

Response to the Joint Communication from Special Rapporteurs from the Government of Japan

16 May 2025

Referring to the information request dated 19 March 2025, sent by the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes; the Special Rapporteur on the human right to a clean, healthy and sustainable environment; the Special Rapporteur on the right to food; the Special Rapporteur on the rights to freedom of peaceful assembly and of association; the Special Rapporteur on the human rights of internally displaced persons; and the Special Rapporteur on the human rights to safe drinking water and sanitation, the Government of Japan (GOJ) takes note that the Special Rapporteurs are interested in measures taken on Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi Nuclear Power Station (FDNPS). The GOJ believes that this communication is a good opportunity to provide the Special Rapporteurs with an update on the topic and to promote their accurate understanding on it. In the following response, the GOJ explains its position on the topic, followed by answers to the questions posed by the Special Rapporteurs.

A. The Government of Japan's Position

a. Background Information

1. In March 2011, the Great East Japan Earthquake claimed the lives of approximately 20,000 people and affected thousands more. Working with prefectural and municipal governments, as well as businesses, academia, relevant institutions, and people in the affected areas, the GOJ has been leading efforts to reconstruct and revitalize the affected areas, including by implementing a medium- to long-term response in those areas.
2. These include the efforts to decontaminate radioactive material discharged by TEPCO's FDNPS accident and to reconstruct after the accident.

b. Ensuring the Safety of the Discharge of ALPS Treated Water

3. Regarding the safety of the discharge of Advanced Liquid Processing System (ALPS) treated water into the sea, after two years of rigorous review, the International Atomic Energy Agency (IAEA) concluded in its Comprehensive Report of July 2023 that the approach to the discharge of ALPS treated water into the sea, and the associated activities by TEPCO, the Nuclear Regulation Authority (NRA), and the GOJ are consistent with relevant international safety standards, and that the discharge of ALPS treated water will have a negligible radiological impact on people and the environment.
4. Since August 2023, when the discharge of ALPS treated water began, twelve batches of ALPS treated water have been completed (as of May 2025). The discharge of ALPS treated water into the sea has been carried

out safely and as planned, in full compliance with international safety standards. Multi-layered monitoring activities by Japan, with the involvement of the IAEA, have confirmed its safety. The level of radioactive nuclides, including tritium, in the discharged water has been far below the regulatory standards. The results of all these monitoring activities have been made available to the public. TEPCO has established a website called “the Overarching Radiation-monitoring data Browsing System in the coastal ocean of Japan (ORBS)” with a map showing sea area monitoring data published by Fukushima Prefecture, the Ministry of the Environment, the Fisheries Agency, and the Nuclear Regulation Authority.

5. Additionally, in October 2023, April 2024, and December 2024, a total of three review missions were conducted after the start of the discharge into the sea, including visits to Fukushima Prefecture by the IAEA Task Force, which consists of IAEA officials and international experts from various countries. The IAEA published reports in January and July 2024, and in March 2025, respectively, on its three review missions of the Safety Aspects of the Handling of ALPS treated water at FDNPS since the start of the discharge. The reports state that the Task Force did not identify anything that is inconsistent with the requirements in the relevant international safety standards regarding the discharge of ALPS treated water into the sea, and that the IAEA can reaffirm the fundamental conclusions of its safety review as outlined in the July 2023 Comprehensive Report.

c. Conclusion

6. The results of ongoing reviews and multi-layered monitoring by the IAEA and international experts will continue to be provided to the international community in a transparent manner, and information and materials are readily available from various websites of the GOJ, including those of the Ministry of Economy, Trade and Industry and the Ministry of Foreign Affairs. The GOJ also responded five times to the previous Special Rapporteurs’ requests (dated 8 June 2017, 17 August 2018, 5 September 2018, 12 June 2020, and 15 March 2021), and provided the information that was sought on ALPS treated water and all other matters. Japan will continue its efforts to gain further understanding from the international community, and will continue to engage not only with interested parties in Japan but also with various stakeholder countries of the Asia Pacific region and beyond.

B. Response to the questions

1) Please provide any additional information and/or comment(s) you may have on the above-mentioned allegations.

7. The Joint Communication claimed that the ALPS processing system is of utmost concern because of its inaptness to properly remove all contaminating substances from the treated water. In this regard, Japan has been analyzing all of the water before discharge into the sea to ensure that all nuclides, other than tritium, are removed by ALPS and other systems until their concentration level is below the regulatory standards. In addition,

ALPS treated water has been discharged into the sea after being sufficiently diluted by seawater, while confirming that the concentration of tritium is below the regulatory limits. This process has been reviewed and corroborated by the IAEA. Water that exceeds the standards will never be discharged. Therefore, the expression “the release of the wastewater” used by the Special Rapporteur is incorrect. While the GOJ recognizes other significant misunderstandings on facts in your description, it will not repeat what it stated in the previous response.

a. Concerns regarding the accumulation of contaminated groundwater

8. Not all the water stored in the tanks at TEPCO’s FDNPS is contaminated water but it is ALPS treated water, from which most radioactive nuclides, except tritium, have been removed and water that has been purified with ALPS, but that needs to be re-purified before the discharge because the concentrations of radioactive materials do not meet regulatory standards for safety. At the time of the commencement of ALPS treated water discharge, approx. 1.33 million m³ of ALPS treated water and water to be re-purified were stored in the tanks. To cool the fuel debris, water is continuously injected into the reactors, but the water used for this purpose is part of the purified contaminated water that is recirculated (circulating injection cooling), so it does not contribute to the generation of contaminated water. Additionally, multi-layered contaminated water management measures, including land-side impermeable walls and subdrains, have stabilized the groundwater at a low level around the buildings and the increased contaminated water generated during rainfall is being suppressed by repairing damaged portions of building roofs and laying waterproof pavement (“facing”) onsite. The goals to be achieved by the end of 2020, as described in the Mid-and-Long-Term Roadmap (namely (1) restricting the amount of contaminated water generated to under approximately 150m³ per day, and (2) completing stagnant water removal and treatment from the plant buildings, excluding the reactor buildings of Units 1 to 3, the Process Main Buildings, and the High Temperature Incineration Building) were achieved by the end of 2020. Through measures such as repairing damaged parts of the building roofs and laying “facing” within the site, the generation of contaminated water has been suppressed and reduced from approx. 540 m³/day (in May 2014) prior to implementing the above measures to approx. 70 m³/day (in FY2024), thereby also achieving the milestone of “suppressing the amount of contaminated water generated to 100 m³/day or less during average rainfall within FY2025” as described in the Mid-and-Long-Term Roadmap. Such measures will be continued to further reduce the amount of contaminated water generated and suppress it to approx. 50–70 m³/day by FY2028.

b. Concerns regarding bioaccumulation

9. Regarding the concerns about bioaccumulation expressed in the Joint Communication, even if the tritium contained in ALPS treated water were to be ingested into the body, most of it is excreted out of the body along the body fluid circulation pathway, and its biological half-life is about 10 days.

Therefore, there is no potential for bioaccumulation or long-term accumulation.

c. Concerns regarding adverse health effects

10. So far, radiation exposure has not been found to have caused any adverse health effects. Following the accident at the power station, a survey was carried out targeting 2.06 million people in Fukushima Prefecture. The objective was to estimate external doses over a period of four months. Results of the survey estimated the doses for 93.8% of respondents (466,000 people, excluding radiation workers) to be less than 2 mSv. A committee for the prefecture reviewed the findings while giving consideration to past epidemiological studies, which have been unable to discern significant adverse health effects at doses of ≤ 100 mSv. The committee took into account the fact that the values were estimates based on a four-month period, but concluded that the radiation levels were unlikely to cause adverse health effects. Third-party agencies have also made their own assessments. The World Health Organization (WHO) concluded that there were no increased risks to countries neighboring Japan, and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) reported that discernible adverse health effects were unlikely among the population of Japan.

11. It is deemed unlikely that there will be an increase in the incidence of radiation-induced cancer. In a report compiled by UNSCEAR, the committee concluded that there would be neither a discernible increase in the incidence of radiation-induced leukemia or breast cancer (two of the most radiogenic cancers) nor a discernible increase in other types of solid cancers (with a possible exception of thyroid cancer). Regarding thyroid cancer, the committee summarized that, "The occurrence of a large number of radiation-induced thyroid cancers as were observed after the Chernobyl accident can be discounted because the doses were substantially lower."

2) Please provide information on how the Radiological Environmental Impact Assessment has been conducted according to the best available scientific evidence, including the consideration of exceptional meteorological circumstances that may occur throughout the long-term release operations.

12. The assessment of radiological environmental impact conducted under the IAEA review takes into account the effects of ocean currents based on meteorological and oceanographic conditions, including data on special conditions such as typhoons over a 7-year period from 2014 to 2020. It concluded that tritium concentration at distances of 2–3 kilometers from TEPCO's FDNPS is no longer distinguishable from that of existing seawater.

13. In the IAEA's comprehensive report, the results of the radiological environmental impact assessment showed that the estimated dose to populations in neighboring countries will be negligible and that, based on the marine dispersion model, international waters would not be influenced

by the discharge of ALPS treated water into the sea. The report therefore concluded that the transboundary impacts of the discharge are negligible.

14. In concrete terms, the approach adopted in the assessment considers the possibility of bioaccumulation or long-term accumulation for the most affected people, such as those who only consume seafood collected in the sea area around TEPCO's FDNPS. Especially, to assess internal exposure, the assessment is being made in groups by age (adult, child under school age, and infant). The assessment regarding the seabed sediments is sufficiently conservative because it is assumed that the accumulation of radioactive materials from seawater to seabed sediments reaches an equilibrium state immediately, indicating full accumulation of radioactive materials, even though in reality this process takes a number of years. The IAEA's comprehensive report concluded that the approach adopted ensures that the annual dose during the discharge period is not underestimated.

3) Please provide information on whether and how a justification assessment on the release operations has been carried out.

15. As we proceed with the decommissioning work to reduce risks, such as fuel removal from the spent fuel pools of Units 1 and 2, and fuel debris retrieval at Units 1, 2, and 3, it is essential to secure the necessary space on site for the construction of facilities to safely store retrieved fuel debris, etc., including the space where tanks are already located. Therefore, the handling of ALPS treated water is part of the decommissioning work of TEPCO's FDNPS, and is indispensable for completing decommissioning and enabling reconstruction of the region.
16. After many years of comprehensive discussions by a group of Japanese experts, the method of discharge into the sea was selected because it is the method that monitoring can be conducted most accurately, and this method has been adopted at nuclear power plants around the world. Japan has assessed other methods, but they were deemed not to be responsible options, since the technologies and post-disposal monitoring used in these methods are not established.
17. Japan has undergone rigorous review by the IAEA since the early stages after the accident caused by the Great East Japan Earthquake. The IAEA assessed that the discharge into the sea was technically feasible and in line with international practice, and that the decision by the GOJ was based on a sufficiently comprehensive analysis and on a sound scientific and technical basis. In addition, the Director General of the IAEA also clearly stated in an interview that there were no better alternatives.
18. The IAEA Comprehensive Report has also concluded that the discharge of ALPS treated water will have a negligible radiological impact on people and the environment. In addition, a system for appropriate monitoring has been conducted

4) Please provide information on the measures adopted to assist those persons who may find themselves under additional strain in the aftermath

of the release operations, including Indigenous Peoples of the Pacific, beyond the Japanese borders.

19. As mentioned in the response to 2), in the IAEA's comprehensive report, the results of the radiological environmental impact assessment concluded that based on the marine dispersion model, international waters would not be influenced by the discharge of ALPS treated water into the sea and that the transboundary impacts are therefore negligible.

20. Before and after the discharge in August 2023, Japan provided explanations to Pacific island countries and regions, including through high-level meetings conducted by the Prime Minister, Chief Cabinet Secretary, and Foreign Minister of Japan. In addition, multiple briefing sessions were held for the Pacific Islands Forum (PIF) Secretariat and experts, ensuring a high level of transparency regarding matters of interest and the progress of relevant initiatives.

5) Please explain in detail which mechanisms have been put in place to guarantee effective consultation rights to the affected communities, including concrete examples of the consideration given to the concerns expressed and the proposals advanced by civil society.

21. In deciding on the method for discharging ALPS treated water, experts conducted studies over a period of more than six years and evaluated that discharge into the sea is a realistic option. The Ministry of Economy, Trade and Industry and other relevant ministries held seven sessions called "Meetings as opportunities for Receiving Opinions," gathering input from 43 representatives from 29 local community-based organizations, among others, and also invited opinions in writing from the general public. After careful consideration of how to handle ALPS treated water, a basic policy to discharge it into the sea was decided in April 2021. Since the policy decision, more than 1,900 explanatory and opinion exchange sessions have been held (as of May 2025). Based on the opinions the GOJ has received before the discharge of ALPS treated water into the sea, the monitoring system for the sea area and fishery products, especially for the rapid analysis of tritium immediately after the discharge, has been strengthened and expanded.

22. TEPCO is making efforts to deepen understanding through communication related to decommissioning via various media and by organizing visits to the power station. Specifically, on the dedicated website "Treated Water Portal Site" (in Japanese, English, Chinese, and Korean), which is part of the TEPCO website, monitoring results of radioactive materials are published in a timely manner. Additionally, visits to TEPCO's FDNPS and discussion meetings on the power station have been held since 2019 for 13 cities, towns, and villages in Hamadori. From fiscal year 2021 onwards, these activities have been expanded to include all of Fukushima Prefecture. Through various opportunities, such as visits and on-site explanations, communication continues whereby the opinions of related parties are heard, their thoughts are taken seriously, and TEPCO conveys information on, among others, its efforts and its views, and its countermeasures against reputational damage.

6) Please explain whether and how the adoption of feasible less harmful alternatives, such as the utilization of treated water to make concrete with low human contact, has been taken into consideration.

23. The method of discharge into the sea has been selected as the method that can manage the radiation risk in the safest manner, after more than six years of study by experts on the disposal methods of ALPS treated water. To explain this in greater detail:

24. (a) geological injection, hydrogen release, and underground burial have not yet been technically established;

25. (b) although there is a precedent for vapor release in accident reactors outside Japan, it is difficult to predict the diffusion of radioactive materials after the discharge in advance, and there are issues to be considered for monitoring and other countermeasures; and

26. (c) regarding the continued storage of tanks, the expansion of tanks at TEPCO's FDNPS is limited, and prolonged storage will hinder decommissioning work.

27. Regarding the discharge into the sea, as previously mentioned, the IAEA also stated that (1) the method Japan has chosen is both technically feasible and in line with international practice, and (2) controlled water discharges into the sea are routinely used by nuclear power plants in operation around the world.

7) Please explain what measures have been taken or are envisaged to ensure the right to remedy for those affected by the release of the wastewater in terms of displacement, adverse health impacts, or adverse impact to their livelihoods.

28. Because the water satisfies safety standards before it is discharged, there is no concern about adverse effects on human health or the environment. The IAEA concluded in its Comprehensive Report that the approach to the discharge of ALPS treated water into the sea is consistent with relevant international safety standards and the discharge will have a negligible radiological impact on people and the environment.

29. The IAEA's review will be conducted over many years, before, during, and after the discharge. Since the discharge started in August 2023, the IAEA has conducted three review missions on the safety of the discharge of ALPS treated water and has already announced the results. The IAEA's review has been conducted by the IAEA Task Force, which consists of IAEA officials and international experts.

30. The IAEA Task Force discussed technical details with the GOJ and TEPCO. The Task Force also visited TEPCO's FDNPS to confirm the status of the discharge facilities. It compiled reports in January and July 2024, and in March 2025, based on these review missions.

31. All reports concluded that the Task Force did not identify anything that is inconsistent with the requirements in the relevant international safety standards, reaffirming the safety of the discharge into the sea. The IAEA also maintains its continuous presence at the IAEA Fukushima Daiichi NPS Office to conduct its on-site independent sampling and analysis activities.
32. Furthermore, sea area monitoring is conducted continuously. Twelve discharges into the sea have been conducted as of May 2025. Monitoring results so far have confirmed that the tritium concentration is far below the operational limit and has no adverse impact on human health or the environment.

(end)