**Managing uncertainties through citizen science: The case of Fukushima**

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Abstract

Citizen science is a form of science developed and enacted by citizens, with citizens collecting or analyzing various kinds of data. Following the Fukushima Daiichi Nuclear Power Plant disaster (11 March 2011), citizen science has demonstrably contributed to filling information gaps and enabled citizens to gain more control over the situation, as residents in the affected areas monitor radioactivity in the environment and communicate about environmental risks (e.g. http://en.minnanods.net/, http://blog.safecast.org/ ). By developing new, innovative ways of assessing risks using existing and new technologies (e.g. self-assembled Geiger counters), these citizen scientists highlight discrepancies between expert and lay appreciations of risk, initiate contextual learning about disasters, and assist in post-disaster recovery. In this paper, we discuss various types of uncertainties (technical, conceptual, epistemological, social and ethical) citizen scientists in Japan face today. We analyze how such uncertainties are collaboratively managed and which opportunities and concerns they embed or give rise to. Findings are drawn from extensive ethnographic research (interviews, participant observation, participation in activities) conducted in and around Fukushima in February-April 2018. The study has been conducted in the framework of doctoral research at SCK•CEN and KU Leuven, in cooperation with Osaka University and the European project CONFIDENCE.

Keywords: Citizen science, Ethnography, Fukushima, Monitoring, Radiation, Uncertainty.