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Discharge of nuclear wastewater from Fukushima into the Ocean by Japan – Special Procedure Communications and Official Statement

To the honourable mandate holders, especially but not limited to the

Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes;

Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment;

Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health;

Special Rapporteur on the right to food;

Special Rapporteur on the human rights to safe drinking water and sanitation.

Excellencies,

We have the honour to address you in our capacity as the representatives of the Pacific Network on Globalisation (PANG), and endorsed by a number of NGOs and civil society groups (Annex 1), concerning an imminent risk of severe Human Rights violations caused by the disposal of nuclear-contaminated wastewater from the Fukushima Daiichi Nuclear Power Station (NPS) into the Pacific Ocean by the Government of Japan and the Tokyo Electric Power Company (TEPCO).

Acknowledging the previous Communications of the Special Procedures to Japan, especially concerning

the discharge of the water into the Ocean by letter dated [20. April 2020](#) and answer from [12. June 2020](#) and letter dated [13. January 2021](#) and answer form [11. March 2021](#), a renewed Special Procedures Communication and public Statement is crucial for preventing severe and irreversible Human Rights violations for the following reasons:

- the dumping of the nuclear-contaminated wastewater into the Pacific Ocean is planned to take place in August 2023 and is an imminent threat;
- there are new factual developments since the last communication in 2021; and
- the dumping violates hitherto unrebuked Human Rights, including but not limited to the Right of Future Generations, as a special expression of the Human Right to a Healthy Environment.

It is urgently indicated to humbly address your Excellencies and respectfully request another Communication with the Government of Japan and, in the light of the imminent risk of severe and irreversible Human Rights violations, to courteously request the release of a public Statement, to prevent the Government of Japan and TEPCO to proceed with the discharge in August 2023.

Allow us to elaborate on the factual background constituting the violations as follows, before briefly commenting on the Human Rights infringed.

Factual background

Acknowledging the facts already laid out in the previous Special Procedures Communications with Japan, we shall like to focus our attention on the immediacy of the forthcoming Human Rights violation and the developments after Japan's latest response in March 2021, in particular the publication of a Report by the International Atomic Energy Agency (IAEA) and feasible alternatives to the ocean dumping.

Status Quo and Immediacy of Discharge

The Ocean disposal of the treated, radioactively contaminated wastewater resulting from the 2011 tsunami and subsequent meltdown of three nuclear reactors at the Fukushima Daiichi Nuclear Power Station (NPS), approved by the Government of Japan and the operator of the plant, Tokyo Electric Power Company (TEPCO), poses a threat to the health of the Ocean and those who depend on it for their lives, livelihoods and cultural practices. The volume of contaminated water continues to increase through additional cooling water, rainwater and groundwater in contact with the cores. The contaminated water is now stored in about 1.000 tanks on the Fukushima Daiichi NPS grounds, amounting to more than 1.3 million metric tonnes (status July 2023).¹ Estimations from 2019 anticipate an accumulation of an additional 500.000 to 1.000.000 tons of contaminated water by 2030.²

The contaminated water is being treated with the Advanced Liquid Processing System (ALPS) to reduce the concentration of radionuclides. However, the ALPS treatment is not capable of removing tritium, a radioactive isotope of hydrogen, and carbon-14, and has inconsistent results with other radionuclides, such as strontium -90, cesium-137 and cobalt-60 from the water.³ The dumping of the wastewater in the Pacific Ocean would thus lead to varying degrees of biological uptake, trophic transfer and bioaccumulation of these radionuclides and lead to an attendant risk of uptake associated with seafloor sediments at the outfall point, and propagation of radioactive exposure through oceanic currents, ecosystems and food webs.⁴ TEPCO proposes to dilute the treated water with fresh water, so that the

¹ TEPCO, Current ALPS Treated Water, <https://www.tepco.co.jp/en/decommission/progress/watertreatment/alps01/index-e.html>; Pacific Islands Forum Expert Panel, Dr Arjun Makhijani, Dr Ferenc, Dr Robert H. Richmond, Dr, Anthony Hooker, Dr Ken Buesseler (in the following: PIF Expert Panel), Minimizing Harm: the concrete option for solving the accumulation of radioactively contaminated water at the Fukushima Daiichi Nuclear Power Plant site - A paper prepared by the Independent Expert Panel to the Pacific Islands Forum, 12. June 2023, p. 1.

² JCER, "Contaminated water strategy of critical importance", Japan Center for Economic Research, March 7, 2019, see <https://www.jcer.or.jp/policy-proposals/2019037.html> (in Japanese); Burnie, Shaun, Greenpeace Germany, Stemming the tide 2020 The reality of the Fukushima radioactive water crisis (2020), https://www.greenpeace.org/static/planet4-japan-stateless/2020/10/5e303093-greenpeace_stemmingthetide2020_fukushima_radioactive_water_crisis_en_final.pdf, p. 6.

³ TEPCO, Radiation concentration estimates for each tank area (as of March 31, 2023), https://www.tepco.co.jp/en/decommission/progress/watertreatment/images/tankarea_en.pdf; PIF Expert Panel, Minimizing Harm; Burnie, Shaun, Greenpeace Germany, Stemming the tide 2020 The reality of the Fukushima radioactive water crisis (2020), https://www.greenpeace.org/static/planet4-japan-stateless/2020/10/5e303093-greenpeace_stemmingthetide2020_fukushima_radioactive_water_crisis_en_final.pdf, p. 6.

⁴ PIF Expert Panel, Minimizing Harm, p. 2.

tritium level would be reduced to 1.500 Bq/liter,⁵ a contamination level of one-seventh of the drinking water guideline by the World Health Organisation, and then guide the treated and diluted water through an underwater tunnel to gradually discharge it into the Pacific Ocean about 1 kilometer off the east coast of Japan over the next 30 to 40 years.⁶ According to TEPCO, the concentration of the substances in the treated water are lower than the regulatory concentration limits set for discharge into the environment by Japan,⁷ however, key data on uptake, trophic transfer and bioaccumulation of a variety of radionuclides are still missing and adequate sampling protocols for detection are incomplete.⁸

The underwater tunnel and other facilities for the discharge are now near completion⁹ and TEPCO began testing the facilities in June 2023.¹⁰ The first release of the wastewater is expected to take place in August 2023.¹¹ Concerns over the timeline for the dump are further heightened due to the release of a two-year Report from the IAEA in July 2023, claiming that “the approach and activities to the discharge of ALPS treated water taken by Japan are consistent with relevant international safety standards [...]”¹² and that “the controlled, gradual discharges of the treated water to the sea, as currently planned and assessed by TEPCO, would have a negligible radiological impact on people and the environment.”¹³ Although the IAEA Report is not legally binding and according to the Director General of the IAEA, Rafael Mariano Grossi, it is not a recommendation or endorsement of the discharge¹⁴ and should not be misused as such, there are severe concerns that the Report may be used as a green light for Japan’s discharge.¹⁵ According to the latest information, the dumping is planned to take place after a summit between the United States, Japan and Korea in Washington on 18. August 2023.¹⁶ A renewed Special Procedures Communication and a Statement prior to the summit meeting on 18. August 2023, would send a strong signal that there are

⁵ TEPCO, Revision of the Radiological Impact Assessment Report Regarding the Discharge of ALPS Treated Water into the Sea, Attachment 3, <https://www.tepco.co.jp/en/hd/newsroom/press/archives/2022/pdf/220428e0303.pdf>, p. 5.

⁶ <https://www.tepco.co.jp/en/decommission/progress/watertreatment/oceanrelease/index-e.html>; <https://www.reuters.com/world/asia-pacific/japan-get-crucial-un-verdict-fukushima-water-release-2023-07-04/>; PIF Expert Panel, Minimizing Harm, p. 1.

⁷ TEPCO, Current ALPS Treated Water, <https://www.tepco.co.jp/en/decommission/progress/watertreatment/alps01/index-e.html>.

⁸ Dr Robert H. Richmond, Research Professor and Director, Kewalo Marine Laboratory, University of Hawaii at Manoa.

⁹ <https://apnews.com/article/japan-fukushima-nuclear-plant-water-discharge-cdaea4f4201d08ca6117ecbff34d082e>; <https://www.science.org/content/article/japan-plans-release-fukushima-s-contaminated-water-ocean>; <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>; <https://asia.nikkei.com/Spotlight/Environment/Japan-preparing-to-release-Fukushima-water-into-sea-from-August>.

¹⁰ <https://www.tepco.co.jp/en/decommission/progress/watertreatment/oceanrelease/index-e.html>.

¹¹ <https://apnews.com/article/japan-fukushima-nuclear-plant-water-discharge-cdaea4f4201d08ca6117ecbff34d082e>; <https://www.science.org/content/article/japan-plans-release-fukushima-s-contaminated-water-ocean>; <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>; <https://asia.nikkei.com/Spotlight/Environment/Japan-preparing-to-release-Fukushima-water-into-sea-from-August>.

¹² https://www.iaea.org/sites/default/files/iaea_comprehensive_alps_report.pdf, p. iii, v, 28

¹³ Mariano Grossi, Rafael, Director General (IAEA), Comprehensive report on the safety review of the ALPS-treated water at the Fukushima Daiichi Nuclear Power Station (2023), in the following: IAEA Report, https://www.iaea.org/sites/default/files/iaea_comprehensive_alps_report.pdf, p. iii, v.

¹⁴ IAEA Report, p. iii.

¹⁵ Chinese Minister for Foreign Affairs spokesperson, http://nz.china-embassy.gov.cn/eng/zyxw/202307/t20230704_11107562.htm.

¹⁶ <https://www.reuters.com/world/asia-pacific/us-south-korea-japan-hold-aug-18-summit-camp-david-news-2023-07-20/>.

significant concerns of severe and irreversible Human Rights violations and to therefore the dumping should be prevented, especially in the light of viable alternatives. **The Ocean dumping of nuclear-contaminated wastewater into the Pacific Ocean is an imminent threat. The only way to prevent Japan from conducting severe and irreversible Human Rights violations, is a public Statement by the Human Rights Council calling for immediate pause on the dump, until all effects have been assessed and less harmful alternatives exhausted.**

IAEA Report not Suitable to Defend Discharge

The Report is solely based on the IAEA's own safety standards,¹⁷ some of which are more than 22 years old and thus lack the advancements of multi-omics and DNA analyses to determine sublethal, cellular-level damage to the ocean and human life. The Guidelines are thus incomprehensive, outdated and do not reflect the best scientific evidence available.¹⁸ Furthermore, the Radiological Environmental Impact Assessment (REIA)¹⁹ by TEPCO, on which the IAEA Report is based, shows deficiencies, inadequacies, and inaccuracies, including but not limited to the following findings:²⁰

- According to the IAEA, the ocean current models assessed a 7-year period from 2014-2020.²¹ The REIA reports, however, only state that meteorological and sea condition data from 2014 and 2019 were taken into account.²² Furthermore, the assessment primarily deals with mean flow and does not adequately address expected anomalies, such as between *El Nino* and *La Nina* years and the effects of storms and other meteorological events.²³
- The REIA is incorrectly based on the assumption that radionuclide values reach equilibrium²⁴ in bottom sediments. However, levels of the non-tritium radionuclides, which are 1000's (137Cs) to > 300,000 (60Co) times more likely to accumulate on the seafloor, would continue to increase over time with a continuous source, leading to an increasing uptake by demersal fish and benthic dwelling shellfish and consumers thereof.²⁵

The IAEA Report does not contain any assessment of justification, although “[j]ustification is a fundamental

¹⁷ IAEA Report, p. v.

¹⁸ Safety Standards Series No. SF-1 (Vienna, 2006); IAEA Safety Standards Series No. RS-G-1.8, IAEA (Vienna, 2005); IAEA Safety Report Series No. 19 (Vienna, 2001); IAEA Report, p. v and 122.

¹⁹ <https://www.tepco.co.jp/en/hd/newsroom/press/archives/2021/pdf/211117e0101.pdf>, IAEA Report, p. 8.

²⁰ PIF Expert Panel, Comments on and concerns with the IAEA Final Report 2023-07-24, para. 2.

²¹ IAEA Report, p. 80.

²² TEPCO, Radiological Impact Assessment Report Regarding the Discharge of ALPS Treated Water into the Sea, Assessment 2, November 17, 2021, <https://www.tepco.co.jp/en/hd/newsroom/press/archives/2021/pdf/211117e0101.pdf>, p. 10; Revision of the Radiological Impact Assessment Report Regarding the Discharge of ALPS Treated Water into the Sea, Attachment 3, April 28, 2022, <https://www.tepco.co.jp/en/hd/newsroom/press/archives/2022/pdf/220428e0303.pdf>, p. 9.

²³ PIF Expert Panel, Comments on and concerns with the IAEA Final Report 2023-07-24, para. 4.

²⁴ IAEA Report, p. 56, 57 68

²⁵ PIF Expert Panel, Comments on and concerns with the IAEA Final Report 2023-07-24, para. 4.

principle for the international standards of Radiation protection.”²⁶ The lack of the justification assessment is based on a loophole because the request of the Government of Japan to obtain the review by the IAEA was made after it decided to discharge ALPS-treated water into the Ocean. According to the IAEA Report, the justification assessment responsibility thus lies with the Government of Japan.²⁷ Lacking this fundamental Radiation Protection Principle, the analysis is incomprehensive and cannot be a viable basis to “justify” the discharge of ALPS-treated water into the Ocean.

According to para. 2.11 of the IAEA General Safety Guide No. 8 (GSG-8),²⁸ the justification assessment must include the determination for “whether the expected benefits to individuals and to society from introducing or continuing the practice outweigh the harm (including radiation detriment) resulting from the practice. Justification thus goes far beyond the scope of radiation protection, and also involves the consideration of economic, societal and environmental factors” (IAEA, GSG-8, 2018, para. 2.11). The justification assessment must therefore also include transboundary economic, societal and environmental implications for the whole Pacific Region and worldwide, which are entirely absent from the IAEA Report.²⁹ Such implications would have, amongst others, had to include the following facts:

- China, the biggest buyer of Japanese seafood in 2022 (22.5%), banned seafood imports from 10 prefectures in Japan, including Fukushima. As a consequence of the discharge, the Chinese foreign ministry spokesman stated that “[t]he relevant Chinese government departments will strengthen the monitoring of the ocean environment and inspection of marine products import, so as to ensure the health and food security of the public [...]”³⁰ Hong Kong, the second biggest buyer of Japanese seafood (19.5%) announced that it will ban seafood imports from 10 prefectures, including Fukushima, if Japan goes ahead with the discharge.³¹
- More than 40 countries, including the United States, Britain and Canada have lifted restrictions on food from Japan in the aftermath of 2011.³² The discharge of the nuclear wastewater undoes the work of the food product and tourism industries of Japan and of all countries in the Pacific region after the tsunami in 2011 to rebuild their reputation.³³
- South Korea’s salt industry has been affected, as a direct result of the announcement of the dump.³⁴

²⁶ IAEA Report, p. 18.

²⁷ IAEA Report, p. 19.

²⁸ IAEA Safety Standards for protecting people and the environment, Radiation Protection of the Public and the Environment, General Safety Guide No. GSG-8 (Austria, 2018), https://www-pub.iaea.org/MTCD/publications/PDF/PUB1781_web.pdf.

²⁹ PIF Expert Panel, Minimizing Harm, p. 1.

³⁰ <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>.

³¹ <https://edition.cnn.com/2023/07/13/economy/hong-kong-seafood-ban-japan-fukushima-intl-hnk/index.html>.

³² <https://www.reuters.com/world/asia-pacific/after-12-years-japan-still-faces-post-fukushima-food-import-curbs-2023-07-05/>.

³³ <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>.

³⁴ <https://www.reuters.com/world/asia-pacific/skorea-sea-salt-demand-grows-ahead-japans-fukushima-contaminated-water-release-2023-06-09/>.

- Countries other than Japan will not experience any benefits from the proposed release of ALPS-treated radioactive water. In the light of no benefits for other countries, any harm will necessarily outweigh the benefits, even if the harm is small.
- The discharge affects the whole Pacific region and the Ocean worldwide, as “the problems of ocean space are closely interrelated” (Preamble of UNCLOS).³⁵ Straddling and migratory fish, such as tuna, have been found to carry radionuclides from Fukushima across the Pacific.³⁶
- Phytoplankton, the base of all marine food webs, can capture and accumulate radionuclides such as tritium and carbon-14. When eaten, the contaminants will not be broken down but stay in the cells and accumulate in invertebrates, fish, marine mammals and ultimately humans.³⁷

The evaluations in the IAEA Report are, moreover, based on the presumption that the discharge of the wastewater will happen gradually “as currently planned” and “under normal operations”.³⁸ It is highly unlikely that the discharge will go according to plan for a period as long as 30 to 40 years. It is much more likely that unpredictable incidences (natural catastrophes, war, technical issues) will happen and disrupt the process. There is also no guarantee that TEPCO will strictly follow the gradual discharge plan. On the contrary, TEPCO’s misconduct with IAEA Guidelines has already been proven.³⁹ Before the tsunami in 2011, TEPCO was warned, including by the IAEA, that the safety standards of the Fukushima Daiichi NPS were not up to date and were not adequately prepared for a 15-metre tsunami wave. TEPCO even knew that models predicted the possibility of a 15-metre tsunami wave but ignored warnings.⁴⁰ Some of the same people responsible for the safety failures leading to the disaster are still in positions of responsibility, such as Junichi Matsumoto.⁴¹ TEPCO manipulated processes at the Fukushima Daiichi NPS in the past, to hide that the containment leak rate was too high.⁴²

Noticeably, also the IAEA has faced criticism over its autonomy, as it is primarily funded by governments. Japan contributed 54 million Euros in 2021 and thus may influence the activities of the IAEA. This concern

³⁵ United Nations Treaty Series 1833-35, 31363, 1982 United Nations Convention for the Law of the Sea.

³⁶ Madigan, Daniel J./Baumann, Zofia/Fisher, Nicholas S., Pacific bluefin tuna transport Fukushima-derived radionuclides from Japan to California, PNAS June 12, 2012, Vol. 19, No. 24, p. 9483-9486, <https://www.pnas.org/doi/epdf/10.1073/pnas.1204859109>; <https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific>.

³⁷ <https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific>.

³⁸ IAEA Report, p. 28.

³⁹ <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=25864>, p. 3; Burnie, Shaun, Greenpeace Germany, Stemming the tide 2020 The reality of the Fukushima radioactive water crisis (2020), https://www.greenpeace.org/static/planet4-japan-stateless/2020/10/5e303093-greenpeace_stemmingthetide2020_fukushima_radioactive_water_crisis_en_final.pdf, p. 6.

⁴⁰ PIF Expert Panel, Executive Summary, p. 4; <https://carnegieendowment.org/2012/03/06/why-fukushima-was-preventable-pub-47361>; Synolakis, Costas/ Kânoğlu, Utku, The Fukushima accident was preventable, Philosophical Transactions A, R. Soc. A 373; 20140379, <http://dx.doi.org/10.1098/rsta.2014.0379> (2015).

⁴¹ PIF Expert Panel, Executive Summary, p. 4.

⁴² The plant staff injected air via the main steam isolation valves to reduce the leak rate, which TEPCO publicly admitted and had to apologise for after the manipulation was discovered, TEPCO press release (October 25, 2002), <https://www.tepco.co.jp/en/press/corp-com/release/02102502-e.html>; <https://www.neimagazine.com/news/newstepco-admits-leaktightness-test-falsification>.

is further encouraged by the fact that the IAEA endorsed the idea to discharge the wastewater into the Ocean even before it conducted any investigations. On April 13th 2021, several months before its first mission, the Director General of the IAEA had already expressed a clear, positive opinion on TEPCO's plan saying that he welcomed this plan and that the "method Japan has chosen has is both technical feasible and in line with international practice [...]".⁴³ In light of these concerns, Japan's decision for the discharge cannot be based on this IAEA Report.

Alternatives to Ocean Dumping

The discharge of the wastewater in a time span of 30 to 40 years, allows an estimated build-up of 500.000 to 1.000.000 tons of contaminated water by 2030 provided that all goes according to plan. Currently, large quantities of stored wastewater must be discharged, although viable alternatives are at hand: the ALPS-treated water can be used to make concrete for applications with little human contact, such as for the Fukushima Daiichi NPS itself, limiting the potential for radiation exposure to the public.⁴⁴ Assessments of the Fukushima Daichi NPS site in February 2023 showed that large amounts of concrete are needed to expand the seawall, stabilise contaminated soil and fortify the ice barrier that reduces groundwater flow into the reactors.⁴⁵

In 2016, the Japanese Government rejected the option to use the wastewater for concrete based on assessments using water that had not been treated by ALPS yet. The significant difference is, however, to use ALPS-treated water for the concrete, which only contains tritium and low amounts of other radionuclides. Tritium decays by emitting relatively low-energy beta particles with an average energy of 5.7 kilo-electron volts (range 0 to 18.6 keV) and a stopping distance of the tritium beta particles in the concrete of only so few microns that even if someone came close to the structure, their clothes would stop any particles. Water binds chemically with the cement. Even if the concrete would disintegrate over the decades (should that occur), tritium beta particles would still be trapped in the concrete.⁴⁶ The half-life of tritium is 12.3 years. Almost the entire tritium radioactivity (about 97%) in the ALPS-treated water would thus decay in about 60 years, as opposed to Ocean dumping, where the tritium will be absorbed by marine organisms. The principal risks of tritium arise when it is *inside* the body and becomes part of the cells, which would happen through Ocean dumping and would be prevented by the concrete alternative.⁴⁷ The

⁴³ IAEA, Statement by IAEA Director General on Fukushima Water Disposal from 13. April 2021, <https://www.iaea.org/newscenter/multimedia/videos/statement-by-iaea-director-general-on-fukushima-water-disposal>.

⁴⁴ <https://www.forumsec.org/2022/03/14/release-pacific-appoints-panel-of-independent-global-experts-on-nuclear-issues/>; PIF Expert Panel, Minimizing Harm, p. 1, 2.

⁴⁵ <https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific>.

⁴⁶ PIF Expert Panel, Minimizing Risks, p. 2 f.

⁴⁷ PIF Expert Panel, Minimizing Risks, p. 2.

Ocean dumping will furthermore very likely take well over 60 years, given the generation of additional groundwater-fed cooling waters until the molten fuel has been removed from the stricken reactors. The Three Mile Island Unit 2 reactor, for instance, which partially melted down in 1979, still contains residual fuel debris and will not be decommissioned before 2037, 58 years after the meltdown.⁴⁸

One of the main reasons the Japanese Government is pushing for the discharge is to dispose of the wastewater as fast as possible to prevent accidental leaks in case of an earthquake and other (unpredictable) events and to begin the plant's decommissioning as soon as possible. Even on the base of a discharge time frame of 30 to 40 years for the Ocean dumping, the concrete alternative would be much faster and the wastewater could be used immediately. According to the Japanese Cement Association, Japan uses about 40 million tons of cement a year, with a large amount (two-thirds) being used for low-contact applications. Other figures even estimate a demand of up to 85.96 million tons of cement in Japan in 2022.⁴⁹ At the low end, about 0.4 litres of water are mixed with a kilogram of cement. 1.3 million tons of contaminated water would thus provide for 3.25 million tons of cement. Assuming that a much smaller fraction of concrete was made with the contaminated water, even as low as 1% (which equals 400,000 tons) each year and the cement industry would only use 40 million tons each year, the stored water would be consumed in 8.125 years as opposed to 30 to 40 years.⁵⁰ Moreover, the quantity of water, which is currently stored in the tanks, is equivalent to the annual drinking water for almost 2 million people. Using ALPS-treated water to make low-contact applications such as concrete would thus free up a vast amount of water that can be used for other purposes.⁵¹ In its report, however, the IAEA only considered the option of Ocean dumping, leaving less harmful alternatives entirely out of the evaluation.

The second Radiation Protection Principle of the GSG-8 is optimisation.⁵² Para. 2.16 of the GSG-8 defines optimisation of protection and safety as the process of determining what level of protection and safety would result in the magnitude of individual doses, the number of individuals (workers and members of the public) subject to exposure and the likelihood of exposure being as low as reasonably achievable (ALARA), taking into account economic, social and environmental factors being. Optimisation requires reducing exposure to radiation to levels "as low as reasonably achievable". Even if the public doses due to the Ocean dump are low, they would still be higher than through the concrete option, which prevents the transboundary spread of the radionuclides. Furthermore, all reasonable alternatives must be examined.⁵³

⁴⁸ PIF Expert Panel, Minimizing Risks, p. 2 f.

⁴⁹ Klein, Catharina, Consumption volume of ordinary portland cement Japan 2017-2022 (24. July 2023), <https://www.statista.com/statistics/1344994/japan-ordinary-portland-cement-consumption-volume/#:~:text=In%202022%2C%20the%20consumption%20volume,around%20859.67%20thousand%20metric%20tons>.

⁵⁰ PIF Expert Panel, Minimizing Risk, p. 3.

⁵¹ Dalnoki-Veress, Ferenc, Concrete Alternative: A Better Solution for Fukushima's Contaminated Water Than Ocean Dumping (16. June 2023), <https://nonproliferation.org/concrete-alternative-a-better-solution-for-fukushimas-contaminated-water-than-ocean-dumping/>.

⁵² Para. 2.8 GSG-8.

⁵³ PIF Expert Panel, Minimizing Harm, p. 6.

The Government of Japan did not assess the option of using ALPS-treated water to make concrete.

Lastly, If radionuclide levels are higher than standards, which appears to be the case from some samples, releases through Ocean dumping cannot be recovered, as opposed to concrete, which could still be disposed of by grouting or other techniques.⁵⁴

In summary, treating the water and making concrete with low potential for human contact is a feasible and reasonable option that would essentially eliminate transboundary, transgenerational, environmental, and human health harms and would meet the need for space and speedy disposal in the light of the earthquake and other risks much quicker than the Ocean dumping. Notwithstanding these facts, there has not been a comprehensive analysis of the option to use ALPS-treated water for concrete.

Human Rights Implications

While not excluding the violation of any other Human Right, we would like to respectfully bring the following Human Rights violations, caused by the discharge of the contaminated water into the Pacific Ocean by Japan, to the special attention of your Excellencies:

Right to a Clean, Healthy and Sustainable Environment

Japan's plan to release nuclear wastewater into the Pacific Ocean violates the Human Right to a Clean, Healthy, and Sustainable Environment. The Human Right to a Clean, Healthy, and Sustainable Environment is an emerging Right, as humanity is confronted with unprecedented planetary crises, such as irreversible pollution of the Ocean. It is recognized as a Human Right by several international bodies, such as the United Nations General Assembly,⁵⁵ the Inter-American Court of Human Rights⁵⁶ and the Human Rights Council.⁵⁷ The Human Right to a Clean, Healthy, and Sustainable Environment has substantive and procedural expressions.

⁵⁴ Dr. Robert Richmond.

⁵⁵ UNGA A/RES/76/300 in 2022; OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>; UN, Our Common Agenda Policy Brief 1, To Think and Act for Future Generations (March, 2023), <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-future-generations-en.pdf>.

⁵⁶ IACtHR, Advisory Opinion OC-23/17.

⁵⁷ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>; UNOHCHR, Bachelet hails landmark recognition that having a healthy environment is a human right, <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27635>, 2021; Li/Wang, Legal responses to Japan's Fukushima Nuclear Wastewater Discharge into the sea—from the perspective of China's right-safeguarding strategies, *Heliyon* 9 (2023) e15701, p. 2.

Substantively, it is an autonomous right, which, unlike other rights, “protects the components of the environment, such as forests, rivers and seas, as legal interests in themselves, even in the absence of the certainty or evidence of a risk to individuals. This means that it protects nature and the environment, not only because of the benefits they provide to humanity or the effects that their degradation may have on other human rights, such as health, life or personal integrity, but because of their importance to the other living organisms with which we share the planet that also merit protection in their own right.”⁵⁸ A safe, clean, healthy and sustainable environment, furthermore, is the foundation without which the full enjoyment of a wide range of other Human Rights, including the Rights to Life, Health, Food, Water and Sanitation, is not possible.⁵⁹ The Ocean is one of the main repositories of biodiversity on Earth. It provides for over 90% of the habitable space on the planet and contains around 250,000 known species, with at least two-thirds of the world's marine species still unidentified.⁶⁰ Marine biodiversity is critical to the health of people and our planet.⁶¹ The Ocean contains 97% of the Earth's water.⁶² The Ocean regulates global systems that make the world habitable for humankind, supplying half of the world's oxygen⁶³ and functioning as the world's biggest carbon sink.⁶⁴ The Ocean provides for the livelihoods of millions of people. 59.6 million people were engaged in the primary sector of capture fisheries and aquaculture in 2016; around 200 million people are directly or indirectly employed in the marine fisheries sector.⁶⁵ “The Ocean inspires human imagination and supports rich and diverse cultural practices. Ultimately, all life on Earth is dependent upon healthy ocean ecosystems.”⁶⁶ The discharge of contaminated water by Japan leads to an uptake of tritium and other radionuclides into the marine ecosystems, including its flora and fauna, where it is spread across the Ocean worldwide through currents and distributed throughout the whole food web. The discharge of nuclear wastewater thus violates the Human Right to a Clean, Healthy, and Sustainable Environment by harming the environment due to its own right of protection and as the foundation of the well-being of all species on Earth, including the full realisation of Human Rights.

Right to Access Information and Public Participation, including in Environmental Matters

⁵⁸ InterAmerican Court of Human Rights, Advisory Opinion OC- 23/17, P. 28, para. 62.

⁵⁹ <https://www.ohchr.org/en/special-procedures/sr-environment/about-human-rights-and-environment>; InterAmerican Court of Human Rights, Advisory Opinion OC- 23/17, P. 22, para. 49; P. 26, para. 59; A/HRC/43/53 (2019); OHCHR, UNEP, UNDP, “What is the Right to a Healthy Environment? Information Note” (5 JANUARY 2023).

⁶⁰ UN Chronicle, <https://www.un.org/en/chronicle/article/marine-biodiversity-and-ecosystems-underpin-healthy-planet-and-social-well-being>.

⁶¹ <https://www.un.org/sustainabledevelopment/oceans/>; OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

⁶² <https://www.un.org/sustainabledevelopment/oceans/>.

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⁶⁴ <https://www.un.org/en/conferences/ocean2020/about>; <https://oceanservice.noaa.gov/facts/ocean-oxygen.html>.

⁶⁵ FAO (2018), p. 6; <https://www.un.org/sustainabledevelopment/oceans/>.

⁶⁶ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

The procedural side of the Human Right to a Clean, Healthy, and Sustainable Environment includes facilitating public participation in decision-making related to the environment, and taking the views of the public into account in the decision-making process.⁶⁷ Before discharging contaminated wastewater, Japan must therefore take effective measures to guarantee these rights. All people have the right to access information, public participation and access to justice, including in environmental matters, which is expressed in three essential elements: human rights assessments, participation of those potentially impacted and access to justice.⁶⁸ Even after the previous Special Procedures Communications, Japan has yet failed to lay down how it assessed the Human Rights implications due to the discharge. Even more, it has become obvious that no justification assessment has been conducted either by the Government of Japan nor by the IAEA. The IAEA Report expressly excluded a justification assessment, and even if it had done so, some of the IAEA Safety Standards are outdated and thus do not reflect the best scientific evidence available. Recognizing the duty to preserve the ability of future generations to enjoy their Human Rights provides a further clear benchmark to inform decision-making on their behalf. Neither such environmental, social, cultural, or other Human Rights impacts have been assessed.

Rights to Information, Consultation and Free, Prior Informed Consent and Indigenous People

The Right to Information, Consultation and Free, Prior Informed Consent is further detailed in Art. 19 of the 1966 International Covenant on Civil and Political Rights (ICCPR) and Art. 18, 19, 20, 29 and 32 of the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), providing the right of all people, and specifically Indigenous Peoples, to participate in decision making in matters which would affect their rights, and particularly prior to any proposed action that is likely to affect the enjoyment of their rights (Art. 18-20 UNDRIP). States are to consult and cooperate in good faith with Indigenous Peoples concerned prior to the approval of any project affecting their lands, territories or other resources, particularly in connection with the development, utilisation or exploitation of mineral, water or other resources (Art. 32 UNDRIP). Furthermore, States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of Indigenous Peoples without their free, prior and informed consent (Art. 29 UNDRIP). Ocean currents spread pollution of the marine environment not only across the Pacific, but the Ocean worldwide. The Pacific region especially is rich in cultural ethnicities and Indigenous Peoples who have historically been subject to systematic violations of their basic human rights.⁶⁹ The Ocean is central to their way of life as it underpins their culture, food, livelihoods, and national

⁶⁷ United Nations, Framework Principles on Human Rights and the Environment, 2018, A/HRC/37/59, at <https://www.ohchr.org/en/special-procedures/sr-environment/framework-principles-human-rights-and-environment-2018>; A/HRC/43/53 (2019); OHCHR, UNEP, UNDP, “What is the Right to a Healthy Environment? Information Note” (5 JANUARY 2023).

⁶⁸ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

⁶⁹ UN, Indigenous People in the Pacific Region, https://www.un.org/esa/socdev/unpfii/documents/factsheet_Pacific_FINAL.pdf.

economies.⁷⁰ Previous studies have also shown straddling and migratory fish, such as tuna, carry radionuclides from Fukushima across the Pacific,⁷¹ affecting the food and livelihoods of all people who rely on seafood as their primary food source.

Right of Future Generations

The discharge of contaminated wastewater into the Ocean by Japan violates transgenerational Rights, including the customary⁷² Right of Future Generations. Under the Human Right to a Healthy Environment, States are obliged to take any measure to protect the rights of those who are most vulnerable to, or at particular risk from environmental harm and thus substantively provide for transgenerational Rights, such as the Right of the Child, Future Generations and Older People.⁷³ States have a duty to preserve the ability of Future Generations to fully enjoy Human Rights, including the Right to a Clean, Healthy, and Sustainable Environment.⁷⁴ Accordingly, present generations have the responsibility of ensuring that the needs and interests of present and Future Generations are fully safeguarded (Art.1 of the 1997 UNESCO Declaration on the Responsibilities of the Present Generations Towards Future Generations).⁷⁵ They must bequeath to Future Generations an Earth that will not one day be irreversibly damaged by human activity and thus use natural resources responsibly and ensure that life is not prejudiced by harmful modifications of the ecosystems. Present generations should, pursuant to Art. 5 of the Declaration, preserve living conditions, particularly the quality and integrity of the environment and take into account possible consequences of projects for Future Generations before these are carried out to ensure that Future Generations are not exposed to pollution which may endanger their health or their existence itself. Under Art. 8 of the Declaration, the common heritage of humankind may only be used by the present generations, provided that this does not entail compromising it irreversibly. As the honourable mandate holders laid down, before acting, decision-makers must fully understand and account for the intergenerational repercussions for children, youth, and Future Generations, who will inherit a degraded marine environment due to ocean acidification, loss of marine biodiversity, and other harmful human activities.⁷⁶ Additionally, the Committee

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<https://www.conservation.org/places/pacific-ocean-and-islands#:~:text=Pacific%20Islanders%20are%20the%20guardians.vital%20to%20global%20food%20security.>

⁷¹ Madigan, Daniel J./Baumann, Zofia/Fisher, Nicholas S., Pacific bluefin tuna transport Fukushima-derived radionuclides from Japan to California, PNAS June 12, 2012, Vol. 19, No. 24, p. 9483-9486, <https://www.pnas.org/doi/epdf/10.1073/pnas.1204859109>; [https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific.](https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific)

⁷² The Rights of Future generations are now mentioned in several international Treaties, such as Art. 4 of the UNESCO 1972 World Heritage Convention, 1997 UNESCO Declaration on the Responsibilities of the Present Generations Towards Future Generations, the Preamble of the 1992 Convention on Biological Diversity (CBD), Art. 3 of the 1992 United Nations Framework Convention on Climate Change (UNFCCC), as well as in numerous soft laws and national and international judgements.

⁷³ [https://www.ohchr.org/en/special-procedures/sr-environment/about-human-rights-and-environment.](https://www.ohchr.org/en/special-procedures/sr-environment/about-human-rights-and-environment)

⁷⁴ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

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⁷⁶ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

on the Rights of the Child considers that the following actions should be taken immediately, including, to conserve, protect and restore biodiversity for the current and future generations and to prevent marine pollution by banning the direct or indirect introduction of substances into the marine environment that are hazardous to children's health and marine ecosystems.⁷⁷ Radionuclides in the Ocean can persist for decades. The radionuclides spread throughout the whole Ocean through currents and will be distributed in the food web, ultimately intoxicating food of the current and all Future Generations. Once discharged, the contaminated water cannot be recovered. Dumping the wastewater into the Ocean therefore irreversibly damages the marine environment and ecosystems, violating the Rights of all Future Generations.

Right of the Child

The Rights of the Child are recognized in various Human Rights frameworks and have several expressions. The child's inherent Right to Life as provided for by Article 6 of the 1989 Convention on the Rights of the Child (CRC) requires State parties to ensure to the maximum extent possible, the survival and development of the child. State parties are urged to reduce infant and child mortality and create conditions that promote the well-being of all children.⁷⁸ Under Art. 27 CRC, every child has the Right to a Standard of Living adequate for the child's physical, mental, spiritual, moral and social development. Under the Right to the Highest Attainable Standard of Health, as put forth under Art. 12 of the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR), a child's Right to Health extends not only to appropriate prevention but also to a right to grow and develop to their full potential and live in conditions that enable them to attain the highest standard of health.⁷⁹ States have the duty to provide adequate nutritious foods and clean drinking-water, taking into account the dangers and risks of environmental pollution (Art. 24 (2) (c) CRC). Pursuant to Art. 3 (1) CRC, in all actions concerning children by administrative authorities, the best interests of the child shall be a primary consideration. The Committee on the Rights of the Child has identified this article as one general principle for interpreting and implementing the rights of the child, to ensure both the full and effective enjoyment of all rights recognized in the Convention and the holistic development of the child.⁸⁰

Further, a clean, healthy and sustainable environment is necessary for the full enjoyment of a broad range of children's rights, including life, survival and development, health, adequate standard of living, food, water

⁷⁷ Committee on the Rights of the Child, Draft General Comment No. 26 on Children's rights and the environment with a special focus on climate change,(IV).

⁷⁸ General Comment 7, CRC, para 10.

⁷⁹ Committee on the Rights of the Child, General Comment No. 15 (2013) on the right of the child to the enjoyment of the highest attainable standard of health, P. 2 para 2.

⁸⁰ Committee on the Rights of the Child, General Comment No. 14 (2013) on the right of the child to have his or her best interests taken as a primary consideration, P. 2. Para. 1 and 4.

and sanitation and cultural life.⁸¹ This includes substantive elements of healthy ecosystems and biodiversity, safe and sufficient water, healthy and sustainable food, and non-toxic environments.⁸² The Convention on the Rights of the Child explicitly addressed environmental issues in Art. 24 (2) (c) CRC, which obliges States to take measures to combat disease and malnutrition, “taking into consideration the dangers and risks of environmental pollution.” This requires States to refrain from causing environmental harm, such as by activities that produce toxic pollution, paying due regard to the precautionary approach and reducing preventable harm, not taking retrogressive measures that are less protective of children without convincing justification, and a child’s rights impact assessment.⁸³

Lastly, it is established that children are more sensitive to radiation and are more likely to develop short-term and long-term effects from exposure.⁸⁴ Children are at higher risk of radiation-related cancers of certain tissues.⁸⁵ A significant increase in perinatal mortality and thyroid cancer in children has already been found related to the 2011 accident. Acceptable limits for radioactive waste are generally based upon a normal man, not pregnant women or children, who have a higher susceptibility. Therefore, even if levels of radionuclides are found to be within accepted industry standards, they have the potential to infringe upon a child’s Rights to Life, Survival and Development

The child’s best interests are to be assessed and taken as a primary consideration when different interests are being considered.⁸⁶ Securing the right of each child to develop to the maximum extent in the optimal environment requires States to take into consideration short, medium and long-term effects of actions related to the development of the child over time. Such effects include the foreseeable environmental-related threats arising as a result of acts of omissions of States now, the full implications of which may not manifest for years or even decades.⁸⁷ States shall apply the precautionary principle, which requires States to take effective and proportionate action to prevent environmental harm to children, especially where there are threats of serious or irreversible damage, even if the scientific evidence is inconclusive. This can include

⁸¹ Committee on the Rights of the Child, Draft General Comment No. 26 on Children’s rights and the environment with a special focus on climate change, I(A). para 3.

⁸² Committee on the Rights of the Child, Draft General Comment No. 26 on Children’s rights and the environment with a special focus on climate change, (IV) para 2.

⁸³ The obligation of States to respect, protect and fulfil the right to a clean, healthy and sustainable environment include the requirement for States to refrain from violating children’s rights by causing environmental harm such as by activities that produce toxic pollution, paying due regard for the precautionary approach and reducing preventable harm, not taking retrogressive measures that are less protective of children without convincing justification, and a child’s rights impact assessment.

⁸⁴ United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), Report to the General Assembly with Scientific Annexes (2013), Vol. II, https://www.unscear.org/unscear/uploads/documents/unscear-reports/UNSCEAR_2013_Report_Vol.II.pdf, p. 41, para. 152; Special Procedure Communications, 13. January 2021, p. 5.

⁸⁵ Linet, Martha S./Kazzi, Ziad Kazzi/Paulson, Jerome A., Pediatric Considerations Before, During, and After Radiological or Nuclear Emergencies, American Academy of Pediatrics, Volume 142, number 6, December 2018:e20183001.

⁸⁶ Committee on the Rights of the Child, General Comment No. 14 (2013) on the right of the child to have his or her best interests taken as a primary consideration, P. 2. Para. 6 (a).

⁸⁷ Committee on the Rights of the Child, Draft General Comment No. 26 on Children’s rights and the environment with a special focus on climate change, (II) (B).

replacing the activity with suitable alternatives.⁸⁸ The decision-making process has to include an evaluation of the possible impact (positive or negative) on the child or children concerned and the decision must show that the right has been explicitly taken into account. States shall explain how the right has been respected in the decision and therefore what was considered to be the child's best interest and how their interests were weighed against other considerations.⁸⁹ No such evaluations can be derived from Japan's decision to dump nuclear-contaminated water into the Ocean. Before proceeding with the dump, Japan must show how it particularly took the Rights of the Child into account, when deciding to release nuclear-contaminated water into the Ocean.

Right of Every Individual to Life; Right to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health

Japan's plan to release nuclear wastewater into the Pacific Ocean violates the Human Right to Life, Liberty and Security as provided for under Art. 3 of the 1948 Universal Declaration of Human Rights (UDHR), Art. 6 (1) and Art. 9 ICCPR. The right to life is a *jus cogens* norm and 'the supreme right of the human being.'⁹⁰ The duty to protect the Human Right to Life implies that States take appropriate measures to address the general conditions in society that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity, including degradation of the environment.⁹¹ Implementation of the obligation to respect and ensure the Human Right to Life, depends, *inter alia*, on measures taken by State parties to preserve the environment and protect it against harm and pollution caused by public and private actors, including both preventative measures and retrospective measures.⁹² Additionally, the right to security of a person concerns freedom of injury to the body and the mind, or bodily and mental integrity.⁹³

Under Art. 12 (1) ICESCR, every human being is furthermore entitled to the enjoyment of the highest attainable standard of health.⁹⁴ Health thus means more than 'merely the absence of disease or infirmity'.⁹⁵

⁸⁸ Committee on the Rights of the Child, Draft General Comment No. 26 on Children's rights and the environment with a special focus on climate change,(II)(D).

⁸⁹ Committee on the Rights of the Child, General Comment No. 14 (2013) on the right of the child to have his or her best interests taken as a primary consideration, P. 2. Para. 8 (c).

⁹⁰ Taylor, P. M. (2020). A commentary on the international covenant on civil and political rights: the UN human rights committee's monitoring of ICCPR rights. Cambridge University Press. Article 6.

⁹¹ Human Rights Committee Comment No. 36, para 26.

⁹² Human Rights Committee, General Comment No. 35, 2014, CCPR, P. 2, para 9; Human Rights Committee Comment No. 36, para 62.

⁹³ Human Rights Committee, General Comment No. 35, 2014, CCPR, P.1, para 3.

⁹⁴ CESCR, General Comment No. 14 on the right to health, E/C.12/2000/4 (11 August 2000) ('General Comment No. 14'), para. 1.

⁹⁵ Saul, B., Kinley, D., & Mowbray, J. (2014). The international covenant on economic, social and cultural rights: commentary, cases, and materials (First, Ser. Oxford scholarly authorities on international law - trial (20 October 2020), p. 979; Li/Wang, Legal responses to Japan's Fukushima Nuclear Wastewater Discharge into the sea—from the perspective of China's right-safeguarding strategies, Heliyon 9 (2023) e15701, p. 2.

Steps taken by States to ensure the full realisation of this right shall include all those necessary for the provision for the reduction of the stillbirth rate and of infant mortality and for the healthy development of the child (Art. 12 (2) (a) ICESCR), which includes the duty of States to provide adequate nutritious foods and clean drinking- water, taking into account the dangers and risks of environmental pollution (Art. 24 CRC). The improvement of all aspects of environmental and industrial hygiene under Art. 12 (2) (b) ICESCR further comprises “*inter alia*, preventive measures in respect of occupational accidents and diseases; the requirement to ensure an adequate supply of safe and potable water [...]; the prevention and reduction of the population’s exposure to harmful substances such as radiation and harmful chemicals or other detrimental environmental conditions that directly or indirectly impact upon human health. [...]”⁹⁶ Lastly, the right to maintain wholesome or healthy living is also enshrined in Art. 25 of the Constitution of Japan.

Radioactive elements in nuclear wastewater cause long-term radiological hazards, which may induce diseases and genetic mutations. Radionuclides in the Ocean can persist for decades and studies have already found radioactive waste from the Fukushima accident throughout the Pacific and on a global scale, including penetration to the deep ocean. Those communities within close proximity, or anyone who ingests contaminated seafood from the nearshore area, are most likely to be affected. Radionuclides can be ingested by consuming contaminated seafood and cause irreversible harm to human health, including genetic mutations that can increase the risk of certain cancers. By discharging nuclear-contaminated wastewater into the Ocean, Japan thus infringes upon the Human Right to be free of injury to bodily and mental integrity.

Right to an Adequate Standard of Living

The release of radioactive wastewater into the Pacific Ocean violates the Human Right to an Adequate Standard of Living as provided by Art. 11 of the ICESCR. The Right to adequate food under Art. 11 (1) ICESCR provides for both economic and physical accessibility of food.⁹⁷ Food must be accessible in sufficient quantities and quality to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture.⁹⁸ ‘Free from adverse substances’ thereby sets requirements for food safety and for a range of protective measures by both public and private means to prevent contamination of foodstuffs.⁹⁹ State parties are obliged not to take any measures that result in preventing such access and to take measures to ensure access to adequate food is not deprived.¹⁰⁰ As a result of the Fukushima

⁹⁶ CESCR, General Comment No. 14 on the right to health, E/C.12/2000/4 (11 August 2000) (‘General Comment No. 14’), para. 15. Bold was added subsequently.

⁹⁷ Committee on Economic, Social and Cultural Rights, General Comment No. 12, para. 7; General Comment 12 para 1.

⁹⁸ *Id.* para 8.

⁹⁹ *Id.* para 10.

¹⁰⁰ Committee on Economic, Social and Cultural Rights, General Comment No. 12, para.7.

disaster in 2011, broad bans have been implemented on seafood imports from Japan in a variety of countries.¹⁰¹ For example, Hong Kong, the second biggest buyer of Japanese seafood exports pledged that it would reactivate the recently lifted ban if Japan proceeds with the discharge of the water.¹⁰² This shows that the Right to an Adequate Standard of Living, especially for those who's life and livelihoods rely on nearshore fisheries, will be infringed upon by the release of radioactive wastewater into the ocean.

Right to Culture

The release of radioactive wastewater into the Ocean furthermore violates the Human Right to Culture as provided for in the ICESCR. Pursuant to Art. 1 and 15 ICESCR, all persons have the right to cultural development and to take part in cultural life. The right to culture may consist of a way of life which is closely associated with territory and resource use, particularly for Indigenous or minority groups.¹⁰³ Art. 27 of the ICCPR provides that persons belonging to minorities shall not be denied the right to enjoy their own culture, and the UNDRIP provides the Right of Indigenous Peoples to dignity and diversity of their cultures (Art. 15) and to practise and revitalise their cultural traditions and customs (Art. 11). Culture is understood as “a broad, inclusive concept encompassing all manifestations of human existence.”¹⁰⁴ It encompasses ways of life, language, literature, music and song, religion or belief systems, ceremonies, food, customs and traditions and may be exercised as an individual or a collective.¹⁰⁵ People amongst all nations in the Pacific, especially the Pacific Islanders, have been living in the Pacific Ocean for millennia, and have developed deep cultural systems and practices, traditional knowledge and customs, and kinship relationships with the Ocean and flora and fauna within. The decision to release radioactive wastewater not only endangers their right to life and health but their culture and way of life, including through the traditional, artisanal and subsistence fisheries that serve as a vital source of livelihood for island communities.

Right to Work and Workers Rights

The release of radioactive waste into the Pacific Ocean harms the Human Right to Work and Worker Rights, as provided by Art. 6 (1) ICESCR. The Right to Work includes the right of everyone to the opportunity to gain a living through work which he/she freely chooses or accepts. States have the

¹⁰¹ <https://www.reuters.com/world/asia-pacific/after-12-years-japan-still-faces-post-fukushima-food-import-curbs-2023-07-05/>.

¹⁰² <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>.

¹⁰³ CCPR General Comment No. 23, para 3.2

¹⁰⁴ General Comment 21, CESCR, p. 3. A. para 11.

¹⁰⁵ General Comment 21, ESCR, para 12 and 13.

obligation to take appropriate steps to safeguard this right.¹⁰⁶ Local fisherfolk have already suffered since the Fukushima disaster in 2011 and are worried that the release of wastewater will make consumers wary of buying their catch and jeopardize ongoing revitalization efforts, therefore, violating their right to gain a living from their chosen work. The fishing industry in Japan and the whole Pacific Ocean is likely to collapse, as the biggest seafood importers of Japanese seafood, China (including Hong Kong), have already announced that they would keep up and reintroduce a ban on seafood imports respectively if Japan proceeds with the dump.¹⁰⁷ As scientific findings have already proved that tuna in California contains traces of radionuclides originating from Fukushima, this collapse is likely to expand across the whole seafood sector of the Pacific Ocean, placing developing countries at risk.¹⁰⁸ Additionally, findings suggest that even if environmental impacts are minimized, the indirect socioeconomic impacts of the treated wastewater releases on Fukushima's coastal fishing communities are likely to be experienced over the long term.¹⁰⁹

Right to Development

The release of radioactive wastewater into the Pacific Ocean violates the Human Right to Development pursuant to the 1986 UN Declaration on the Right to Development (DRD), where “all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized” (Art. 1 (1) DRD). The right to development “provides a comprehensive approach to the realization of human rights by according attention to structures, processes and outcomes; recognizing the entitlements of individuals as well as collectives including future generations. It puts equity, equality and justice as primary determinants of development, and promotes the full realization of fundamental freedoms.”¹¹⁰ The right to development is a human right that recognizes every human right for constant improvement of well-being. Japan's discharge of nuclear wastewater into the Ocean will violate the Right to Development. Firstly, because the consequences of the discharge thwart neighbouring countries' fisheries and thus limits the economic development of coastal areas, failing to guarantee the affected developing and developed countries enjoy the same right to economic development. Secondly, discharging nuclear wastewater into the Ocean will damage the Right to Development on the level of sustainable development, as environmental protection is a critical

¹⁰⁶ ICESCR Article 6 paragraph 1.

¹⁰⁷ <https://www.reuters.com/world/asia-pacific/japan-prepare-august-start-fukushima-water-release-nikkei-2023-07-04/>; <https://edition.cnn.com/2023/07/13/economy/hong-kong-seafood-ban-japan-fukushima-intl-hnk/index.html>.

¹⁰⁸ Madigan, Daniel J./Baumann, Zofia/Fisher, Nicholas S., Pacific bluefin tuna transport Fukushima-derived radionuclides from Japan to California, PNAS June 12, 2012, Vol. 19, No. 24, p. 9483-9486, <https://www.pnas.org/doi/epdf/10.1073/pnas.1204859109>; <https://www.newsroom.co.nz/alternatives-to-dumping-fukushima-wastewater-into-the-pacific>.

¹⁰⁹ <https://www.pnas.org/doi/10.1073/pnas.2205431119>.

¹¹⁰ <https://www.ohchr.org/en/special-procedures/sr-development/about-right-development>.

component of a country's development, and the irreversibility of nuclear pollution will severely damage the virtuous cycle of environmental protection and economic development.¹¹¹

Ensure Coherence with other Instruments Protecting Marine Biodiversity

According to the Human Rights Council, the Kunming-Montreal Global Biodiversity Framework contains strong human rights language including references to a human rights based approach, Right to Development, Right to a Healthy Environment, Rights of Indigenous Peoples and gender equality. The discharge of the contaminated water must be prevented before the impacts on the marine environment and biodiversity are sufficiently researched and the risks understood. This is to ensure that the irreversible harmful effects on the marine environment and biodiversity are avoided. This approach acknowledges the best scientific evidence available as well as the traditional knowledge of Indigenous Peoples and local communities with their free, prior and informed consent. Pollution of the marine environment by dumping of nuclear wastewater into the Ocean, further breaches Japan's obligation under the 1982 United Nations Convention for the Law of the Sea, in particular Art. 192, 194, 207, 1 (1) (4) UNCLOS, also read in conjunction with the customary precautionary principle. Additionally, the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ) was recently adopted, following 20 years of negotiation, with the aim "to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, for the present and in the long term."¹¹²

Strong Accountability Framework for Businesses

As recognized in the Guiding Principles on Businesses and Human Rights (UNGPs), States should set out clearly the expectation that business enterprises domiciled in their territory and/or jurisdiction respect human rights throughout their operations [...]. Safeguards should be in place to ensure that any engagement by the private sector is consistent with the corporate responsibility to respect human rights. [...] As part of their responsibility to respect human rights, businesses are expected to undertake human rights due diligence, which involves identifying and assessing human rights risks with which they may be involved, taking effective measures to prevent and mitigate such risks, tracking whether those measures are effective in fact, and communicating information sufficient for external stakeholders to evaluate the

¹¹¹ Li/Wang, Legal responses to Japan's Fukushima Nuclear Wastewater Discharge into the sea—from the perspective of China's right-safeguarding strategies, *Heliyon* 9 (2023) e15701, p. 2

¹¹² OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

adequacy of the businesses' response. Where harm occurs, those affected must have access to effective remedy."¹¹³The discharge of nuclear-contaminated wastewater into the Ocean must not proceed without a strong accountability framework for businesses engaged in these activities, including the jurisdictional challenges posed by harms impacting multiple States when the damage is originally done in marine areas beyond national jurisdictions.

Obligation of States to Prevent Human Rights Violations

States have a duty to prevent human rights violations and harm.¹¹⁴ The negative impacts of oceanic degradation in all its forms is particularly acute for the (marine) Environment, Future Generations and Children, Indigenous Peoples, subsistence fishers and persons living in Small Island Developing States. It is at the core of Human Rights to ensure that the rights of people come before economic interests and that this paradigm is respected by States.¹¹⁵ By dumping nuclear-contaminated wastewater into the Ocean, Japan severely and irreversibly violates a broad range of Human Rights. We therefore urge the honourable mandate holders, to initiate a new Communication to Japan and, in light of the imminent threat of a discharge planned for August 2023, release a public Statement and give a voice to the large number of individuals that fear their Human Rights to be violated in a severe and irreversible manner by the imminent discharge. With all due respect we urge your Excellencies, to ask Japan to not proceed with the discharge of the nuclear-contaminated wastewater from the Fukushima Daiichi NPS into the Pacific Ocean, until all other alternatives, especially low-contact concrete with ALPS-treated water, are exhausted and until such a time as adequate safeguards, including sufficient scientific knowledge, exist to ensure such activities can be carried out in a way that respects, protects and fulfils Human Rights, including the human right to a Healthy Environment, Future Generations and Children.¹¹⁶

Suggested Questions to ask Japan

Based on the facts and Human Rights violations as laid down above, we suggest including but not limiting the following questions in the Communication to Japan:

¹¹³ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

¹¹⁴ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

¹¹⁵ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

¹¹⁶ OHCHR, <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf>.

- Can Japan provide a Radiological Environmental Impact Assessment that takes into account (1) ocean currents over several decades, (2) abnormalities such as through *El Nino* and *La Nina* years and other meteorological events, (3) reflect the best scientific evidence available with regards to the equilibration time of other radionuclides such as ^{137}Cs and ^{60}Co ?
- Has Japan undergone a justification assessment, taking into account any transboundary, reputational, economic and societal effects of the discharge and can provide this assessment?
- Has Japan assessed the alternatives exclusively and is not just pursuing the discharge, because it now has built the facilities (optimisation)?
- Did Japan specifically take the Rights of vulnerable people, in particular those of Future Generations and Children into account when deciding in favour of the Ocean dump?
- Can Japan lay down specifically the Human Rights evaluations that informed their decision-making of the dump, particularly taking into account the Rights of vulnerable Human Rights subjects, such as Children, Future Generations, Indigenous Peoples and the Right to a Healthy Environment itself?
- The concerns of Human Rights violations are nourished by the fact that the discharge facilities are now finalised and Japan may go ahead with the discharge just because of the financial investment. Can Japan lay down that economic considerations were not taken into account when evaluating the options of the disposal, particularly when weighing the Ocean dump and other less harmful alternatives such as low-contact concrete with ALPS-treated water?
- What was the justification for beginning construction of the expensive discharge pipe prior to getting approval from the Nuclear Regulation Authority and receiving the supporting IAEA Report? What assurances were provided to TEPCO by the Government of Japan to proceed with the costly construction in light of the lack of required approvals and documented deficiencies in their Radiological Environmental Impact Assessment?¹¹⁷
- Why are some of the same people who were responsible for the safety failures leading to the disaster, such as Junichi Matsumoto, in charge of supervising the ALPS?¹¹⁸
- If the ALPS-treated water is supposed to be completely safe, why is there a refusal by Japan to use any of the accumulated and treated water for use on-site to make needed concrete?¹¹⁹
- How did the Government of Japan take the new UN High Seas Treaty Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) into account, when deciding in

¹¹⁷ <https://apnews.com/article/wastewater-climate-and-environment-272256a3bcdd1b6bbc7f34ff0f20bdee>.

¹¹⁸ <https://www.independent.co.uk/voices/comment/sorry-sorry-sorry-as-the-nuclear-radiation-crisis-at-fukushima-deepens-at-least-tepcos-know-the-script-8778017.html> <https://carnegieendowment.org/2012/03/06/why-fukushima-was-preventable-pub-47361> https://royalsocietypublishing.org/doi/10.1098/rsta.2014.0379?url_ver=Z39.88-2003&rft_id=ori%3Arid%3Acrossref.org&rft_dat=cr_pub++0pubmed

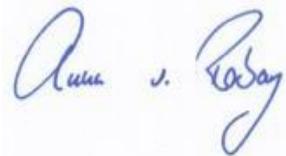
¹¹⁹ <https://cafethorium.who.edu/wp-content/uploads/sites/9/2023/06/Concrete-paper-Final-2023-06-12-v-2.pdf>.

favour of a discharge?

We would like to thank you for the opportunity to provide a voice to a large number of individuals, communities, civil society groups and NGOs, who see their rights infringed by the discharge of Japan and would not have another means to address this concern than initiating a Special Procedures Communication. In light of the severity and imminency of the Human Rights violations, we most respectfully ask your Excellencies, to help voice these concerns by releasing a public Statement in time before the first discharge.

We kindly like to ask you to bring to our attention, if there is any information missing. Please do not hesitate to contact us, should there be any questions or more information needed.

Respectfully yours



Dr. Anna von Rebay
(CEO of Ocean Vision Legal)



Maureen Penjueli
(Coordinator Pacific Network on Globalisation)





[Aid/Watch](#)



Alliance For Future Generations

[Alliance on Future Generations \(AFG\)](#)



[Citizens' Constitutional Forum \(CCF\)](#)

DSMC

Deep Sea Mining Campaign

[Deep Sea Mining Campaign \(DSMC\)](#)



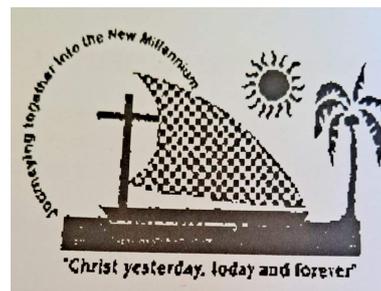
[Development Alternatives with Women for a New Era \(DAWN\)](#)



[Diverse Voices and Action \(DIVA\) for Equality](#)



[femLinkPacific](#)



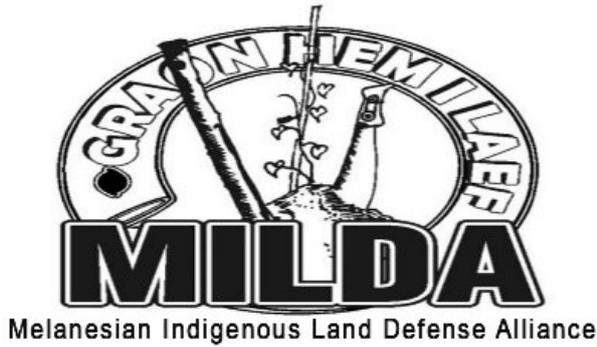
[Fiji Council of Churches \(FCC\)](#)



[Friends of Earth Australia \(FOEA\)](#)



[Fiji Women's Rights Movement \(FRWM\)](#)



Melanesian Indigenous Land Defense Alliance
(MILDA)



[Nuclear Truth Project](#)



[Pacific Conference of Churches \(PCC\)](#)



Pacific Centre for Peacebuilding (PCP)



[Pacific Island Association of Non-Government
Organisations \(PIANGO\)](#)



[Pacific Islands Climate Action Network \(PICAN\)](#)



Papua New Guinea
Trade Union Congress

[Papua New Guinea Trade Union Congress \(PNGTUC\)](#)



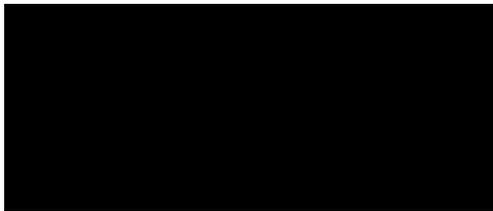
Pacific Youth Council (PYC)



Social Empowerment and Educational Program (SEEP)



[Yes to Life, No to Mining \(YLMN\)](#)



[Youngsolwara Pacific](#)



Young Women's Christian Association of Fiji (YWCA Fiji)

[Global Partnership for the Prevention of Armed Conflict \(GPPAC\) Pacific](#)

Pacific Women Mediators Network

Annex 1: List of Endorsements



[Korean Peoples' Action Against Japan's Ocean
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[Beyond Nuclear](#)
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[Buckminster Fuller Institute](#)
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[Turtle Island Restoration Network](#)
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[Code Pink](#)
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[Walter Munk Foundation](#)
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Nuclear Free Local Authorities
Councils working for a renewable, safe and peaceful future



[THE UK/IRELAND NUCLEAR FREE LOCAL AUTHORITIES](http://www.nuclearfree.org.uk)

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Annex 1: List of Endorsements



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