Making contamination knowable:  
The tools and practices of radiation monitoring in Fukushima  
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Radiation measuring and monitoring are one of the key mechanisms by which humans start to create knowledge and construct ideas about radiation contamination and exposure in and on their environments [1], food [2] and bodies [3]. As a social scientist, my research centres on questions around how measuring and monitoring practices influence the what, how and why of radiation knowledge creation. I pay particular attention to the role of the devices involved in knowledge creation and understandings – such as the network of Real-Time Fixed Radiation Monitors [4]. These are unique markers found throughout Fukushima, following the 2011 disaster at Fukushima Dai-ichi Nuclear Power Plant.

Data
Ethnographic research in Fukushima, over 6 months in 2018 and 2019. 35 formal semi-structured interviews, and informal conversations with a diverse range of participants about radiation measuring and monitoring: government officials, national agency representatives, researchers, scientists, artists, school teachers, children, citizen science groups, a priest, a food market tester, lawyers and farmers.

Participant observation included:
• Workshops for school children about radiation monitoring [5]
• Food monitoring preparation in markets and laboratories [6]
• Foraging for and monitoring wild vegetables in the mountains [7]
• Accompanying scientists carrying out research towards a standard for environmental radiation monitors and farming practices [8]
• Looking inside monitors and making my own monitor
• Collecting and uploading monitoring data onto a mapping system
• Almost getting a radiation monitor into North Korea
• Being monitored for internal contamination in a Whole Body Counter, as well as for external surface contamination [9].

Findings
There are many ways of measuring and monitoring radiation. The devices, standards and methods involved are complex, multiple, contested and problematic. A lot is negotiable. Making radiation knowledge by measuring and monitoring is not only about knowing about radiation.

Monitoring can also show that someone cares (e.g. the government, a parent, a head teacher, the community) about the thing being monitored (e.g. vegetables in the garden, water in the ocean, a family member’s body). It indicates that someone is paying attention to the potential for contamination and might take action. It is a link to a historical contamination event (in this case in 2011). It can show that something is being done to manage the situation (e.g. further decontamination, reopening a village). It can help communities to come together to rebuild their hometowns. It can help give authority to people whose concerns are sometimes ignored.

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