



Detailed Demands to the Japanese Government

Since the tragic March 11 earthquake, tsunami and Fukushima Daiichi nuclear disaster almost six-months ago, Greenpeace has been conducting research on the contamination of fish, seaweed, and vegetables by radionuclides, as well as in the greater area surrounding the plant. The mapping of external radiation doses was also undertaken, with the aim of identifying the risk of external and internal exposure to the population in affected areas.

On August 26 the Government unveiled its “Basic Policy and Decontamination” document, however, this plan does not provide sufficient protection for pregnant women and children, it does not provide necessary evacuation support, and its decontamination strategy is not robust enough to ensure these vulnerable sections of the population are protected at all points of their daily lives. In short, this document provides too little, too late and needs to be reviewed by the new Prime Minister.

Urgent action is needed. Our research in Fukushima city on 17-19 August has demonstrated that since April, **almost nothing has been done**. People still do not have the right to relocate, highly contaminated parks are still accessible, hotspots of contaminated sediments are left untouched on the streets, and radiation levels are still dangerously high in the city center. Schools have been partially decontaminated, often by volunteers without sufficient assistance or proper protective equipment. There is also no central waste management in place, and no support for contaminated waste disposal, leaving radioactive waste being buried on school grounds, or disposed of with municipal waste.

This failure of the central government to protect its citizens is at risk of continuing, given the lack of ambition of the “Basic Policy and Decontamination” plan. We thus call the central government and the Prime Minister to take the below mentioned recommendations into account:

Relocation:

- Every citizen living in highly contaminated areas, such as Fukushima City or Koriyama, must be given the right to relocate, and the central government must provide both financial and logistic support.
- The central Government must commit to financial support for citizens that wish to relocate from areas below 20mSv/y. Relocation from zones such as Fukushima City, where people could be exposed to an annual external dose in the range of 4-24mSv/y - up to more than 20 times the maximum allowed annual dose - must be an absolute priority, particularly for pregnant women and children.



Extend Protective Zone and establish a comprehensive radiation protection plan:

- Greenpeace renews its call made on April 11 to establish a protective zone for the greater Fukushima area. Such a zone must be complimented by a comprehensive (radiation protection) plan with a list of measures, ranging from relocation to decontamination. Hot spots of contamination must be fenced off until they are sufficiently decontaminated, clear and precise information given to the population, comprehensive health and food screening undertaken, and proper collection and management of radioactive waste from decontamination carried out.
- The central Government must take full responsibility for decontamination work in areas above 1 mSv/y, and not put the burden on local authorities. Areas such as Fukushima City are a priority, given that hundreds of thousands of people are still living there and dose rates are dangerously high.

Undertake an extensive national effort involving thousands of workers:

- The central government must directly engage in the organisation and funding of a national effort, focusing on high-risk and highly-populated areas, in close collaboration with prefectural and local authorities, and with direct participation of the local population. Thousands of workers and trillions of Yen are likely to be needed to make this area habitable again in a timely and effective manner, so relocated people can return home, and so that the dose to those who remained is reduced as much and as fast as possible. This enormous task cannot be left to the local authorities as proposed on Aug 26.

Decontamination:

- Two set of complementary decontamination needs to be taken: Focused emergency decontamination and general decontamination. Focused decontamination applies to hot spots, as well as places that give the highest risk to the population, especially children, such as playgrounds, schoolyards and street pavements. General decontamination applies to the total contaminated area and is needed to reduce re-contamination of the priority areas. Without general decontamination, the effectiveness of the focused decontamination will be too limited.
- If not done professionally, decontamination can increase the risk to the population, as removing contamination from one surface (roofs,...) can concentrate in other zones, such as gutters along the pavement of streets where children walk or play.
- During decontamination work, the population and especially children should be evacuated from the area. If decontamination is undertaken without preliminary evacuation, there is a risk of an additional exposure through inhalation of re-suspended contaminated particles.
- Decontamination should be regularly monitored to check possible re-



contamination and if needed, decontamination should be repeated.

- Decontamination should be done by trained workers with the required personal protective equipment. Their accumulated doses should be recorded in a central database. Local workers can be engaged in this workforce, but they should be given the proper training in advance.
- A decontamination plan should also model the migration of radionuclides in the environment, as well as their decay, and be based on demographic factors and a detailed contamination mapping of the entire area.
- Each decontamination operation should include a waste management plan.

Waste Management:

- Urgent action is needed to manage decontamination waste, which could reach millions of tonnes. This waste poses a risk to people and environment, both in the short-term and long-term (at least for 300 years). When buried, Cs-137 can be re-suspended by plants, and if not properly secured, this cesium could re-emerge to the surface over the next years or decades, even if buried deep underground.
- The public must urgently be made aware that waste should not be disposed of in the municipal waste stream, or buried underground (such as currently what is happening at schoolyards).
- At the local level, immediate collection and temporary emergency storage has to be allocated/build to avoid private disposal in municipal waste.
- The central government needs to take full responsibility of all waste at emergency storage, so that citizens and local authorities can be confident that their emergency storage will not become a permanent and unmanageable problem.

Specifically on children:

- The highest priority should be given to the relocation of small children and pregnant women, however, their families must be given enough support and options to choose what is best for themselves. Children who are currently residing outside highly contaminated zones during holidays should not be obliged to return home to attend their schools as both the schools as the wider environment are still too contaminated.
- The central government and local authorities must organise ways for children to continue their education outside highly contaminated areas, including attending classes at other schools.
- As children are already at significant risk from contamination, the planning and stepwise implementation of remedial measures such as decontamination can not be used as an argument to not relocate children, or to delay their relocation. Negative roll-on effects of decontamination actions should not lead to less people being



evacuated, for example, the plan to halve environmental dose rates for children over two years should not stop them being relocated from risky areas now.

- For parents who decide, or are obliged to stay in highly contaminated areas, measures should focus on limiting the time children spend in the most contaminated zones. A precise mapping of the whole city is thus urgently required. Sufficient staff should be made available to give clear advice to parents on how to best protect their children.
- Schools should not reopen until proper decontamination takes place, and they should receive proper compensation for decontamination costs and income losses incurred. During decontamination work, the highest priority should be given to places children frequent, such as schoolyards, playgrounds and street pavements. Regular monitoring and re-decontamination of those places will be needed, as emergency decontamination will remain ineffective as long as the government does not engage in general decontamination efforts. The direct surroundings of schools need to be included in the focused emergency decontamination.
- Children must be kept away from highly contaminated areas in the city. Such places should be clearly indicated by warning signs until they are properly decontaminated.
- An annual dose of 1mSv/y from non-natural radiation is the regulatory limit for adults. Given the children's' higher sensitivity to radiation, and the fact that 1mSv/y cannot be regarded as 'safe' even for adults, the regulatory limit to children should be significantly lower. However in the current post-accident context, the 1mSv/y can be used as a practical reference level to protect children, with the aim to lower that limit over time.

