Disaster Medicine and Public Health Preparedness

www.cambridge.org/dmp

Letter to the Editor

Cite this article: Hidaka T, Kakamu T, Endo S, Kasuga H, Masuishi Y, Fukushima T. Returning to a once highly contaminated homeland in Fukushima in 2023: Resident concerns of agricultural accident and public safety. *Disaster Med Public Health Prep.* 17(e449), 1–2. doi: https://doi.org/10.1017/dmp.2023.113.

Keywords:

Fukushima nuclear disaster; radiation effects; psychological stress; wounds and injuries; public health

Corresponding author:

Tomoo Hidaka; Email: thidaka@fmu.ac.jp.

© The Author(s), 2023. Published by Cambridge University Press on behalf of the Society for Disaster Medicine and Public Health. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.



Returning to a Once Highly Contaminated Homeland in Fukushima in 2023: Resident Concerns of Agricultural Accident and Public Safety

Tomoo Hidaka PhD , Takeyasu Kakamu MD, PhD , Shota Endo MD, PhD , Hideaki Kasuga PhD , Yusuke Masuishi PhD and Tetsuhito Fukushima MD, PhD

Department of Hygiene and Preventive Medicine, School of Medicine, Fukushima Medical University, Fukushima, Japan

Due to the Fukushima Daiichi nuclear power plant (FDNPP) accident in Japan in March 2011, large parts of the country were contaminated by radioactive substances. The Japanese Government has designated and classified evacuation zones according to the progress of reconstruction; the "Difficult-to-return zone" has the most severe radiation contamination and thus is off-limits to residents. The former inhabitants of this zone have not yet been able to return, as of 2022.

This situation, however, has changed in the spring of 2023. The evacuation order for the Nagadoro district of Iitate Village, Fukushima Prefecture, designated as a Difficult-to-return zone, has been lifted because of the progress of radiation decontamination work. The residents will be able to return to their homes, which seems like a preferable situation. However, safety and health issues linked with the living environments in the Nagadoro area are of concern to the residents.

Based on the face-to-face interviews we conducted with 4 male residents, 2 main concerns were identified. The first concern involves accidents in agricultural work. Agriculture is the primary industry in the Nagadoro district, and residents may resume farming after returning home. There may be further potential risk; given the long period of time that has passed since the FDNPP accident (that is, 12 years), residents are required to rebuild the degraded farmland and may have lost their sense and habit of agricultural work. This loss of senses and habits may lead to occupational accidents. These backgrounds could contribute to residents' increased injury/ accident risk when they return to farming. Second, safety concerns related to housing have been expressed, such as fire and burglary. As of August 2022, the number of registered residents in the Nagadoro area was 200.1 The average return rate of residents after the evacuation order was lifted is only 31.4% in the communities around Iitate Village. If 62 people (31.4%) of 200 had returned, the population density (residents per km²) would be 5.2, as the area of the Difficult-toreturn zone in the Nagadoro district is approximately 12 km^{2,2} The sparsely populated Nagadoro district presents challenges for implementing effective preventive security measures such as burglary monitoring and early fire detection. Even if residents return, their inevitable lack of human presence will likely cause a delay in the detection of fires and burglaries. As incidents of arson and burglary have already occurred in the evacuation zones surrounding Nagadoro, residents have resorted to barricading and patrolling to protect their properties.³⁻⁵ It is rational to assume that similar problems will arise when the evacuation order is lifted for the Nagadoro district. Given the low population density and location, special considerations and measures are needed to restart life in the Nagadoro district.

In addition to radiation decontamination work to purify the affected areas after the radiation disaster and to encourage residents' return, the government should also take measures to decrease the concerns among residents, as mentioned previously. If these measures prove difficult, the government should not encourage people to return, but rather provide public support to help residents migrate and settle in the evacuated areas where they now live.

Author contribution. TH conceptualized, collected and analyzed the data, and wrote the manuscript. TK contributed to data collection. All authors reviewed and approved the final version of the manuscript.

Funding statement. This work was supported by the JSPS KAKENHI (grant number 16K17338 and 19K03289).

References

1. Pre-Return Accommodation at the Reconstruction Base in Iitate Village, Fukushima Prefecture, Begins on 23 September with the Aim of Lifting the Evacuation Order Next Spring. The Fukushima Minpo Shimbun. Published 2022. Accessed September 26, 2022. https://www.minpo.jp/news/moredetail/2022082499967

2 T Hidaka *et al.*

- 2015 Population Census: Boundary Datasets. Statistics Bureau of Japan. Published 2018. Accessed September 30, 2022. https://www.e-stat.go.jp/gis/statmap-search?type=2
- 3. More Than 1,200 Cases of Theft Reported by Home Owners in Fukushima No-go Zone Since 2011. Japan Today. Published 2014. Accessed February 27, 2023. https://japantoday.com/category/crime/more-than-1200-cases-of-theft-reported-by-home-owners-in-fukushima-no-go-zone-since-2011
- Report from Fukushima: Five Years After the Great East Japan Earthquake. Japan for Sustainability. Published 2016. Accessed February 27, 2023. https://www.japanfs.org/en/news/archives/news_id035527.html
- Shinohara N, Yoshida-Ohuchi H. Radiocesium concentration in indoor air during residential house cleaning in Fukushima Dai-ichi nuclear power plant evacuation areas. J Environ Radioact. 2019; 205-206:127-134.