



### **Human Rights Council**

## **Working Group on Universal Periodic Review**

4th cycle - 42nd session

## **JAPAN**

The Fukushima Daiichi nuclear disaster and violations of survivors' human rights

Joint Submission by Greenpeace International and IADL

14 July 2022

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#### Joint Submission by Greenpeace International, Greenpeace East Asia and IADL

14 July 2022

#### The Fukushima Daiichi nuclear disaster and violations of survivors' human rights

- 1. Greenpeace International and Greenpeace East Asia, together with the International Association of Democratic Lawyers (IADL), submit the following information regarding Japan's implementation of recommendations it supported through its 2017 Universal Periodic Review (UPR) in relation to the management of the Fukushima Daichi nuclear disaster and its consequences.
- 2. During its 2017 review Japan accepted recommendations to respect the right of persons living in Fukushima, in particular pregnant women, and children, to the highest level of physical and mental health, notably by restoring the allowable dose of radiation to the 1 mSv/year limit (161.216).
- 3. Japan also accepted recommendations to continue providing housing, financial and other life-assisting support to evacuees (161.214 and 161.216) and to applying Guiding Principles on Internal Displacement to all those impacted by the Fukushima Daiichi nuclear disaster (161.215).
- 4. Despite its commitments and its international legal obligations, Japan has made no progress whatsoever on the implementation of the above-mentioned recommendations.
- 5. More than eleven years after the accident, tens of thousands of Japanese citizens remain internally displaced from their homes and struggle to rebuild their lives, while radiation levels remain high in many districts of Fukushima prefecture.
- 6. The Japanese government continues to ignore radiation protection principles by allowing a maximum limit of 20mSv/year radiation exposure for its citizens, including pregnant women, children, and infants.
- 7. In March 2017 the government terminated housing subsidies for the so-called voluntary evacuees, who fled from areas other than the government-designated evacuation zones, forcing them to return to places where radiation is still above 1 mSv/year, the internationally recommended maximum public exposure radiation limit.
- 8. Furthermore, the Japanese government has decided to dispose of Fukushima Daiichi nuclear waste water by deliberately discharging into the Pacific Ocean. The

radioactive pollution of the marine environment by Japan poses major environmental and human rights risks for people in and beyond the borders of Japan.

#### RADIATION RISKS

- 9. The Japanese government continues to ignore radiation protection principles by allowing a maximum limit of 20mSv/year radiation exposure for all its citizens, including pregnant women, children, and infants. This is the same level recommended by the International Commission on Radiological Protection (ICRP) for adult nuclear workers.
- 10. The global recommended maximum public exposure set by the ICRP is 1mSv/y per year.
- 11. One reason, the Japanese government continues to apply a policy that allows its citizens in Fukushima to be exposed to hazardous radiation levels of up to 20mSv/y is that its efforts to decontaminate vast areas of land have failed.<sup>i</sup>
- 12. In its radiation surveys over the last decade, Greenpeace has consistently found readings well above the Japanese government's decontamination target levels.<sup>ii</sup> At a former school and kindergarten in the town of Namie, all of the 822 points measured in an adjacent forested area remained above the governments 0.23 μSv/h target and 88% measured above 1 μSv/h. In the area directly outside the school, 93% of all data points measured remain above the 0.23 μSv/h target. Nevertheless, this location has been open to the public since March 2017.
- 13. In 70% of the points measured in the town of Namie along the Takase riverbank, radiation levels would give an annual dose of 3-5 mSv/year based on the Japanese government calculation method.
- 14. The Japanese government claims that, with the exception of the 'Difficult-to-Return' zones, decontamination has largely been completed within the Special Decontamination Area (SDA), which includes the municipalities of Namie and Iitate.
- 15. Yet Greenpeace has consistently found that most of the SDA, where the government has taken direct charge of decontamination, remains contaminated with radioactive caesium. In fact, despite an enormous decontamination programme, analysis of the government's own data shows that in the SDA an overall average of 15% has been decontaminated. In the case of Namie for example, of the 22,314 hectares that make up the municipality, only 2,140 hectares have been decontaminated just 10% of the total. One major reason for this is that much of Fukushima prefecture is mountainous forest that cannot be decontaminated.

#### LIFTING OF EVACUATION ORDERS

- 16. The continuation of its policy to permit people to be exposed to radiation levels up to 20mSv/y (20 times higher than the recommended maximum public exposure and equal to the same level for a nuclear worker), is central to the Japanese government's aim of lifting all evacuation orders in areas heavily contaminated in the 2011 nuclear disaster.
- 17. Starting in April 2014, the government has gradually been lifting evacuation orders in areas where the annual radiation dose is estimated to be less then 20 mSv/year.
- 18. In the last three years evacuation orders have been lifted for small, contaminated areas of Okuma Town (10 April 2019), Futaba Town (4 March 2020), Okuma Town (5 March 2020), Tomioka (10 March 2020). In 2022, a small area of Katsurao (12 June) and Okuma (30 June) also had its evacuation order lifted.
- 19. The majority of citizens from higher contaminated areas (Difficult to-Return areas) remain displaced from their homes, while due to the failure of decontamination efforts and the persistence of radiation hazards those returning, including due to the financial and societal pressure, are at risk from higher radiation exposure.
- 20. The reality is that the lifting of these evacuation orders relates to a small fraction of the overall these districts which remain highly contaminated and uninhabitable. For example, more than half of the area of Okuma town remains at a radiation level designated above the level permitted to return (in excess of 20mSv/y). And consequently, the populations of these and other districts are not returning to their homes. Whereas the original population of Okuma in 2011 was 11,500, the local government target is for 2,600 within five years. This highlights the failure of current government policy with thousands of citizens remaining displaced, due in part to the continuing hazards of radiation exposure.
- 21. What the lifting of evacuation does allow is for the Government to continue to further reduce and eliminate support for the evacuees and citizens of Fukushima most impacted by the disaster and communicate that life is returning to normal.
- 22. Despite several calls by UN Special Procedures mandate holders and by member states during the 3<sup>rd</sup> UPR cycle to continue to provide support to evacuees, in **April 2017 the government terminated housing subsidies** for the so-called voluntary evacuees, who fled from areas other than the government-designated evacuation zones.
- 23. As underlined by the Special Rapporteur on toxic wastes in October 2018 "the combination of the Government's decision to lift evacuation orders and the

prefectural authorities' decision to cease the provision of housing subsidies, places a large number of self-evacuees under immense pressure to return...The gradual lifting of evacuation orders has created enormous strains on people whose lives have already been affected by the worst nuclear disaster of this century. Many feel they are being forced to return to areas that are unsafe, including those with radiation levels above what the Government previously considered safe."vi

24. The termination of housing subsidies puts a heavy financial strain on affected households, many of which consist of mothers and children who have fled the disaster area, whereas the fathers and husbands continue to live and work in the affected zones. Families fear exposure to radiation if they are forced to return and the impact of past exposure that may materialize after a period of latency. These concerns are magnified by existing poor living conditions in their temporary housing, grief from loss of their homes and anxiety about their future.<sup>vii</sup>

#### RIGHT TO LIFE AND HEALTH

- 25. The nuclear accident in Japan has affected the right to health of evacuees and residents alike and has had an impact on physical and mental health, particularly of pregnant women, older persons, and children.
- 26. The Fukushima Daiichi nuclear power plant accident in 2011, as well as the Japanese government's poor management of its consequences during the last decade, led to widespread contamination of soil, water, food and the environment, all underlying determinants of the right to health.
- 27. The return to the lifted evacuation areas (the areas determined by the Japanese government to be safe for return) increases health risks to returning citizens. Viii
- 28. Post-disaster mental health assessments of Fukushima victims have shown shockingly high rates of depression and PTSD symptoms. Women, particularly mothers, are also one of the highest risk groups for mental illness resulting from the disaster.
- 29. Women are not only at greater risk due to the physical impacts of radiation but are at greater risk of suffering mental health consequences as well. This greater mental health vulnerability for women may be due to a number of compounding factors that are directly related to the nuclear disaster and the emergency response policy failures, including: increased domestic tensions, violence and/or sexual assault; loss of support networks and lack of legal protections; loss of income and employment; inability to access compensation payments due to distribution to male heads of household; challenges in taking action to evacuate and/or take actions to protect oneself and children against radiation due to domestic disagreements and lack of financial resources; and, of course, concern about radiation exposure of themselves and their children.

- 30. The Fukushima nuclear accident resulted in a breakdown in families and communities and feelings of isolation. The UN Special Rapporteur on the right to health, Anand Grover, after his visit to Japan reported about "anxiety and stress of evacuees, residents and their families that were related to the effect of radiation leakage on health, especially of children, the cost of evacuation and the loss of livelihoods, as well as the uncertainty of the future and the delays in receiving compensation, which hindered the rebuilding of their lives."
- 31. Japan is under an obligation to mitigate the effect of the nuclear disaster on the mental health of people by, inter alia, alleviating stress and anxiety related to radiation exposure and separation from families.
- 32. The right to health requires the State to ensure availability and accessibility of quality health facilities, goods and services. This includes information that allows individuals to make informed decisions regarding their health.
- 33. There is a continued lack of reliable and accurate information by the Government of Japan on the radiation risks in Fukushima to the people of Fukushima. While the rights of citizens, including those under the Guiding Principles on Internal Displacement are not transparently and widely disseminated to the population.
- 34. The right to health requires the State to pay special attention to vulnerable groups, such as children.
- 35. As children are most vulnerable to thyroid cancer caused by radioactive iodine intake, the Fukushima authorities initiated thyroid check-ups of all children who were up to 18 years of age on 11 March 2011. But this is not enough. The same UN Special Rapporteur on the right to health, in 2012, encouraged Japan to "explore other health effects of radiation on children, such as leukemia, given that epidemiological studies have not ruled out the possibility of leukemia in children who were exposed to radiation following the Chernobyl accident."

#### 36. The Japanese government **should**:

- Take all necessary measures to protect the right to life and the right to health of residents living in Fukushima from radioactive hazards.
- Reduce the allowable radiation dose level in Fukushima-impacted areas to a maximum of 1 mSv/year, which would reflect the international standard.
- Monitor the health effects of radiation on the affected population (in particular Fukushima prefecture residents and evacuees) through holistic and comprehensive health screening and make appropriate treatment available to those in need.
- Avoid limiting health check-ups on children to thyroid checks, and to extend check-ups for all possible health effects, including urine and blood tests.

- Make quality mental health facilities, goods, and services available and accessible to the residents of Fukushima, the evacuees and their families, with a focus on vulnerable groups, such as women and children.
- Provide and support programmes to reduce stress and anxiety in the affected communities.
- Provide full, complete, accurate, and easily accessible information regarding radiation levels, the scope of decontamination efforts, and radiation risks to the public, including age-appropriate materials for children.

#### INTERNALLY DISPLACED PERSONS

- 37. The 2011 Fukushima Daiichi nuclear disaster created more than 165,000 internally displaced persons (IDPs). As of February 2022, at least 33,365 Fukushima citizens remain evacuees confronted by major challenges including livelihood support and termination of housing assistance which has contributed to high levels of stress and suicide rates.<sup>xi</sup>
- 38. The Government continues to fail to acknowledge that evacuees are Internally Displaced Persons (IDPs), including those so-called voluntary evacuees from areas that were not officially designated evacuation areas.
- 39. As mentioned in paragraph 22, in April 2017 the government stopped providing accommodation for evacuees, even though some of them had nowhere else to live. In an extraordinary reversal of societal norms, in March 2020 the Fukushima prefecture filed a lawsuit against four household who had evacuated to Tokyo, demanding that they surrender their accommodation and claiming damages.
- 40. As the possibility of adverse health effects exists in low-dose radiation, evacuees should be advised to return only when the radiation dose has been reduced as far as possible and to levels below 1 mSv/year. In the meantime, the Government **should** continue to provide financial, housing, medical and other support and subsidies to all evacuees, women and children in particular, so that they may make a voluntary decision to return to their homes or remain evacuated.
- 41. The Japanese government should also recognize all persons evacuated or self-evacuated from their homes by the Fukushima disaster as internally displaced persons (IDPs) and apply to them the 1998 Guiding Principles on Internal Displacement.

#### **CHILDRENS RIGHTS**

42. The rights of children in Japan to be protected from harmful radiation have not been respected to reflect concerns of the international community as recommended in the UPR 3<sup>rd</sup> cycle.

- 43. During the last 4 years concerns have grown over the radiation threat posed to children in Japan.
- 44. As underlined by the UN Special Rapporteur on hazardous substances and wastes "the UN Convention on the Rights of the Child, to which Japan is a Party, contains a clear obligation on States to respect, protect and fulfil the right of the child to life, to maximum development and to the highest attainable standard of health, taking their best interests into account. This, the expert said, requires State parties such as Japan to prevent and minimize avoidable exposure to radiation and other hazardous substances."xiii
- 45. The Japanese government was specifically asked to "provide full details as to how its policy decisions in relation to the Fukushima Daiichi nuclear accident, including the lifting of evacuation orders and the setting of radiation limits at 20mSv/y, are not in contravention of the guiding principles of the Convention, including the best interests of the child."
- 46. As of 14 July 2022, the government of Japan had failed to provide evidence of its compliance with the Guiding Principles in relation to its policy on radiation exposure.
- 47. On 1 February 2019, the United Nations Committee on the Rights of the Child, in its Concluding Observations on the combined Fourth and Fifth periodic reports of Japan, xiii recommended that Japan (a) reaffirm that radiation exposure in evacuation zones is consistent with internationally accepted knowledge on risk factors for children
- 48. As underlined by several Special Procedures Mandate Holders in a joint communication sent to the government of Japan (AL JPN 1/2021),<sup>xiv</sup> it is an established fact that children are more sensitive to radiation and are more likely to develop the short-term and some of the long-term effects of radiation exposure.
- 49. Children's thyroid cancer is an extremely rare illness, and the occurrence rate is usually 1-2 cases per million per year. But in the Fukushima case, as of June 2021 266 cases of child thyroid cancer had been detected. In January 2022, six young people filed a class action lawsuit against Tokyo Electric Power Company Holdings Inc. (TEPCO) claiming that they developed thyroid cancer due to exposure to radiation emanating from the Fukushima nuclear disaster.<sup>xv</sup>
- 50. The Fukushima Medical University continues to monitor the state of health of thyroid glands of children in Fukushima who were 18 years old and younger at the time of accident. Despite the scientific evidence, the Japanese Government continues to deny any association between radiation exposure resulting from the Fukushima Daiichi

accident and higher levels of thyroid cancer.

51. In 2019, Japanese scientists reported that, "the average radiation dose-rates in the 59 municipalities of the Fukushima prefecture in June 2011 and the corresponding thyroid cancer detection rates in the period October 2011 to March 2016 show statistically significant relationships."xvi

#### 52. The government of Japan should:

- Conduct comprehensive and long-term health check-ups for children in areas with radiation doses exceeding 1mSv/year;
- Provide, in schoolbooks and materials, accurate information about the risk of radiation exposure and the increased vulnerability of children to radiation exposure.

#### WOMENS RIGHTS

- 53. Women's and children's rights are disproportionally affected by the nuclear accident, both in the immediate aftermath and as a result of the current reconstruction policies, as they are more vulnerable to both the health effects of radiation exposure and are at greater economic and political disadvantage.
- 54. In the emergency response in 2011, women had role in decisions that immediately affected them, as was noted in the 2013 report by the UN SR on the right to health, Anand Grover following his visit to Japan to assess the situation of Fukushima disaster survivors. This lack of representation and opportunity to participate in decisions that directly affect the lives of women has persisted in the Japanese government's reconstruction efforts.
- 55. Women in Japan are at a significant economic disadvantage due to the enormous disparity in earned income between the sexes.23 As a result, women were in a uniquely disadvantaged position for coping with the impacts of the Fukushima Daiichi disaster according to their own wishes.
- 56. Women and children are more vulnerable to the effects of ionizing radiation than are adult men. Further, female fetuses, infants and girls are at far greater risk than their male counterparts. It is particularly important for women who are pregnant or may become pregnant to avoid unnecessary, i.e., excluding medically required, ionizing radiation exposures, both internal and external. Thus, the violation of women's human rights in the wake of the Fukushima disaster and the Government's resettlement policy is particularly pointed in this area: while radiation exposure poses a myriad of potential health risks for all people, it is women and girls who are most vulnerable to

- its effects the same population that is less able, as a whole, to protect themselves from radiation exposure due to unequal power distribution between the sexes within households and in broader Japanese society.
- 57. Female Fukushima evacuees thus face a unique set of circumstances that place them at greater risk for poverty, including: significantly less pre-disaster income than their male counterparts; loss of income and property post-disaster; marital discord resulting from differences of opinion on radiation risks and whether to evacuate resulting in a potential split with the primary income earner in the household; lack of access to compensation money and/or inadequate compensation; and relocation and child rearing costs.
- 58. **The government of Japan should:** Develop and support initiatives aimed at helping Fukushima-impacted women achieve financial independence including, but not limited to, supporting women's startup businesses, addressing income gaps, and improving the conditions and workplaces of women.

## PACIFIC OCEAN DISCHARGE OF FUKUSHIMA DAIICHI RADIOACTIVE WASTE WATER

- 59. In addition to the radioactive contamination released from the 2011 disaster and that continues to expose the population of Fukushima and neighboring prefectures in Japan, the government of Japan is decided to increase radioactive pollution of the Pacific Ocean from 2023. The decision is a direct threat to the human rights of people of the Asia-Pacific region to a clean, healthy and sustainable environment.<sup>xvii</sup>
- 60. In grave violation of its international human rights and environmental legal obligations, the Japanese government is planning to deliberately pollute the marine environment by discharging radioactive contaminated water into the Pacific Ocean which together with its people have been subjected to more than 70 years of radioactive contamination from nuclear weapons testing, nuclear waste dumping and the 2011 Fukushima Daiichi disaster. The communities of Fukushima prefecture, and neighboring prefectures are particularly at risk from the planned discharges, including the fishing communities most impacted by the 2011 earthquake, tsunami and nuclear disaster.
- 61. With as much as 1100 tons of highly radioactive nuclear fuel debris in the reactors being the root cause of contaminated water generation, tens to hundreds of thousands of tons of additional contaminated water will be produced over the coming decades as plans to remove nuclear fuel debris inevitably fail.
- 62. In April 2021, the Japanese government decided to release over 1.23 million tons of radioactive wastewater stored in tanks at the Fukushima Daiichi Nuclear Power

Station into the Pacific Ocean. The Tokyo Electric Power Company (TEPCO) and Japanese government plan is to build a sub seabed pipeline and release diluted processed radioactive water 1 km off the coast of Fukushima prefecture. Discharges are scheduled to begin in 2023, and to last at least three decades. Greenpeace assessments are that an additional 1 million tons of water could be generated over the coming three decades and that discharges would in effect be permanent.

- 63. The Japanese government claims that the Advance Liquid Processing System (ALPS) treated water stored in the tanks is not contaminated water. However, TEPCO's own data confirms that ALPS treated water contains multiple radionuclides such as strontium-90, iodine-129, carbon-14 and plutonium isotopes, as well as high concentrations of tritium and carbon-14.
- 64. In 2018 TEPCO admitted that ALPS water processing technology had failed to reduce radioactive concentrations in the majority of the contaminated water stored in tanks. As of 7 July 2022, according to TEPCO, 1,307,139 cubic meters of contaminated ALPS water is in storage tanks, of which 68% (854,900m3) needs to undergo secondary processing. So far only 0.25 percent of the tank water has undergone secondary processing and it will take at least several years before all the water can be processed, though uncertainties remain. It should also be noted that the ALPS has not been designed to remove radioactive tritium or carbon-14 which would be discharged in their entirety into the Pacific.
- 65. As underlined by several UN Special Rapporteurs, "Japan has noted that the levels of tritium are very low and do not pose a threat to human health. However, scientists warn that the tritium in the water organically binds to other molecules, moving up the food chain affecting plants and fish and humans. They say the radioactive hazards of tritium have been underestimated and could pose risk to humans and the environment for over 100 years".xviii
- 66. The deliberate dumping of nuclear waste into the Pacific Ocean is illegal, irresponsible, and totally unjustified. There is sufficient storage space on both the Fukushima Daiichi site and the adjacent localities of Okuma and Futaba to provide long term storage area for accumulating contaminated water. This was acknowledged by TEPCO in 2018 and by the Japanese government's own Task Force in their 2020 report. TEPCO could acquire more land and build more tanks, and the longer the tritium remains in tanks, the more it decays, with a half-life of 12 years.xix
- 67. Furthermore, Japan has not conducted a comprehensive Environmental Impact Assessment on its planned discharge into the Pacific Ocean, as required by its international legal obligations, including the United Nations Convention on the Law of Sea (UNCLOS) given that there is a risk of significant transboundary harm to neighboring countries.

- 68. Nations in the Asia Pacific region are particularly concerned by Japan's plans for radioactive discharge. These include the nations of the Pacific Island Forum, xx and the wider community of civil society organizations representing people, including indigenous communities, across the Pacific Ocean. xxi
- 69. Several UN Special Rapporteurs have urged the Japanese government to refrain from releasing contaminated water into to the maritime environment, stressing that an eventual discharge "could only be interpretated as a failure to uphold the human rights of vulnerable categories impacted by the Fukushima Daiichi nuclear accident, including children, whose physical and mental health as well as the livelihood will come under additional strain"xxiii The experts also warned that the discharge could impact millions of lives and livelihoods in the Pacific region, threatening human rights of concerned population in and beyond the borders of Japan.xxiii

# RIGHT TO INFORMATION AND TO MEANINGFUL PARTICIPATION IN DECISION MAKINIG

- 70. The Japanese government has also failed to meet its domestic and international human rights obligations to facilitate the right to meaningful public participation in environmental decision-making and to provide adequate information regarding the management of highly contaminated water at Fukushima Daiichi.
- 71. Every citizen has the right and should have the opportunity to take part in the conduct of public affairs, including in relation to toxics, directly or through freely chosen representatives. As stressed by Special Procedures Mandate Holders in a joint communication to the government of Japan in 2021, "the lack of consultation and participation of the concerned population and the general public continues to prevail. The absence of substantive exchange of information on issues of extreme importance to the lives of affected populations, the opacity and lack of transparency of information provided to the public, the uncertainty over their health and future and most importantly over the future and health of their children, the prospects of return to contaminated areas of internally displaced persons are all factors which result in immense pressure over a population already facing a myriad of grave problems.\*xxiv
- 72. Serious preoccupations concern the lack of effective participation of local communities and civil society organizations in meaningful consultations on the proposed avenue of disposal of the ALPS treated water, undermining their right to meaningful participation, as well as the lack of effective remedies. xxv

#### 73. The Japanese government should:

- Provide full, complete, accurate, and easily accessible information regarding radiation levels, the scope of decontamination efforts, and radiation risks to the public, including age-appropriate materials for children; and,
- Ensure full and equal public participation and a formal role for women as well as men in all decision-making processes regarding future lifting of evacuation orders, emergency planning schemes, and nuclear restart decisions.

#### RECOMMENDATIONS

- Suspend the current return policy, which ignores science-based analysis, including potential lifetime exposure risks to the population.
- Immediately clarify its long-term decontamination target of 0.23  $\mu$ Sv/h, equal to 1 mSv/y. Set a date for when 0.23  $\mu$ Sv/h is to be attained and halt any plans to revise the target level to a higher limit.
- Urgently assess the public health risks posed by radioactive hotspots, including the presence of cesium-rich micro particles.
- Abandon plans to lift evacuation orders in the six municipalities of Futaba, Okuma, Namie, Tomioka, Iitate and Katsurao, including the Namie districts of Tsushima, Murohara, Suenomori and Obori.
- Ensure full and equal public participation and a formal role for women as well as men in all decision-making processes regarding future lifting of evacuation orders, emergency planning schemes, and nuclear restart decisions.
- In the interests of worker protection, suspend current decontamination programs in the difficult-to-return zones.
- Establish a fully transparent process to consider and reflect residents' opinions on the evacuation policy and create a council of citizens that includes evacuees.
- Provide full compensation and financial support to evacuees and allow citizens to decide whether to return or relocate on the basis of scientific evidence and free from duress and financial coercion.
- Respond in full to the offer of dialogue and guidance from UN Special Rapporteurs and accept outstanding requests for Special Rapporteurs to visit Japan.
- Halt plans for radioactive wastewater discharge from Fukushima Daiichi and fully comply with its legal obligations, including under the United Nations Convention of the Law of the Sea (UNCLOS), including conducting a comprehensive

#### Environmental Impact Assessment.

<sup>i</sup> Greenpeace East Asia, "Fukushima Daiichi 2011-2021: The decontamination myth and a decade of human rights violations", March 2021, see <a href="https://www.greenpeace.org/static/planet4-japan-stateless/2021/03/ff71ab0b-finalfukushima2011-2020\_web.pdf">https://www.greenpeace.org/static/planet4-japan-stateless/2021/03/ff71ab0b-finalfukushima2011-2020\_web.pdf</a>; and, Greenpeace East Asia, "On the Frontline of the Fukushima Nuclear Accident: Workers and Children Radiation risks and human rights violations", march 2019, see <a href="https://www.greenpeace.de/publikationen/20190308-greenpeace-report-fukushima-workers-children.pdf">https://www.greenpeace.de/publikationen/20190308-greenpeace-report-fukushima-workers-children.pdf</a>

combined-fourth-and-fifth

 $\underline{https://journals.lww.com/mdjournal/Fulltext/2019/09130/Association\_between\_the\_detection\_rate\_of\_thyroid.5}\\ \underline{9.aspx}$ 

ii Ibidem.

iii Op.Cit. Greenpeace East Asia, March 2021.

iv Fukushima Prefecture, "Steps for Revitalization in Fukushima", 25 December 2020 edition.

v Mainichi, "Evacuation order lifted in Fukushima nuclear plant town after 11 years", 30 June 2022, see <a href="https://mainichi.jp/english/articles/20220630/p2g/00m/0na/029000c#:~:text=FUKUSHIMA%2C%20Japan%20(Kyodo)%20%2D%2D,the%20March%202011%20nuclear%20disaster">https://mainichi.jp/english/articles/20220630/p2g/00m/0na/029000c#:~:text=FUKUSHIMA%2C%20Japan%20(Kyodo)%20%2D%2D,the%20March%202011%20nuclear%20disaster</a>

vi https://www.ohchr.org/en/press-releases/2018/10/japan-must-halt-returns-fukushima-radiation-remains-concern-says-un-rights

vii https://spcommreports.ohchr.org/TMResultsBase/DownLoadPublicCommunicationFile?gId=24064 viii https://spcommreports.ohchr.org/TMResultsBase/DownLoadPublicCommunicationFile?gId=25864

ix Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Anand Grover on his Mission to Japan (A/HRC/23/41/Add.3) <a href="https://www.ohchr.org/sites/default/files/Documents/HRBodies/HRCouncil/RegularSession/Session23/A-HRC-23-41-Add3\_en.pdf">https://www.ohchr.org/sites/default/files/Documents/HRBodies/HRCouncil/RegularSession/Session23/A-HRC-23-41-Add3\_en.pdf</a>

x https://www.ohchr.org/sites/default/files/Documents/HRBodies/HRCouncil/RegularSession/Session23/A-HRC-23-41-Add3 en.pdf

xi Dr. Nanako Shimizu, "Issues related to nuclear accident evacuation and gender", 13 March 2022, International Relations, International Law, Utsunomiya University, Japan

xii "Japan must halt returns to Fukushima, radiation remains a concern, says UN rights expert", 25 October 2018, see <a href="https://www.ohchr.org/en/press-releases/2018/10/japan-must-halt-returns-fukushima-radiation-remains-concern-says-un-rights?LangID=E&NewsID=23772">https://www.ohchr.org/en/press-releases/2018/10/japan-must-halt-returns-fukushima-radiation-remains-concern-says-un-rights?LangID=E&NewsID=23772</a>

xiii Committee on the Rights of the Child Concluding observations on the combined fourth and fifth periodic reports of Japan", CRC/C/JPN/CO/4-5, para. 36, 1 February 2019, see <a href="https://www.ohchr.org/en/documents/concluding-observations/crccipnco4-5-concluding-observations-">https://www.ohchr.org/en/documents/concluding-observations/crccipnco4-5-concluding-observations-</a>

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