



Viewpoint

The Fukushima Nuclear Power Station incident and marine pollution

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ABSTRACT

Based on the facts relating to the radioactive wastewater discharged by the Fukushima Nuclear Power Station in Japan, this paper intends to explore the international legal obligations for Japan from three perspectives, namely, the immediate notification, the prevention of transboundary harm and the prevention of dumping. Furthermore, this article defines and compares two types of international legal liabilities, the traditional state responsibility and the responsibility for transboundary harm. Through comparison, the international legal liability of Japan is discussed. After detailed analysis, the conclusion is that Japan should be responsible for the obligation of immediate notification and since Japan unilaterally discharge the wastes without prior specific permits of other contracting countries, it should also be responsible for the violation of prevention of dumping. Since so far, no material injury has emerged and there would appear to be no culpability as regards the prevention of transboundary harm. Finally, this paper stresses the necessity to develop a worldwide agreement concerning the liability for transboundary harm and to establish an institutional framework for the enforcement of a state's obligations, and also the great significance of international cooperation between nations and organisations in relation to marine environmental protection.

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1. Introduction

On March 11th, 2011, a magnitude 9.0 earthquake occurred in the eastern sea off Japan, because of which, the Fukushima Daiichi Nuclear Power Plant in Japan, declared a heightened state of alert and was forced to shut down (IAEA, 2011). Subsequently, hydrogen explosion at Unit 1 reactor on March 12 and explosion at Unit 3 and Unit 2 reactors on March 14 at the Fukushima Daiichi plant was reported. In order to control the temperature of the continuously heated-up reactors, Japan started to cool down the reactors by injecting seawater mixed with boron into the reactor vessels (IAEA, 2011). As a result, water with a high contamination of radiation was found in these reactors (Guangzhou Daily, 2011). The plant operator, Tokyo Electric Power Company (TEPCO), then was given permission by the Japanese Government to discharge more than 10,000 ton of comparatively low level contaminated water from their radioactive waste treatment facility to the sea, so as to make room for the storage of highly radioactive wastewater (IAEA, 2011; Chongqing Evening News, 2011).

TEPCO held a press conference and declared the decision regarding the emission of the radioactive wastewater on April 4th, 2011, and later that day, the Japanese Foreign Ministry

briefly explained this issue to the diplomatic representatives in Tokyo and then sent faxes to the embassies in Japan. At this juncture, what should be noted is that the number of the representatives attending the briefing held by the Japanese Foreign Ministry only accounted for one third of the total countries which have embassies in Japan. What should also be noted is that the declaration was made on the very same day when the large-scale radioactive wastewater was discharged.¹ According to the report of *Tokyo Shimbun*, however, the Japanese Government had already negotiated with and acquired the tacit consent of the United States, three days before the emission of the radioactive wastewater (Huo, 2011). According to another report by Kyodo News, on April 13th, 2011, at the meeting of the External Affairs Committee of the House of Representatives, the Japanese Foreign Minister Mr. Matsumoto, confirmed that at the time Japan started to discharge the low-level radioactive wastewater, the Ministry of Foreign Affairs had not yet completed the notification of all embassies and international bodies in Japan. He commented that 'in fact, Japan did start to discharge the wastewater at the time of notifying the countries through fax but had improved the contact system afterwards' (Yangzhou Evening News, 2011).

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¹ According to the Fukushima Nuclear Accident Update (5 April 2011, 20:25 UTC) by IAEA, "Japanese authorities have confirmed to the IAEA that they began to discharge 11,500 ton of low level radioactive water from the Fukushima Daiichi Nuclear Power Plant into the sea on 4 April".

The neighbouring countries are unhappy with Japan's '*fait accompli*' behaviour, the South Korean Ministry of Foreign Affairs and Trade even indicating that the emission of radioactive wastewater may have violated international law. Nonetheless, Yukio Edano, the Japanese Chief Cabinet Minister, alleged that Japan, 'had no choice but to' discharge the wastewater into the ocean and that this, 'wouldn't cause immediate radiation pollution to the neighbouring countries' (Beijing News, 2011). Mr. Matsumoto further defended his position by commenting that, "at the present time, the emission wouldn't land Japan with any international liability, since no transboundary effect has been found up to now" (China News, 2011).

Whether or not Japan's behaviour violates international legal obligations, should Japan bear the state liability and other liabilities for its discharging behaviour? These two issues will be discussed in detail in this paper.

2. Immediate notification

In accordance with Article 198 of the 1982 United Nations Convention on the Law of the Sea (hereinafter referred as "UNCLOS"), 'when a state becomes aware of cases in which the marine environment is in imminent danger of being damaged or has been damaged by pollution, it shall immediately notify other states it seems likely to be affected by such damage, as well as the competent international organisations'. In addition, Article 2, Paragraph 1 of the 1986 Convention on Early Notification of a Nuclear Accident, noted that after a nuclear incident, the state Party should, 'forthwith notify, directly or through the International Atomic Energy Agency (hereinafter referred to as the "Agency"), those states which are or may be physically affected as specified in Article 1² and the Agency of the nuclear accident, its nature, the time of its occurrence and its exact location where appropriate'. The aforementioned two provisions illustrate the international legal obligation for states to complete, immediate and accurate notification of the countries whose environment is likely to be harmed by the emission, aiming at helping these countries to make a timely response. In addition, this would also help the notifying state to seek international cooperation and to negotiate with other countries, in order to find the best solution.

Based on the foregoing facts, Japan notified the United States three days earlier than the *de facto* emission of the wastewater, whereas it started to inform other countries merely on the very same day when the large-scale emission commenced and had not then completed even notification, when it began to discharge the wastewater. The facts indicate that Japan had already been very aware of the potential danger and effects that the emission might cause, at least three days before the process of emission. It has been explicitly provided by UNCLOS that, 'when a state becomes aware of...in imminent danger..., it shall immediately notify...', and similarly, the 1986 Convention on Early Notification of a Nuclear Accident requires, 'forthwith notify[ing]'. Apparently, to act in line with these two provisions, Japan should have notified the susceptible countries at least three days before its actual

discharging date. In any case, the notification made by Japan on the exact day of emission cannot be counted as, 'immediate notification', therefore, Japan did not fulfill the obligation of immediate notification.

3. The prevention of transboundary harm

The *sic utere* rule has long been recognised as a general principle of law, which is the source of law that the International Court of Justice could apply according to Article 38³ of the Statute of International Court of Justice (Haimbaugh, 1981). To be elaborated, this rule means "use your own property so that it will not injure others", in which the doctrine of "good neighbourliness" is embodied (Malone, 1987).

In addition, both Principle 21 of 1972 Declaration of the United Nations Conference on the Human Environment and Principle 2 of 1992 Rio Declaration on Environment and Development, introduced this general principle into the environmental field, namely that, 'every state has the responsibility to ensure the activities under its jurisdiction or control would be conducted without damaging the environment of other states or the area that is beyond its own jurisdiction'.⁴ Here in this article, the term 'the prevention of transboundary harm' will be used for short. Notably, this principle is also reflected in Article 194, Paragraph 2 of UNCLOS, which provides that, 'states shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other states and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention'.

In the landmark *Trail Smelter* case,⁵ the tribunal concluded that, "under the principles of international law as well as of the law of the United States, no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence". The tribunal also stated that pollutants from Canada, which had crossed the United States border would not trigger liability for damages without a showing of "material damage". In the *Lac Lanoux* case,⁶ the tribunal established its opinion on this principle by stating that "state has the right to utilise unilaterally that part of a river which runs through it so far as such utilisation is of a nature which will effect on the territory of another state

³ Article 38 of International Court of Justice provides, "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: (a) international conventions, whether general or particular, establishing rules expressly recognized by the contesting states; (b) international custom, as evidence of a general practice accepted as law; (c) the general principles of law recognized by civilized nations".

⁴ Principle 21 of *Stockholm Declaration* provides that, 'States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction'; Principle 2 of *Rio Declaration* provides that, 'States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction'.

⁵ The *Trail Smelter Arbitration* (U.S. v. Canada) (1941), 3 RIAA 1905. The United States brought the case to object the emission of sulphur dioxide from the smelter near Trail, Canada which crossed the border and damaged farmland and timberland in Washington State, U.S.

⁶ The *Lac Lanoux Arbitration* (Spain v. France) (1957), 24 I.L.R. Spain brought the case to object the unilateral decision by France to divert the waters of Lake Lanoux for use in a hydroelectric plant.

² Article 1 provides that '(1) This Convention shall apply in the event of any accident involving facilities or activities of a State Party or of persons or legal entities under its jurisdiction or control, referred to in paragraph 2 below, from which a release of radioactive material occurs or is likely to occur and which has resulted or may result in an international transboundary release that could be of radiological safety significance for another State. (2) The facilities and activities referred to in paragraph 1 are the following: (a) any nuclear reactor wherever located; (b) any nuclear fuel cycle facility; (c) any radioactive waste management facility; (d) the transport and storage of nuclear fuels or radioactive wastes; (e) the manufacture, use, storage, disposal and transport of radioisotopes for agricultural, industrial, medical and related scientific and research purposes; and (f) the use of radioisotopes for power generation in space objects.'

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