

Analysis of Japan's Nuclear Sewage Discharge into the Sea from the Perspective of International Law

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Abstract: The Japanese government's proposed plan to release radioactive-contaminated water into the Pacific Ocean has raised global concerns. Consequently, this prompted extensive contemplation and discourse over Japan's obligations under international law. This study summarizes domestic and international nuclear-contaminated water studies. The assertion is made that Japan's action of releasing nuclear-contaminated water into the ocean can be classified as a state act, contravening pertinent international agreements and legal standards. The subsequent analysis delves into the legal foundation for Japan's state responsibility, highlighting the absence of any exemption from said responsibility. Furthermore, it explores the challenges associated with holding Japan accountable, encompassing varying standards of damage, the lack of regulatory oversight from the International Atomic Energy Agency (IAEA), the complexities surrounding evidence collection and acquisition, as well as the obstacles to transboundary implementation. This paper presents a set of strategies for China to address Japan's discharge of nuclear-contaminated water, focusing on the perspective of international law. These strategies encompass the formulation of explicit discharge standards and environmental damage criteria, and the establishment of a specialized organization for conducting investigations and gathering evidence. The primary objective of this study is to offer valuable insights into comprehending and addressing the intricacies of this multifaceted matter. Additionally, it seeks to furnish pertinent resources for effectively resolving transnational environmental conflicts within the context of international legal frameworks.

Keywords: International law, nuclear contaminated water, international disputes

1. Introduction

As of August 2023, the Japanese government has commenced the formal procedure of discharging the accumulated radioactive effluent from the Fukushima nuclear power plant into the ocean. The Japanese government has initiated the formal process of releasing the accumulated radioactive wastewater from the Fukushima nuclear power plant into the ocean as of August 2023. The discharge of sewage containing nuclear radiation substances into the sea may bring serious transboundary pollution problems, and Japan's move has attracted great attention from countries all over the world, especially the neighboring countries, which has led to a heated discussion on marine environmental protection in the international community. At present, South Korea, Russia, China, and other neighboring countries are strongly opposed to it and have urged Japan to give up its plan to discharge nuclear sewage into the sea, however, Japan has not ended its program of discharging nuclear

effluents across the sea. Potentially victimized countries, represented by South Korea, have turned their attention to international law, and want to resort to international law to regulate Japan's nuclear sewage discharge.

With the influence of globalization, the theory of State responsibility has also been the focus of scholars' research. On the study of state responsibility itself, Professor Lin Canling, in his "On State Responsibility for Damage Consequences Arising from Acts Not Prohibited by International Law", analyzes the limitations of the traditional state responsibility in the new situation and the legal basis of "State Responsibility for Damage Consequences Arising from Acts Not Prohibited by International Law". In addition, the domestic research on the international law of nuclear pollution damage also shows the phenomenon of stage, before 2010, scholars had little research on the state responsibility for nuclear damage, only in 2006, Professor Cai Xianfeng in his paper "China's nuclear damage liability system construction" to explore the state responsibility for nuclear damage to adapt to the newly revised international convention system.

Foreign scholars on state responsibility system research are more mature, German scholar Wolfgang Graf Wei Zhitong in his editorial "International Law" advocates that the international responsibility of international law does not prohibit the harmful consequences of the behavior of the international responsibility should be included in it. However, the current foreign academic research on nuclear sewage discharge into the sea behavior has fewer articles, most of which report and comment on the main.

2. Analysis of Japan's National Responsibility for the Release of Nuclear-contaminated Water into the Ocean

2.1. Acts of Discharge of Nuclear Contaminated Water may be Considered as Acts of State

As the subject of legal presumptions, the State's conduct is manifested primarily through the actions of specific government departments, public officials, or their agents. From this definition, we can infer that the government should be held responsible for the actions of the employees of its agencies, and the "Moses Case" of 1871 is strong evidence of this view. This case shows that, in a sense, the officials of the state organs can act as the representatives of the state, which, according to international law, is composed of all the officials of the governmental institutions [1]. The Japanese government held a cabinet meeting in 2021 and decided to discharge nuclear-contaminated water into the sea, which was an act by its agency, and from this point of view, it was a national act.

In addition, whether an act is an act of a State should be determined based on the existence of a link between the act and that State. The TEPCO Group is a large-scale power generation company in Japan whose main business is the development and utilization of nuclear energy. The Tokyo Electric Power Group (TEPCO) is a mega power generation company in Japan whose main business is the development and utilization of nuclear energy. The nuclear energy industry is a high-risk industry, and the total chain of its manufacture and development must be subject to strict regulation by the national Government. In addition, under the doctrine of "national sovereignty," countries enjoy absolute jurisdiction over their internal affairs. TEPCO is a local nuclear energy company in Japan, and the Japanese government strictly controls and approves all of its activities [2]. Although TEPCO discharged nuclear contaminated water into the ocean from the viewpoint of the implementation subject, in practice, this action required the consent of the Japanese government. Therefore, when TEPCO decided to discharge nuclear contaminated water into the sea, it only played the role of delivering the news and did not implement it. The Japanese Government has already made such a decision. After the Fukushima nuclear plant accident, a "Nuclear Energy Damage Compensation and Destruction Support Organization" (NEDSCO) was established with 50.1% of TEPCO's voting rights [3]. This shows that TEPCO is indeed under the control of the Japanese government. When a country

controls an action, it is responsible for the results of that action. If nuclear energy is controlled by the government, the nuclear safety issue is not only the responsibility of the operator but also the responsibility of the government. Article 3 of the Convention on Nuclear Safety also assigns responsibility for nuclear safety to those states that have jurisdiction over it. As mentioned above, TEPCO is a civil subject within Japan and thus has the jurisdiction of the Japanese government, as reflected in this paper. Japan is legally responsible for this.

2.2. Discharge of Nuclear-contaminated Water into the Ocean Violates Relevant International Conventions

Japan's act of discharging nuclear wastewater into the sea is a serious international unlawful act, which has caused or will cause damages of a serious nature and to a great extent, and should be strongly condemned and sanctioned by the international community, and at the same time, Japan must assume its corresponding international responsibility and cease its practice of discharging nuclear wastewater into the oceans, take effective measures to eliminate or mitigate the impacts on the marine environment and human health, and provide full compensation to the countries and individuals that have suffered damages. comprehensive compensation. The United Nations Convention on the Law of the Sea not only clarifies the overall responsibility of States parties for the marine environment but also specifies the responsibilities to be assumed by Member States in preventing, mitigating, and combating marine pollution.

For example, the accident of the tanker *Ericson*, a tanker grounding that occurred in Alaska, United States of America, on 24 March 1989, resulted in the spillage of some 41,000 tons of crude oil into Prince William Sound, polluting the marine ecosystem and affecting fisheries, tourism and the livelihood of residents. The accident sparked international concern over marine oil pollution and contributed to the development and signing of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter. This Protocol imposes strict restrictions and prohibitions on the disposal of nuclear waste or other hazardous materials in marine environments, and in particular, prohibits the dumping of nuclear wastes or other radioactive substances in the sea. Whereas Japan became a party to UNCLOS on June 20, 1996, the provisions of UNCLOS are binding on Japan. Article 192 of UNCLOS regulates the preservation and protection of the marine environment is a crucial obligation that falls upon the States. Article 194 of the legislation stipulates the requisite provisions to be implemented by every Member State to safeguard the marine environment. According to the above articles, each Member State is obliged to give notice to the States and authorities concerned of the possibility of pollution without endangering the environment of other States and of the public and to notify the States and authorities concerned of the possibility of pollution of the sea when it is likely to occur [4].

The release of water contaminated with radioactive substances into the ocean is a subject of worldwide concern about ecological and environmental safety, and Japan should have notified the neighboring countries and countries concerned of the important information and disposal procedures before its implementation. However, Japan has not informed the potentially affected neighboring countries of the relevant information and has even concealed or concealed the relevant information, and in this regard, Japan has not demonstrated sufficient effectiveness in meeting its commitments as stipulated by the Convention. Furthermore, the Convention on Early Notification of a Nuclear Accident stipulates in its preamble that States parties shall take reasonable steps to minimize the damage caused by a nuclear incident that has already occurred. Japan's nuclear-contaminated water, which mainly originated from the cooling water of the Fukushima nuclear power plant in 2011, if continued to be discharged into the sea, will not only fail to mitigate the effects of the nuclear accident but will also create new sources of contamination. The act of Japan releasing polluted water into the ocean can be regarded as a breach of its responsibilities outlined in the Convention on Early

Notification of a Nuclear Accident.

2.3. Absence of Exemptions from State Responsibility in Japan

2.3.1. Not Constituting Force Majeure

Both the Vienna Convention on the Law of Treaties and the Draft refer to force majeure as a circumstance precluding an obligation, while the latter establishes the conditions for its establishment, with article 23, paragraph 2, stating that force majeure exemptions are not applicable if the force majeure is due to the conduct of a State or to a combination of other factors and that the decision to discharge nuclear-contaminated water into the ocean is, therefore, a decision taken by a State of its initiative and cannot be discharged into the ocean if it is not dealt with in any other way. Therefore, the decision to discharge nuclear-contaminated water into the sea was the initiative of a State, and if there was no other way to deal with it, it could not be discharged into the sea; and the conduct of the Government of Japan did not satisfy the "negligence" element of "force majeure".

2.3.2. Failure to Obtain Prior Consent

Prior consent meant that the polluting State effectively permitted the originating State to carry out specific actions that were contrary to its international obligations, but there were three prerequisites for dispensing with "prior consent", namely, legality, genuineness, and validity. The discharge of nuclear-contaminated water into the sea, which jeopardized the vital environmental interests of mankind, was fundamentally unjustifiable, and the Draft also stipulated that prior consent should not be used as an exception to the fulfillment of obligations under international law. At the same time, no State or country had the right to give prior consent in the interests of humanity as a whole.

2.3.3. Not to Avoid Distress

Danger avoidance, also known as an emergency refuge, when in danger, a subject of international law can only remove the illegality of his or her actions by committing an act that violates his or her obligations, as specified in Article 24 of the Draft. First, as a subject of international law, the offender must be in danger and danger of survival. The nuclear-contaminated waters of Fukushima are still under effective control and do not pose an already existing danger to human beings. Secondly, in the case of emergency evacuation, the subject of international law must "refrain" from an act that would cause more than "distress" to the environment. This is not the case with nuclear contaminated water discharged into the oceans, which is much worse than what is currently stored in the oceans. Finally, crisis avoidance provides for only one method of response in this case. Japan was not alone in discharging nuclear-contaminated water into the sea, and, all things considered, "risk aversion" could not be used as a defense.

2.3.4. Non-critical Situations

Article 25 of the Draft clarified the meaning and application of cases of urgency, in which the distinction between urgency and distress lies in the threat faced by a State agent or their guardian. Urgency specifically pertains to a situation where there is a threat to the life of a State agent or their guardian, while distress encompasses a similar threat to the life of a State agent or their guardian. Non-performance of an international obligation in cases of urgency, which must be voluntarily committed by States, also differs from involuntary acts committed as a result of force majeure. Although Japan's nuclear wastewater was a spontaneous act, it does not pose an immediate crisis that would endanger the core interests of nations and the global community. However, the discharge of Japan's nuclear wastewater would impact the fundamental interests of the international community

as a whole. This was contrary to the logic of the applicability of emergency avoidance, and therefore Japan did not qualify for the emergency avoidance exception.

3. Methods and Paths for Holding Japan Internationally Legally Responsible for Discharging Nuclear Contaminated Water into the Sea

The potential release of nuclear wastewater into the ocean has the potential to result in transboundary marine nuclear pollution. Consequently, Japan's decision to discharge such wastewater is not solely a domestic concern but rather has significant implications for the environmental security of the global community. In light of this, Japan must heed the perspectives and concerns expressed by the international community. Japan must exercise caution and prudence in its actions to prevent the occurrence of irreversible, immeasurable harm to both the environment and the global society. Moreover, the release of Japanese nuclear wastewater into the ocean necessitates adherence to international legal frameworks and regulations. From an international legal standpoint, it is widely accepted among scholars both domestically and internationally that, by the provisions outlined in the Convention on Nuclear Safety (1994), the responsibility for ensuring nuclear safety lies with the sovereign state within whose jurisdiction the nuclear facility is situated. Therefore, it is argued that the Japanese government bears the responsibility for the release of nuclear effluent from the Fukushima nuclear power plant into the ocean. The presence of nuclear waste in marine environments poses a significant risk to the ecological balance, hence endangering the well-being and security of human populations. Furthermore, the release of nuclear waste into the ocean contravenes multiple duties outlined in international legal frameworks, necessitating corresponding international accountability.

3.1. Legal Basis on which China can Take Corresponding Countermeasures

Before the occurrence of the accident, the international community had already commenced a series of collaborative efforts. This initiative was grounded in the concept of international cooperation and served as a concrete manifestation of the principle of risk prevention. Furthermore, it represented the most exemplary embodiment of Japan's commitment to safeguarding the ecological and environmental integrity of nuclear-contaminated waters. Japan should have responsibility for providing compensation for the harm caused to individuals, property, and the environment as a result of its globally wrongful actions. Chinese individuals who have been victimized have the legal right to initiate legal proceedings in either Japanese or Chinese courts, by the applicable national laws of Japan and Article 44 of the Law of the People's Republic of China on the Laws Applicable to Civil Relations Involving Foreign Countries. It is important to note that the laws of both Japan and China can be used in such cases [5].

The inclusion of civil liability for environmental pollution and ecological damage within tort liability is a notable provision in the Civil Code (General Principles of Civil Law). Under this provision, individuals who have suffered harm as a result of contaminated water from the Fukushima nuclear power plant have the right to seek compensation from the responsible party within the jurisdiction of our country. Additionally, the defendant also has the right to request punitive damages. Hence, the individuals affected by the polluted waters at Fukushima possess the entitlement to pursue legal recourse and seek compensation for harm and losses inflicted by the responsible party, per the stipulations outlined in the Civil Code. The significance of the Radioactive Pollution Prevention and Control Law in China cannot be overstated. The initial legislation implemented within our nation on atomic energy aims to mitigate or restrict the emission of radioactive substances arising from atomic energy utilization, as well as the management of radioactive waste produced during the process. By the established national criteria, the disposal of nuclear waste necessitates prior authorization from

the environmental protection authorities before its release. The adherence of radioactive effluent from the Fukushima nuclear power plant to national discharge rules and discharge patterns is imperative when it enters our territorial waters.

The Regulations on the Safe Management of Radioactive Waste have significant importance as a prominent legal and regulatory framework within the context of China. In contrast to the Radioactive Pollution Prevention and Control Law, the recently implemented Regulations on the Management of Nuclear Waste encompass comprehensive guidelines about the storage and disposal of nuclear waste. These regulations aim to minimize the generation of nuclear waste, ensure its environmentally responsible disposal, and guarantee its long-term safety. "If the stipulated criteria cannot be fulfilled, it becomes imperative to store and dispose of the nuclear waste in an environmentally sustainable manner. If the stipulated criteria cannot be fulfilled, it becomes necessary to transform them into solid trash and thereafter transfer them to authorized entities responsible for their disposal. Additionally, it is stipulated that the importation of radioactive wastes and items contaminated by radiation is prohibited within the jurisdiction of the People's Republic of China. On April 14, 2021, the Chinese Society for the Law of the Sea released a statement expressing strong condemnation of the decision made by the Government of Japan to discharge nuclear wastewater from the Fukushima Nuclear Power Plant into the Pacific Ocean. The statement also presented a series of legal claims. The assertion highlighted that the decision made by the Japanese government contravened several international agreements, such as the United Nations Convention on the Law of the Sea, the London Convention, the Convention on Early Notification of a Nuclear Accident, and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. Additionally, it violated the principles of preventing harm across borders, preventing risks, fostering international cooperation, and adhering to international law [6]. The demand was made for the Government of Japan to promptly retract its decision to release the contaminated water into the sea. Additionally, it called for comprehensive discussions with relevant nations and the global community to explore alternative methods for the treatment of nuclear wastewater that prioritize safety, reliability, and sustainability. The statement additionally urges the international community to collaborate and implement appropriate actions to halt the reckless conduct of the Government of Japan, to protect the worldwide marine ecosystem as well as the well-being and security of humanity.

The Paris Convention on Compensation for Nuclear Damage, established in 1960, and the Vienna Convention on Civil Liability for Nuclear Damage, established in 1963, are notable international agreements in the field of nuclear liability. Several developed nations that have established nuclear energy programs have chosen not to sign the Convention due to the existence of national laws, such as those in Japan, which offer greater compensation for victims within their respective countries. In the realm of international environmental law, a longstanding framework of principles exists, which asserts that States bear legal responsibility for cross-border harm inflicted upon life, property, and the environment as a result of their breach of international obligations. This framework encompasses the notions of attributing liability to those who engage in pollution, as well as holding the responsible parties accountable through State intervention, among other related considerations. The introductory statement of the Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities asserts that individuals who experience harm or loss due to accidents stemming from hazardous activities should not be unfairly burdened with such losses. Consequently, they should have the ability to promptly and sufficiently receive compensation. The international community has consistently acknowledged the responsibility of a State to provide compensation for environmental damage resulting from an activity, which is considered an inherent component of customary international law. Hence, several academics have proposed that the terminology "custom" as stated in Article 10 of the Civil Code ought to be construed to encompass "international practice". On April 15, 2021, a press conference was co-hosted by China's environmental protection and marine

ministries. The purpose of the conference was to deliver a specialized briefing regarding Japan's discharge of nuclear wastewater into the ocean. Additionally, a set of legal assertions were presented at the meeting [7]. The briefing highlighted that the choice made by the Japanese government was deemed as lacking respect for the international community, failing to adhere to international legal standards, and displaying a lack of responsibility towards international fairness and justice. The circular issued a call for the Government of Japan to promptly retract its decision regarding sea exclusion, engage in comprehensive talks with relevant countries and international organizations by international law and established norms, consent to international oversight, and uphold its international commitments. According to the briefing, China expressed its intention to closely observe the developments surrounding Japan's discharge of nuclear effluent. Furthermore, China emphasized its prerogative to undertake additional actions to protect national ecological security and the lawful rights and interests of its citizens.

Ultimately, within the framework of the given scenario, The International Court of Justice was approached in 1996 to address a disagreement between Slovakia and Hungary regarding a hydraulic engineering initiative located on the Danube River. Hungary said that the Slovak project will result in enduring consequences for the flow, quality, and ecosystem of the Danube, hence adversely impacting Hungary. In 1997, the International Court of Justice issued an order for temporary measures, mandating the involved parties to undertake all requisite actions to prevent the occurrence of fresh harm or exacerbation of preexisting harm, while also ensuring the safeguarding and conservation of the Danube's ecosystem. The case referred to as the Danube Case exemplifies the application of the "precautionary principle" and the "principle of cooperation" within the realm of international law. These principles dictate that when it comes to the development and utilization of transboundary water resources, nations should exercise cautionary actions to prevent or mitigate environmental harm. Additionally, they should engage in collaboration and consultation with other relevant stakeholders. Simultaneously, individuals must engage in collaboration and seek guidance from other relevant parties, while also acknowledging and honoring their respective lawful entitlements and concerns.

In 2019, Panama instituted proceedings before the International Court of Justice (ICJ) regarding the management of water resources in the Panama Canal, requesting the ICJ to decide whether Costa Rica's hydraulic works on its territory violated the provisions of international law and bilateral agreements, whether they caused damage to Panama's water resources and ecology, and whether Costa Rica should be held liable and compensated. Costa Rica opted to acknowledge the jurisdiction of the International Court of Justice as the most suitable mechanism for resolving the issue.

Based on those cases, it could be seen that Japan's discharge of nuclear wastewater into the sea was a violation of international law, as it would cause serious transboundary damage to the marine environment and human health in China and other countries, and that Japan had not taken effective preventive measures and had not engaged in adequate consultation and cooperation with other countries. China therefore had the right, by international law, to demand compensation and relief from Japan and could also seek the support and intervention of the international community through international organizations or the International Court of Justice, among other means.

3.2. Recourse to International Dispute Settlement Mechanisms

The most important feature of international arbitration is its flexibility and certain mandatory nature, which allows the parties to choose their arbitration institution or decide on their own the laws and procedures to be applied. 2000, the United Nations Convention on the Law of the Sea (UNCLOS) adopted the Optional Protocol to the Convention on Environmental Disputes (OP-ED), which is the world's first ad hoc arbitration rules for environmental disputes, providing a wider range of ways to settle international environmental disputes; and since the Alabama incident, many countries have been using international arbitration to settle transboundary damage disputes. Since the "Alabama"

incident, many countries have been utilizing international arbitration to resolve transboundary damage disputes, with 110 cases initiated by Western countries in the past three years. In international legal practice, an increasing number of international treaties incorporate dispute resolution clauses into the arbitration process, which is why Judge Mann said, "Arbitration has since become a woman of international law." The international practice of arbitration has been further affirmed by the Convention for the Peaceful Settlement of International Disputes of 1899, as well as the Convention for the Peaceful Settlement of International Disputes of 1907 [8]. Arbitration is included as a means of dispute resolution in many major regional and global environmental treaties, such as the Protocol to the Antarctic Treaty on Environmental Protection, which allows disputes to be referred to arbitration or a method mutually agreed upon by the parties, whenever requested by one of the parties. Both the Basel Treaty and the Treaty on Environmental Impact Assessment of Transboundary Pollution provide for parties to refer to arbitration following the procedures established by the treaty. In theory, arbitration, which presupposes the consent of the parties, is intended to be "voluntary jurisdiction". Therefore, in terms of flexibility, professionalism, and voluntariness, this is a choice that benefits both China and Japan, and entering into an arbitration agreement with Japan is a viable option [9]. At the same time, if both China and Japan cannot solve the problem through consultation, negotiation, and cooperation after they have suffered injuries, resorting to international arbitration will help to expand the protection of China's national and ethnic interests.

The International Tribunal for the Law of the Sea The establishment of a specialized court by the International Court of the Law of the Sea, as outlined in Annex VI to the Statute of the International Tribunal for the Law of the Sea of the United Nations Convention on the Law of the Sea, serves the purpose of resolving disputes that arise between different States regarding the interpretation and application of the United Nations Convention on the Law of the Sea. This court operates following the updated international framework for environmental protection. The International Court of Justice, established by the United Nations, typically designates States as defendants and non-States as plaintiffs in its proceedings, except international tribunals where non-States are the defendants. The International Tribunal for the Law of the Sea demonstrates a greater alignment with the distinctive attributes of contemporary environmental conflicts. It possesses a series of specialized elements that enhance its capacity to effectively address and resolve national environmental disputes by employing the aforementioned attributes. Hence, in the context of the dispute about the contamination of Fukushima's radioactive waters, it is plausible for international organizations or certain corporations to assume the role of plaintiffs, thereby actively safeguarding their environmental rights and participating in the collective governance of the global environment [10]. Furthermore, it should be noted that Article 290 of the United Nations Convention on the Law of the Sea includes the provision of interim measures as a distinct approach for resolving marine environmental disputes. This particular mechanism holds significant importance in the operational framework of the International Court on the Law of the Sea.

4. China's Response Strategy to Japan's Nuclear Contaminated Water Discharge from the Perspective of International Law

4.1. Establishment of Clear Emission Standards and Environmental Damage Criteria

In the existing international conventions, the standards for the discharge of radioactive materials are not clear, and it is not specified which materials are prohibited and which materials can be discharged with a discharge permit. Since each country in the world has its discharge regulations and standards, when Japan discharges nuclear wastewater into the ocean and causes transboundary harm, the tests conducted by each country based on its national legal norms may result in different conclusions, which could easily lead to disputes. Therefore, there is an urgent need for the international community

to establish a set of clear standards for the discharge of radioactive substances into different countries as a basis for judging whether there has been any violation and the degree of harm caused. In addition, the relevant standards should be formulated in such a way as to enable all countries to participate in them, enhance their applicability, reduce disputes arising from differences in standards among countries, and facilitate subsequent efforts to compensate for damages.

However, the establishment of clear discharge standards and environmental damage criteria requires extensive participation and consultation by the international community to arrive at agreed standards and rules, which may take a long time and incur great costs, without being able to respond promptly to the emergency of Japan's nuclear wastewater discharges into the sea. At the same time, it is not possible to cover all radioactive substances and all environmental damages, as the types and characteristics of radioactive substances are very complex, as are the impacts and assessments of environmental damages. Therefore, it needs to be clarified and improved in the light of the actual situation.

4.2. Establishment of Specialized Investigation and Evidence-gathering Bodies

In the case of Japan's nuclear wastewater discharges into the oceans, for example, it is very difficult for Japan to investigate and obtain evidence on its assumption of State responsibility following transboundary damage. Because of the complex nature of transboundary damage, the level of radioactive material accumulates when the amount of release increases and eventually leads to damage. Therefore, the establishment of a professional investigation and forensics organization is necessary. Its establishment has the following advantages: first, it reduces the burden on the victimized State and individual and prevents both parties from being overwhelmed in the collection of evidence. Secondly, the evidence collection work carried out by a professional investigation and evidence collection organization makes its results more acceptable to the international community, including the perpetrating country and the victimized country, and plays a positive role in promoting the resolution of the controversial issue of nuclear wastewater discharges. Thirdly, the professional investigation and evidence-gathering organization has incorporated experts from many countries to form a special working group to carry out the investigation and evidence-gathering of transboundary damage caused by Japan's discharge of nuclear wastewater into the sea, to ensure that the results of the investigation are as fair, truthful and accurate as possible. Therefore, the system of professional investigation and collection of evidence has its unique superiority in practice, and it requires Governments to work hand in hand to enable it to be born, thereby better protecting the interests of mankind as a whole.

At the same time, however, the process of establishing a professional investigative and forensic body requires the active cooperation of Governments. However, the existence of political, economic, and geopolitical differences between countries may make it difficult to reach an agreement, thus affecting the establishment and operation of investigative bodies. There are differences in the laws and regulations on investigation and evidence collection in different countries, including inconsistencies in the standards and procedures for obtaining evidence. This may lead to legal obstacles for investigative bodies in carrying out their tasks, affecting the comprehensiveness and effectiveness of investigations. Taking these limitations into account, the establishment of a professional investigation and forensics agency needs to face the complex international environment and political realities to ensure its success in practice.

4.3. Strengthening International Cooperation in Transnational Implementation

To solve the difficult problem of cross-border enforcement, international cooperation must be strengthened. At present, conflicts of interest have arisen among many countries as a result of

differences in social systems and levels of economic development. Only by strengthening cooperation and resolving conflicts can we realize the greatest interests among countries. We adhere to the five principles of peaceful coexistence and advocate the establishment of a community of human destiny. If Japan triggers cross-border harm due to nuclear wastewater, we should strengthen cooperation with Japan to lower its stakes and actively promote cross-border law enforcement; so that the environment we live in will be better safeguarded, and at the same time bring greater benefits to the world as a whole. Therefore, in practice, countries should take the initiative to carry out exchanges and consultations, and concretize the results of the consultations using an agreement or a treaty; this will enable the countries concerned to make them legally effective and binding under an agreement or a treaty if transboundary enforcement is necessary for damage that crosses national borders.

However, different countries have different legal systems and regulations, and when it comes to transnational enforcement, there may be difficulties in implementation due to legal differences, and certain countries may not be able to identify with or accept the enforcement standards of other countries, thus affecting the substantive progress of cooperation. The international community lacks a unified enforcement mechanism for transnational enforcement, making cooperation potentially non-operational. The lack of a global set of norms and standards may make it difficult for enforcement to be harmonized across different States. Therefore, to effectively address the difficulties of cross-border enforcement, the international community needs to face the above-mentioned limitations and work together to overcome the difficulties in cooperation to establish a more effective and stable cooperation mechanism.

5. Conclusion

This study does a thorough analysis of the issue surrounding Japan's release of nuclear contaminated water into the ocean. It systematically investigates the underlying context of the issue, the establishment of state responsibility, the substantiation of international convention violations, and potential solution strategies within the framework of international law. The present study begins by providing an overview of the historical context surrounding the Fukushima nuclear incident, which resulted in the production of significant volumes of radioactive water and garnered global interest. The paper highlights that the Japanese government's proposal to release nuclear contaminated water into the Pacific Ocean may potentially be considered an act of state and could potentially contravene pertinent international conventions and legal principles. This action raises concerns related to the precautionary principle of risk and the obligation of prudence. Following that, a comprehensive examination is conducted on the legal foundation for Japan's condition responsibility. Additionally, potential justifications for exemption from duty are scrutinized, encompassing factors such as the absence of force majeure, insufficient prior consent, failure to mitigate distress, and absence of a condition of necessity. Nevertheless, the paper highlights the challenges associated with holding Japan accountable for its State responsibility. These challenges encompass varying criteria for assessing damages, the lack of oversight by the International Atomic Energy Agency, obstacles in gathering and acquiring evidence, and the complexities of implementing measures across national borders. This paper presents China's proposed approach to addressing Japan's discharge of nuclear contaminated water from an international law standpoint. The proposed strategy includes the development of explicit emission and environmental damage standards, enhancing the oversight of Japan's nuclear contaminated water discharge by the United Nations International Atomic Energy Agency, and the establishment of specialized organizations for conducting investigations and collecting evidence. Upon thorough examination of the entire book, it becomes evident that the matter of nuclear contaminated water transcends being solely an internal environmental conflict of a single nation, but rather encompasses a multifaceted issue that encompasses international law and worldwide accountability. Within the framework of globalization, the international community must

collaborate to construct a more comprehensive legal framework that can effectively address transnational environmental issues and uphold the principles of sustainable development for the global environment.

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