

Japan's nuclear water disaster on international law

Longen Li

Knowledge-First Empowerment Academy, Guangzhou 510600 China

lynn596620@qq.com

Abstract. With the development of human science and technology, the ecological environment is also destroyed. One particularly big source of contamination recently is the release of contaminated water from Japan's nuclear reactors. The nuclear waste generated in the operation of nuclear facilities and reactors is radioactive and inevitably causes environmental pollution. If there are mistakes in the operation process and operation procedures, it will lead to nuclear accidents, cause huge environmental disasters, damage human health and cause difficult to estimate property losses. After the cabinet meeting, the Japanese government announced that it will start to discharge contaminated water from the reactors of the Fukushima nuclear power plant from the 24th. According to this idea, the Fukushima nuclear power plant will continue to discharge contaminated water for at least the next 30 years. According to this incident, many media and experts are judging the consequences of this incident and what to do in the future. So, how should we deal with and view this incident? So the first thing to look at is how this is regulated or violated in international law. In the future, more international solutions and actions will be needed to maintain world peace and health.

Keywords: nuclear sewage, discharging, International Environmental Law, United Nations Convention on the Law of the Sea(UNCLOS).

1. Introduction

On March 11, 2011, an earthquake and tsunami measuring 9.0 on the Richter scale destroyed the Fukushima nuclear power plant, causing core meltdowns at Units 1 and 3. After the Fukushima nuclear accident, a large amount of nuclear wastewater was collected into the nuclear power plant. Some of the water is brackish, which helps cool nuclear reactors but also causes pollution. The second part is the massive amount of groundwater that flowed into the basement of the plant during the tsunami, mixing with the already contaminated water. Rainwater also seeps into the facility and becomes sewage.[1]

In December 2013, the Ministry of Economy, Trade and Industry, Japan's nuclear energy authority, set up a working group to conduct technical discussions on the issue of "treated water" discharge.

In order to communicate with the local government, the Ministry of Economy and Industry convened a "Local coordination meeting on Waste furnace and contaminated Water Countermeasures" in Fukushima City in July 2017. However, Takashi Kawamura, the company's then-president, told the media before to the meeting that TEPCO had "made a judgment" regarding the release of seawater, which sparked a great deal of civil unrest.

In April 2021, the Japanese government, ignoring domestic and foreign opposition, unilaterally announced that it would implement the discharge of nuclear-contaminated water into the sea in 2023[11].

2. Laws That Japan Violates

The United Nations Convention on the Law of the Sea (UNCLOS), to which Japan is a party, has provisions for the preservation of the marine environment in Article 192 and for the prevention, reduction, and control of pollution of the marine environment from all sources in Article 194 [2]. Japan is in violation of both of these provisions. Additionally, States must take all necessary steps to ensure that pollution from events or activities under their jurisdiction or control does not spread outside the area in which they are exercising their sovereign rights under this Convention and does not harm other States or their environments; According to article 195, a State may not transfer one type of pollution to another or from one place to another. Japan's decision to release the water and its consequences violates its international treaty obligations under the United Nations Convention on the Law of the Sea. Some radioactive elements in the water contaminated by the Fukushima nuclear power plant cannot be removed, and Japan should first take responsibility for any radiation effects on humans.

Regarding the treatment of sewage from the Fukushima Daiichi nuclear power station accident in Japan, Wang Hanling, a professor at the Institute of International Law of the Chinese Academy of Social Sciences, pointed out that many media outlets felt that Japan may have violated the London Dumping Convention, which intentionally dumped waste and other materials at sea from ships, aircraft, platforms or other artificial structures at sea [3]. Japan's practice of discharging sewage into the ocean through the undersea pipeline does violate relevant regulations.

In addition, the Japanese government's information disclosure on nuclear wastewater treatment is not comprehensive, open and transparent, resulting in extremely limited understanding of the international community and the public at present, which is obviously not in line with relevant international conventions, especially the relevant provisions of the Convention on Early Notification of Nuclear Accidents.

3. Consequences

3.1. Pandemic disease

Nuclear contaminated wastewater contains many radioactive compounds, which are easily absorbed by Marine life. However, because Marine life can only absorb radioactive materials, they are contaminated and some species have even become extinct. People who eat these contaminated sea creatures may experience symptoms of nausea, dizziness and exhaustion, and may cause permanent damage to their bodies. Smoke from wildfires in Canada, for example, affects air quality in the northern United States, and as the smoke drifts south, smoke from hundreds of wildfires in Canada has triggered air quality alerts for millions of people in the northern United States and Canada. Patrick Kinney of Boston University in the United States has said that the health effects of air pollution from wildfire smoke are basically the same as other types of air pollution [4]. This is mainly because the fine particles in smoke can irritate the eyes, nose and throat, and are particularly harmful to people with asthma or heart disease, young children and the elderly. As a result, Japan's Marine emissions also cause many diseases. Nuclear contaminated wastewater contains many radioactive compounds, which are easily absorbed by Marine organisms. Since Marine life can only absorb radioactive materials to swim, they are bound to be contaminated. People who eat these contaminated sea creatures may experience symptoms of nausea, dizziness and exhaustion, and may cause permanent damage to their bodies. While no one is eating contaminated Marine life yet, the situation will become uncontrollable as things slowly develop and sewage spreads all over the planet.

3.2. International trade & Business law

For example, due to Japan's discharge of nuclear sewage into the sea, the General Administration of Customs of China announced that, in order to protect the health of the Chinese people, the import of aquatic products originating in Japan will be suspended from now on [5]. On August 24, the official website of the General Administration of Customs of China announced that in order to fully prevent the radioactive contamination risk caused by the discharge of Fukushima nuclear sewage on food safety,

protect the health of Chinese consumers, and ensure the safety of imported food, In accordance with the relevant provisions of the Food Safety Law of the People's Republic of China, the Measures for the Administration of Import and Export Food Safety of the People's Republic of China and the Agreement on the Implementation of Sanitary and Phytosanitary Measures, the General Administration of Customs has decided to suspend the import of aquatic products originating in Japan from August 24, 2023. In addition, on 23 August, the Government of the Hong Kong Special Administrative Region announced in the Gazette that, in accordance with the Food Safety Ordinance, import of aquatic products from 10 Japanese prefectures into Hong Kong would be banned from 24 August. According to the SAR government, online shopping is also a commercial import subject to the ban. What Japan has done is restrict their own economic resources. Their future economic development will also change with time and change.[6]

4. Solutions

4.1. *Bring the lawsuit*

Yoon Kyung-hyo, policy director of the United Environmental Campaign, a South Korean environmental NGO, told the Global Times on June 12 that there are several ways to change the Japanese government's decision [7]. The first is short-term political pressure, such as rallying citizens around the world to hold rallies and online campaigns to file petitions with the United Nations, the International Atomic Energy Agency and the United Nations. Letters from international bodies such as the International Maritime Organization, the heads of State of the United States and the European Union; Second, medium - and long-term legal pressures, such as a complaint to the UN Human Rights Council, will continue to force governments in the Pacific and South Korea to take cases to the International Court of Justice. But Japan eventually released the contaminated water. Because not only did Japan not listen, it violated many treaties. Countries could band together to file an appeal against Japan.

A safety review by the International Atomic Energy Agency has concluded that Japan's plan to discharge water stored at the Fukushima Daiichi nuclear plant into the sea meets IAEA safety standards [8]. However, a spokesperson for China's Permanent Mission to the IAEA said in a statement that Japan had not demonstrated the legality of the decision to discharge the water, the long-term reliability of the nuclear-contaminated water purification equipment, the authenticity and accuracy of the nuclear-contaminated water data, the safety of the Marine environment and human health, the integrity and effectiveness of the monitoring program, and adequate consultation with stakeholders [9].

It must be noted that if the water contaminated by the Fukushima nuclear power plant is safe, there is no need to discharge it into the sea, and if it is not safe, it should not be discharged. Japan's practice of discharging sewage into the ocean is unreasonable, unreasonable and unnecessary. Japan is not prepared to release these waters and other countries have the right to Sue Japan for its actions.

Some 40,000 Koreans, including Korean fishermen and fishing companies, held a large-scale demonstration in Seoul on July 16 against Japan's devolution of power. However, the president and several other officials have failed to act on Japan's decision to discharge water contaminated by the Fukushima nuclear disaster into the sea, violating fundamental rights such as the right to life of domestic citizens. Citizens have the right to file a lawsuit against the Korean government. Once the South Korean government agrees to Sue Japan, it can join forces with other countries to file an appeal against Japan.

4.1.1. Previous example. France has conducted a series of nuclear tests in the South Pacific. This action led Australia and New Zealand to file an application with the International Court of Justice on 9 May 1973 requesting that France immediately cease the tests. France stated that, in its view, the Court clearly lacked jurisdiction and therefore did not participate in the public hearing and did not file any pleadings. At the request of Australia and New Zealand, the Court issued two orders on 22 June 1973 directing interim measures to, inter alia, require France not to conduct radioactive fallout nuclear tests on Australian or New Zealand territory pending judgment. [10] Later, France also announced to the nation and promised that there would be no more nuclear tests anywhere else. The International Court of Justice

did not pursue the case. But if France goes on to do it, then France must bear some responsibility. A country cannot occupy the territory of another country for its own national benefit, so Japan's discharge of nuclear water into the sea is suspected of endangering many other countries, and Japan has violated many rules under international law. And the current and sewage have been discharged, in a few decades, almost the entire Earth's sea water will be polluted.

4.2. Take responsibility

The principle of polluter compensation means that the polluter who causes environmental damage has the responsibility to pay compensation and bear the responsibility to remedy it. Obviously, the discharge of nuclear wastewater from the island into the sea is harmful to the Marine environment and ecological security of neighboring countries and even the world. The principle of State responsibility and compensation means that States bear legal responsibility for internationally wrongful acts or damages, including responsibility for internationally wrongful acts and international liability for compensation. The 1991 Nuclear Waste Management Research Law also provides for the management of high-level radioactive waste, which needs to ensure human health and pay attention to the protection of the ecological environment, while providing legal guarantees for the right of future generations to live and reside. The Act introduces new responsibilities for the National Radioactive Waste Authority [11].

5. How to defence in the future

5.1. Strengthen with other countries

In particular, countries that may be affected by nuclear contaminated water. Marine environmental pollution usually involves not only the interests of one country, but also the interests of other countries. A special mechanism for monitoring the spread of radioactive contaminants will also be established as soon as possible. This can help detect and gauge the extent of the spread of contaminated water across the country. He urged the Japanese government to consult with relevant international organizations [12]. For example, the Japanese government should also fully consult with international organizations on the Marine environment, fisheries, and maritime navigation. Because local fishermen may lose their jobs due to the incident, causing economic losses.

5.2. Develop more defense machines

Strengthen the prevention and control mechanism of nuclear wastewater entering the sea. Researchers in various countries should also actively explore the establishment of prevention mechanisms and cooperate to explore a set of scientific cleaning and filtration mechanisms to prevent the continuation of emissions as much as possible. Strengthen hygienic food safety to prevent radioactive food from getting into people's mouths, which can get the virus and spread to all people.

5.3. Make more regulations

The world needs more laws to sustain it. Countries that break the law also need to be held accountable in order to keep the world working. But the best, the ideal is for the country not to break the regular laws, not to cause trouble. When making important decisions, follow the advice and consent of other countries first, and think about whether it is the best way to handle it before doing so. In the Fukushima nuclear accident, although there are natural disasters, but more is man-made reasons. As a result, the Japanese government and Tepco did not fulfill their obligations under the corresponding international treaties, resulting in nuclear pollution. If a nuclear power accident is caused by a country in violation of its corresponding international obligations, it will be damaged in the country where the nuclear accident occurs and in the country where the nuclear accident occurs. The formation of a new legal relationship between the injuring states involves the state responsibility in the state responsibility caused by international wrongful acts.

6. Conclusion

This radiation is not only a major nuclear disaster in Japan, but also affects neighboring countries and seas [13]. It has triggered the ecological risk of nuclear technology and the crisis awareness of nuclear waste disposal around the world, resulting in people's fear of nuclear leakage. Japan had better solutions, safer in the long run, and less backlash from neighboring countries, but it chose the least costly solution, which could harm the entire Pacific Ocean, and falsified the authenticity of the report in the meantime. Second, Japan has thought of several ways to deal with nuclear contaminated water. It would cost about 100 billion yen to separate hydrogen and 240 billion yen to bury it underground, but about 3.4 billion yen would be enough to discharge it into the ocean [14]. In order to save costs, they do not use other safe and effective methods to solve nuclear sewage, but take the cheapest way - discharge into the sea to solve. They decided to carry out this act despite sanctions and curses from other countries.

The IAEA report is not complete and reliable. This report only evaluates this option of drainage, and no other options are evaluated. So Japan's claim that filtered nuclear water is harmless is far from assured. But if the report is true, the discharge of nuclear water into the sea cannot be easily forgiven. Because the ocean is the property of all mankind, it is already a moral violation to spread one's own country's garbage to other areas. Secondly, this incident has affected the whole country. Because the spread of radioactive water into the sea will endanger the water resources of various countries.

References

- [1] How to talk about honesty after a long time of planning -- Before and after the decision of discharging nuclear contaminated water in Japan from the bottom to the sea -- Xinhuanet. (2023, August 23). Retrieved from http://www.news.cn/world/2023-08/24/c_1129820498.htm
- [2] Journal of Ocean University of China (Social Science Edition). (n.d.-b). Academic research status and analysis on legal issues of Fukushima Nuclear wastewater discharge in Japan. www.xml-data.cn. <https://doi.org/10.16497/j.cnki.1672-335X.202303011>
- [3] Wang Hanling. (2021, April 23). What is the most effective way to deal with the discharge of nuclear sewage in Japan? - Sike. Retrieved from <http://www.news.cn/sikepro/20210423/6285b5ada0314c7eb5f43958862aa118/c.html>
- [4] Sina_Mobile. (2023, June 9). Smoke rises over Northern United States from Canadian wildfires. Retrieved from <https://finance.sina.cn/tech/2023-06-09/detail-imywrwwm1964881.d.html>
- [5] Wang Junjie. (2023, August 24). Extremely selfish and irresponsible! What are the effects of Japan's nuclear contaminated water discharge? _ China Economic Net. Retrieved from http://m.ce.cn/zttp/focus/202308/24/t20230824_38685934.shtml
- [6] Response to Nuclear Pollution/General Administration of Customs: A total ban on the import of Japanese aquatic products _ Big Public Network. (2023, August 25). Retrieved from <http://www.takungpao.com/news/232108/2023/0825/885611.html>
- [7] "Don't fish, go to Seoul ", South Korean fishermen mass protest Fukushima nuclear contaminated water "discharge into the sea." (2023, June 13). Retrieved from <https://m.huanqiu.com/article/4DHwvrZT13K>
- [8] The International Atomic Energy Agency has concluded that Japan's plan to dispose of water at Fukushima and discharge it into the sea meets international safety standards. (2023, July 4). Retrieved from <https://www.iaea.org/zh/newscenter/pressreleases/guo-ji-yuan-zi-neng-ji-gou-ren-wei-ri-ben-zai-fu-dao-jiang-chu-li-shui-pai-hai-de-ji-hua-fu-he-guo-ji-an-quan-biao-zhun>
- [9] The Spokesperson of China's Permanent Mission to the IAEA made a statement on Japan's launch of the discharge of contaminated water from the Fukushima nuclear disaster. (2023, August 25). http://vienna.china-mission.gov.cn/hyyfy/202308/t20230825_11132427.htm
- [10] Nuclear Tests (New Zealand v. France). (1974). Retrieved from <https://www.icj-cij.org/case/59>
- [11] Tan W C. (2017, May 27). Study on International legal system of Nuclear waste Disposal (Master's thesis, Nanchang University).

- [12] Yuan Quandeng. (2023, August 24) Strategies that the Chinese government can adopt to deal with the discharge of Japanese nuclear sewage into the sea. Retrieved from <https://aoc.ouc.edu.cn/2023/0306/c9821a425135/pagem.htm>
- [13] Sort out the article! Japan pushes nuclear contaminated water into sea incident beginning and end. (2023). Retrieved from <https://focus.scol.com.cn/zgsz/202308/58958927.html>
- [14] gb.cri.cn. (2023, June 25). News investigation: Can the world help pay for Japan's sea "disaster" - International Online. Retrieved from <https://news.cri.cn/20230625/169a199a-dee5-3b62-5021-1f9db13f498f.html>