take into account the differentiated national circumstances and economic capabilities of developed and developing countries. In particular, developed countries should provide additional, sufficient and predictable financial support and technical assistance to developing countries in international plastic management (China, 2022a). Although Japan also claims assistance measures in technology and financing, it mainly targets countries in greatest need and does not make clearly distinguish between developed and developing

countries. What's more, China (2023) declares that principles are fundamental to negotiations that will provide guidance to the negotiations and suggests to prioritize the discussions of principles in the zero draft. Instead, Japan holds the opinion that principles can be included in the relevant articles, which indicates that articles on "principles" are not necessarily required in the zero draft (Japan, 2023d).

Considering the core commitments, China maintains that there is no one-size-fits-all approach (IISD, 2022b) and that the instrument's mechanism should fully account for the capacity and resource constraints of developing countries. Due to the significance of plastics as fundamental materials to industries, constructions, agriculture and other areas, limiting the production of plastic polymers is not a straight solution to plastic pollution and goes beyond the mandate of the instrument (China, 2023). In comparison, Japan puts more emphasis on autonomous decisions based on each country's national capacity. In the same time, Japan (2023c) considers it highly important to have an explicit reference to an overall target year "2040" in the instrument so as to share common commitments to address plastic pollution in a speedy manner.

As can be seen from the above comparisons, Japan opposes the EU's approach of demanding uniform measures at international level and favors greater national autonomy. In this respect, Japan's position may not be conducive to the implementation of the instrument, as it may weaken the instrument's unity and binding force. However, Japan has provided an appropriate explanation that it is difficult to set a uniform global standard for all plastic products due to differences in national circumstances and domestic measures among countries. Similarly, Japan does not agree with China's proposal to offer more flexibility and assistance to developing countries, but rather advocates the common responsibilities, thus reducing its responsibilities as a developed country. In short, Japan's position reflects its intention to eliminate plastic pollution without compromising its national interests. Given its narrow geography and limited resources, Japan's proposals are indeed constrained by the realities of its national development. This provides an example for the subsequent negotiations, which must take into account not only the efficiency of dealing with plastic pollution, but also the actual capacity of each country, thereby ensuring the instrument can be accepted by as many states as possible.

5 Conclusion

The negotiations are still ongoing. This paper provides an overview of the general characteristics of Japan's plastic pollution policies. Based on its domestic environmental planning, Japan has integrated the management of plastic pollution into its "recycling society" structure and organically combined it with other environmental policies to form a relatively complete environmental protection system in Japan and ensure the cleanliness of its domestic environment. Simultaneously, Japan has promoted its environmental philosophy to the international community with an "eco-friendly country" image, using environmental diplomacy to greatly enhance its international influence and political status. It can be said that Japan's domestic and international pollution policies share the common goal of safeguarding Japan's national interests, thus contributing to its clean domestic environment and

international reputation. It's the same in negotiations: while Japan has brought many constructive ideas to the negotiations in support of an expeditious solution to the global plastic pollution problem, Japan also sought to minimize the international responsibilities it would bear so as not to unduly compromise its national interests due to the realities of its geography and resource limitations.

By summarizing Japan's main points in the negotiations and comparing its stance with that of other countries, this paper provides an apt analogy of Japan's negotiating stance. It can be characterized as two sides of the same coin, spanning from a progressive position to promote international coordination on plastic governance to a comparatively conservative position to safeguard its national interests. In the negotiations, Japan has maintained its consistent environmental strategy and endeavored to expand its international influence by extending its domestic concepts to international cooperation. To achieve its objective of steering the direction of the negotiations, Japan has also adjusted its advocacy compatible with the mainstream viewpoint through dynamic adjustments. In other words, without unduly jeopardizing its national interests, Japan would be willing to make some compromises in order to conform to the prevailing viewpoints in the negotiations and advance the negotiating process of the instrument. Hence, Japan's advocacy is more flexible than that of other countries. It is expected that Japan will play an active role in future negotiations, allowing its advocacy to permeate some aspects of the instrument and binding Japan to international plastics governance, thereby bolstering its positive international image. As certain aspects of the instrument diverge from Japan's current practices, it would be prudent for Japan to take greater thoughtfulness towards aligning its domestic approach on plastic pollution with international governance, thus reinforcing its ability to tackle this issue. For the mandatory binding framework of national action plans, Japan needs to implement its duties under the instrument to ensure that the instrument's mechanism system can effectively perform its role in terminating plastic pollution. Regarding the partial common but differentiated principles advocated by Japan during the negotiations, it's necessary for Japan to modify its strategy and embrace its international responsibilities, so that Japan could use the power of international cooperation to deal with its domestic plastic pollution problems. What's more, implementing the principles of international environmental law, such as the precautionary principle, in Japan's domestic legal system would also help Japan to address plastic pollution in a practical manner and improve the efficiency of its governance.

Furthermore, Japan's negotiating stance reflects an aspect of the negotiations that cannot be ignored, namely, the impact of practical factors at the national level on international cooperation. Since the ambitious goal of the instrument to eliminate plastic pollution

requires effective implementation by states at the national level, the feasibility of the instrument and the national capacity to implement it should be the focus of further negotiations. The more appropriate way to advance the instrument process is for all parties to view the negotiations from a comprehensive perspective and to strengthen cooperation in the context of shared international interests. In order to address global marine environmental concerns, China is endeavoring to advocate that the international society builds a maritime community with a shared future, in which combating marine plastic pollution is an important part of China's initiative (Xu and Tan, 2023). Therefore, if Japan and China to forge more consensus in the negotiations on a global convention on plastic pollution, strengthening cooperation in building a maritime community with a shared future can play a positive role.

Author contributions

QX: Conceptualization, Methodology, Supervision, Writing – review & editing. MZ: Writing – original draft. PG: Funding acquisition, Writing – review & editing.

Funding

The author(s) declare financial support was received for the research, authorship, and/or publication of this article. Fundamental Research Funds for the Central Universities Project No. 23JNQN04 National Social Science Foundation Project No. 21&ZD226.

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