

Stories & Facts from Fukushima

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A Case Story

The reality of the radioactive contamination at Fukushima

—Was it really the environment that was contaminated, or was it the heart of the people?

Toshiyuki Takeuchi & Emiko Fujioka



Hanamiyama is crowded with many visitors during the cherry blossom season ©JANIC

Cherry blossom viewing under exposure to radiation at Hanamiyama

More than two years later this April since the Tohoku Earthquake and the subsequent nuclear power plant accident on March 11th 2011, one of Fukushima's famous sightseeing spots in the city, Hanamiyama Park is crowded with cherry blossom viewers. Long lines are forming at the special bus station from the Fukushima train station.

" Shouldn't there be a responsibility to warn about the risks to the visitors who do not have any information?"

Shouldn't they at least give warnings about specifically high reading areas?"

Although Hanamiyama Park is called a park, it's really a private estate. 70 years ago, the owner, along with his father, cut down the thicket, cultivated the land, and planted various ornamental flowers. Today, the place is open for free to the public. During the cherry blossom viewing season before the earthquake, a record of more than 320,000 people visited the park and it had become an important revenue source for the city.

With the nuclear power plant accident, Watari ward where Hanamiyama is located had an extremely high rate of contamination within the city. But because the land was privately owned, no decontamination was done by the local administration. Decontamination had been done by a local NPO but some areas within the park and pathways showed dosage as high as 1 $\mu\text{SV}/\text{h}$. *¹

Shouldn't there be a responsibility to warn about the risks to the visitors who do not have any information? Shouldn't they at least give warnings about specifically high reading areas? Unfortunately, even at the special bus station in front of the train station or the local information center no such information is provided. The information is available on the Fukushima City website, but you need to search for it and in addition to that, the information is stored as a PDF file which requires specific software to be readable. In Fukushima, there are not as many people who browse the Internet on a daily basis as in Tokyo.

However, despite these concerns, many visitors seem not to care about such information or perhaps they are just trying not to think about it. At least all the visitors seem to be enjoying the cherry blossom season in Fukushima.



The dosimeter shows the airborne radiation level near the entrance of Hanamiyama is more than 0.9 $\mu\text{SV}/\text{h}$.

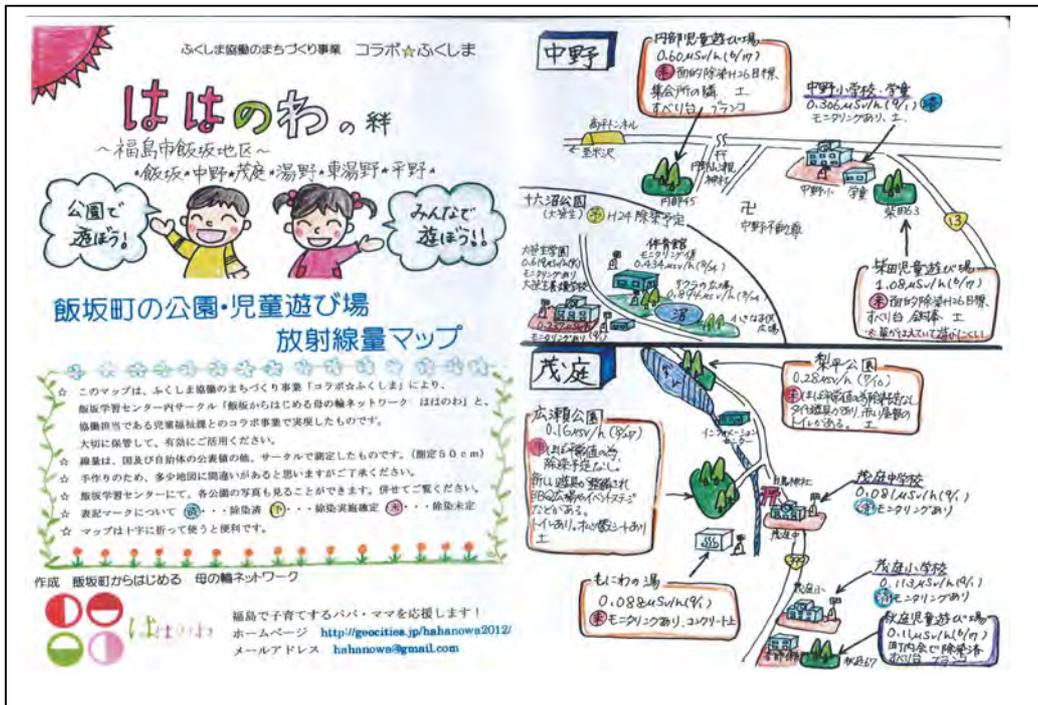
©JANIC

*1 According to the Japanese law, the area with effective dose of 1.3mSV/3 months (average 0.6 $\mu\text{SV}/\text{h}$) or more is "radiation controlled area" where eating, drinking, sleeping is prohibited and those who under 18 years of age are not allowed entering.

Let's Play at the park!

If you go to the Fukushima City administration services desk, there is a brochure you can get for free. This handmade park guide map was created by the mothers in Iizaka-cho within the city and shows the radiation level of each park. It shows the radiation reading levels, whether the facilities were decontaminated or not, and the characteristics of the swings, benches, and other facilities.

However, contrary to the illustration of children "playing in the park", the majority of the parks have not been decontaminated and the brochure honestly discloses the high radiation level. The map almost seems like a bad joke, and it has information written that would have surprised a radiation specialist if this were before the accident. Though the staff of Fukushima city that were in charge of making this map explains, "We created this map just as a reference for mothers. Our intentions were not to push children to play outside", the message of the brochure is confusing.



Though the illustration of children on the map says "Let's play at the park!", the radiation level of the parks shown on the map are very high. ©JANIC

False reports right after the accident

Two months after the nuclear accident, the following article ran on the morning edition of the most subscribed newspaper in Japan.

"False reports regarding radiation spreading through chain mail"
 In relation to the Fukushima Daiichi Nuclear Power Plant accident, rumors that high levels of radiation appeared like "hot spots" in isolated area in four cities, the cities of Kashiwa, Matsudo, and Nagareyama in Chiba prefecture and Misato in Saitama prefecture, spread through chain mails, Twitter, and Internet message boards.

The MEXT*²'s nuclear emergency response headquarters stated that "Radioactive readings in the Chiba and Saitama prefecture are no different from normal levels" and the Japan Data Communications Association's Anti-Spam Consultation Center is warning people to check "Public notices, proper news medium, and other reliable sources for information". (Source: May 16, 2011 Yomiuri Newspaper)

In fact, it turns out that this "False report spreading" article itself was false. The facts gathered later proved that the reality was quite the opposite of what was written. There still has been no corrective article in the Yomuri newspaper. Was this article meant to intentionally mislead or was it a result of bad coverage? Whichever the case, this incident became reminiscent of how the people in Japan could not believe in the government and administration that mishandled the accident and equally in the mass media.

Measurement conducted by citizens from a child's view

According to the official announcement by MEXT (see page 6 for details), the results of their recent airborne monitoring shows that the air dose rates within the zone 80km from the Fukushima Dai-ichi Nuclear Power Plant has declined by around 40% compared to one year ago.

However, if you see the situation of Fukushima at a micro level, there are still many hot spots in which airborne dose is alarmingly high even in Fukushima city which is 60km away from the nuclear power plant and around 283,000 people are living at present.

Mr. Fukada, from Fukushima Network for Saving Children from Radiation (*kodomofukushima*), uses his tablet and a Geiger counter connected to his computer system and has been walking around your ordinary neighborhood and streets to take detailed measurements. The results of the research conducted by Mr. Fukada can be viewed through Google Earth on the Internet. (<http://bit.ly/18SVpmR>)



Mr. Fukada measures airborne radioactivity walking around the streets in Fukushima city
©JANIC

Fukushima Network for Saving Children from Radiation (a.k.a.kodomofukushima)

Kodomofukushima is a civic group established on May 1, 2011, in the aftermath of nuclear disaster of Fukushima Daiichi Nuclear Power plant. Based in Fukushima city, it has been engaging in various activities such as measuring the radioactivity in the neighborhood, finding refuge for citizens to less contaminated areas outside of the prefecture, and consulting and matching of children recuperation programs for two years.

English site:
http://kodomofukushima.net/?page_id=257

*2 MEXT = the Ministry of Education, Culture, Sports, Science and Technology

The citizens living within Fukushima City can check the *official* radiation level in the air around their neighborhood from newspapers and television news every day. However, that data is only a measurement in a specific area where they live. It is not uncommon to see completely different levels of radiation which are higher in sewers and on fences ten meters away from specific areas measured. With Mr. Fukada's measurements, he can understand the level of radiation in front of his house and even at the closest street crossing.

Risk disclosure and remedies are the requirements

After the nuclear accident in Chernobyl, the Belarus region is still restricted of entry by the administration with signs indicating danger of high level radiation in the forests and mountains.

Two years since the nuclear accident, decontamination work continues to be done within Fukushima City by the administration. However, even with areas known to have high levels of radiation for decontamination or so called hot spots with even higher radiation levels, there were hardly any areas where entry was restricted even before decontamination has been completed.

Japan is famous for precautions, posting numerous warning signs everywhere for various risks such as "Beware of bears", "Hazardous volcanic gases eruption. No entry," "Beware of falling rocks," "Slow down," and "Smoking can be hazardous to your health," etc.

Then why is only radiation treated differently? There is no warning sign even in the area where radiation level exceed legal limit.

Isn't what is really necessary to disclose the risks while sharing how remedies are put in place to tackle these issues? Isn't that the quickest way to stop bad rumors and over-reaction?

"Isn't what is really necessary to disclose the risks and at the same time share how remedies are put in place to tackle these issues?"

That is the quickest way to stop bad rumors and over-reaction"

*Toshiyuki Takeuchi: Director of JANIC Fukushima Office
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Translation into English: Nomura Group Translation Volunteer Team

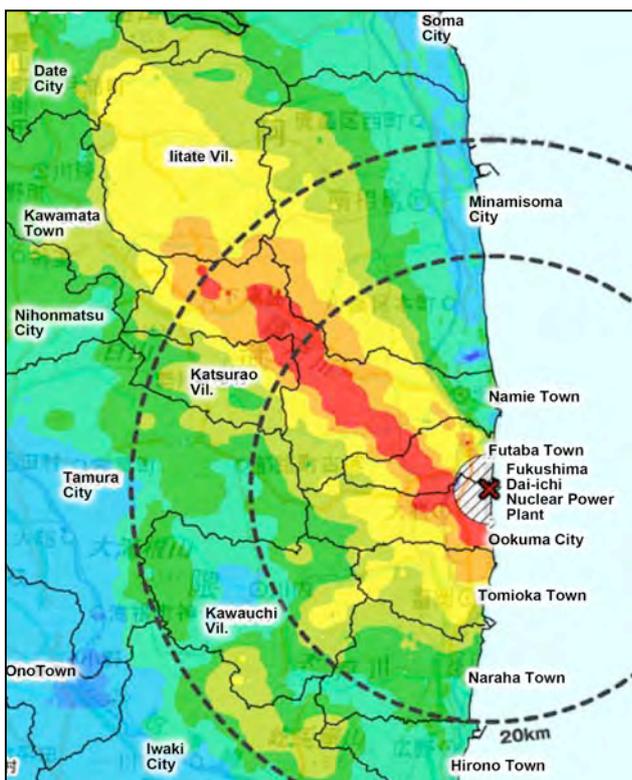
Background Facts

Government report : Rapidly declining airborne radioactivity (Mar.1, 2013)

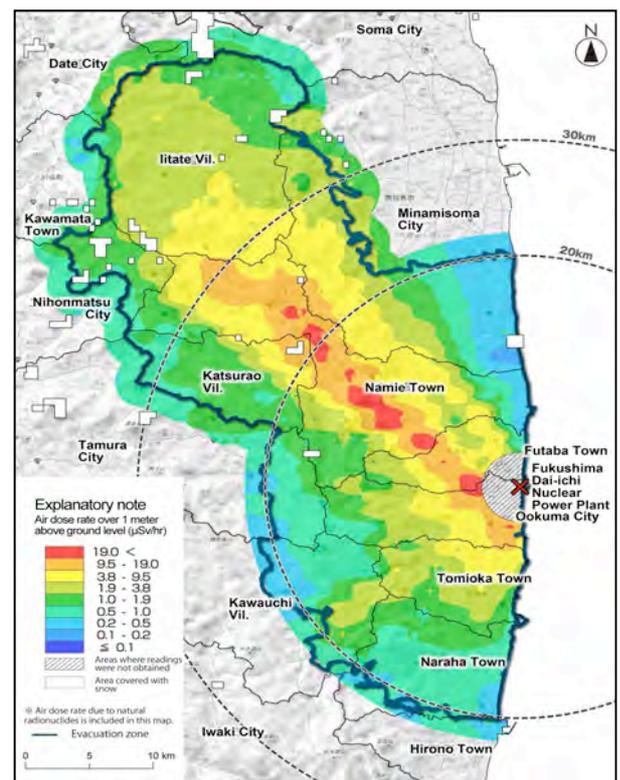
MEXT issued a press release on March 1, 2013 about the results of the airborne radioactivity measurement (one meter above ground level) conducted from a helicopter at an 80 km radius from the Fukushima Daiichi Nuclear Power Plant by MEXT in November and December 2012.

The results showed that it had declined 40% from November 2011. Based on half-life calculations in physics, the decline should have been only 21%. When studied in detail, there are still areas with high contamination but it is also true that the overall trend is a large decline.

According to assistant professor Koide of the Kyoto University Research Reactor Institute, this could be a result of the two year half-life period of cesium 134 compounded with the shielding effect of the soil. Compared to cesium 137, which has a half-life period of thirty years, cesium 134 emits larger amounts of gamma ray per hour causing the radiation level to be three times higher and currently contributing to 70 percent of the airborne contamination. The research team of MEXT explains the factors responsible for this larger decline may include the influence of rain and other natural environmental conditions.



Results of the Fourth Airborne Monitoring Survey by MEXT
(Air dose rates at the height of 1m above the ground surface) as of November 5, 2011

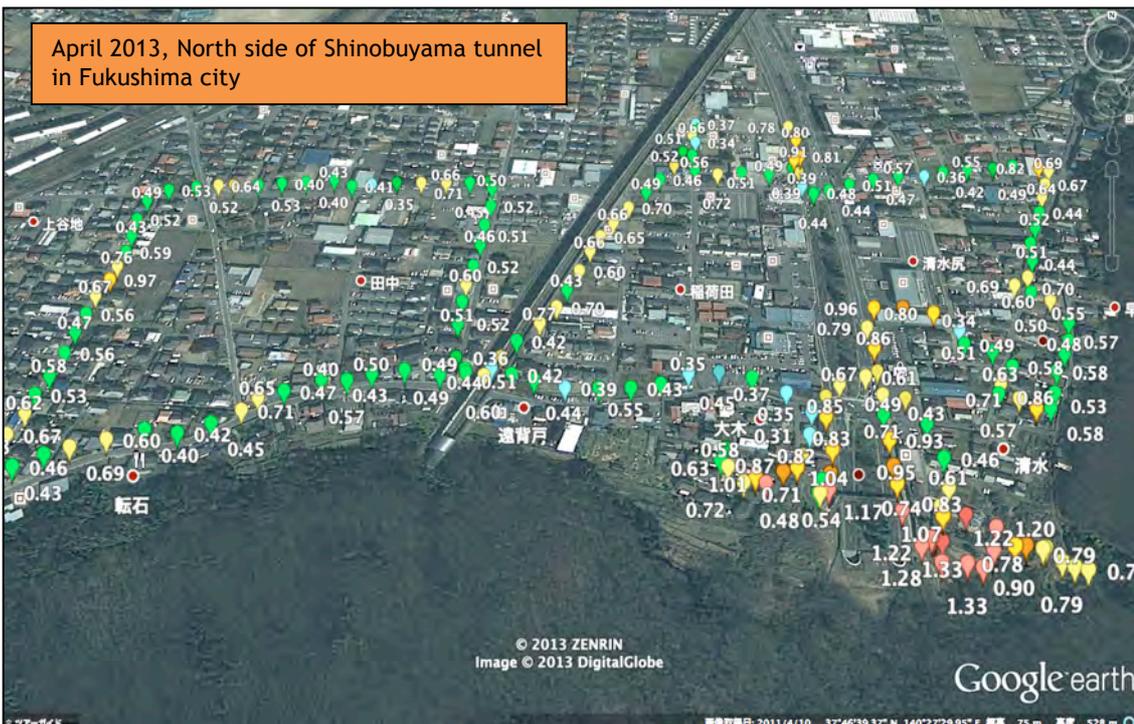
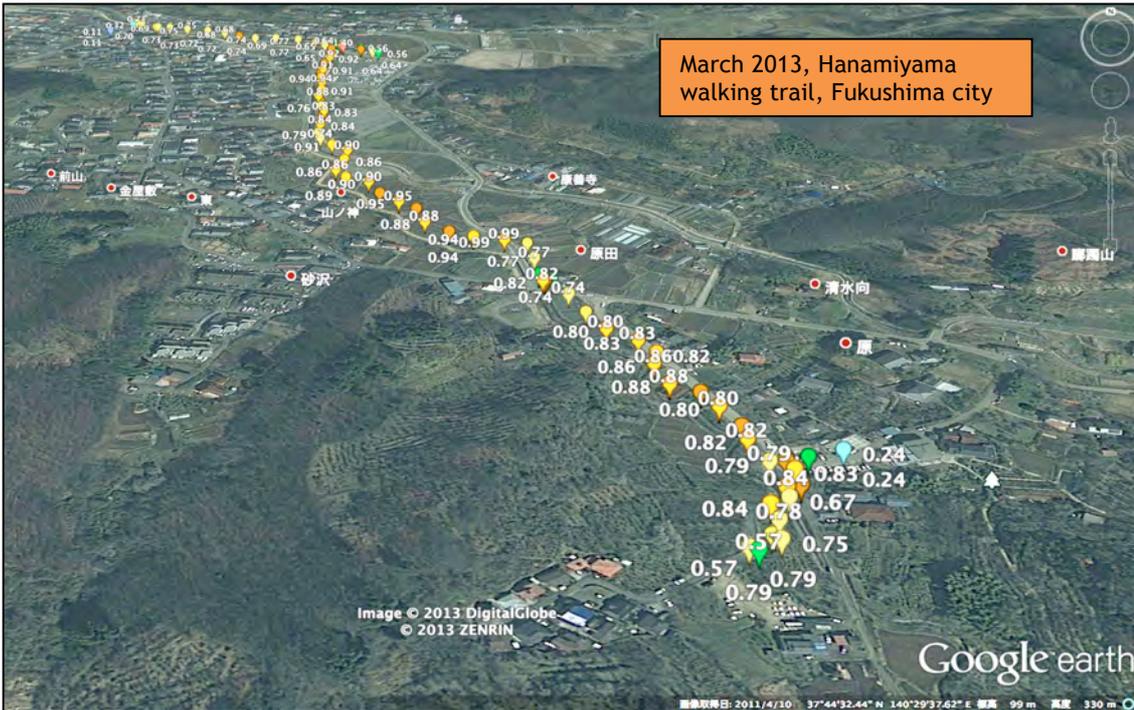


Results of the 6th Airborne Monitoring Survey by MEXT
(Air dose rates at the height of 1m above the ground surface) as of November 16, 2012

Background Facts

Walking radiation measurement map by citizens' group shows radiation hot spots in the city

Maps shown below are the examples of the result of walking measurement of airborne radiation in Fukushima city by Fukushima Network for Saving Children from Radiation (*Kodomofukushima*). The unit of the measurement is $\mu\text{SV}/\text{hour}$. The maps tell us the fact that the level of airborne radiation varies even in the same street or in the same block of a town. (<http://bit.ly/18SVpmR>)



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Cnes/Spot Image Date
SIO, NOAA A, U.S.Navy,
NGA, GEBCO
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Background Facts

High radiation levels were detected at parking lots of public facilities



Signs by city authority with a message “no entry, there are spots with high radiation” in the parking lot of city library. Though there are many hot spots in the city, such sign by the authorities is rarely seen. ©JANIC

About this news letter

Stories & Facts from Fukushima is a newsletter presenting real stories of Fukushima and its background after the nuclear disaster of Fukushima No.1 Nuclear Power plant happened on Mar.11, 2011.

Having 2 years passed since the disaster, this newsletter aims to introduce present

Citizen’s Radioactivity Measuring Station (CRMS), a non-profit organization in Fukushima city, found maximum of 430,000 becquerels per kilogram of radioactive cesium in the soil at a parking lot of Fukushima city library during a survey conducted on April 29 and May 1-2. Also in the soil collected at 2 parking lots of a prefectural library and a museum, where decontamination operation has been done in March 2012, maximum of 280,000Bq/kg radioactive cesium were detected.^{*3}

Local authorities shut down the parking lots for an emergency decontamination operation. CRMS requested to the authorities an urgent survey, disclosure of the result, and appropriate response to prevent people’s further exposure to radiation.

situation of Fukushima people (both living inside and outside Fukushima) and to explain the facts behind their life.

Some of the contents are linked to our website, Fukushima on the Globe (www.fukushimaonthe-globe.com). Please see the site as well as this newsletter.

We welcome your feedback.

Acknowledgement

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*3 In Japan, materials which are detected the radioactive level of more than 8,000Bq/kg are strictly controlled by the Ministry of the Environment(MOE) as “Designated Radioactive Waste.”