Eight years from the Great East Japan Earthquake - Current situation of Fukushima and its challenges

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1. Current situation of Fukushima – Nuclear plant accident, nuclear disaster, and radioactive contamination that have destroyed the lives of ordinary citizens.

Eight full years have passed since the Great East Japan Earthquake and the nuclear accident at TEPCO's (Tokyo Electric Power Company) Fukushima Daiichi Nuclear Power Plant on March 11, 2011. The serial explosion and fire at nuclear reactors brought on an unprecedented radioactive contamination, which resulted in the release of 900PBq of radioactive substance (National Diet's Fukushima Nuclear Accident Independent Investigation Commission (NAIIC) Report p.37) – approximately one-sixth the amount of emissions from the Chernobyl nuclear accident when converted to iodine – throughout a vast area. The resulting effect can still be seen in many different forms in regions mainly around the nuclear power plant.

I was born in Fukushima City, which is about 65 kilometers from the nuclear plant, in September 1967, two months before the construction of Unit 1 of Fukushima Daiichi Nuclear Power Plant started. I was a student of local elementary, junior high, and high school during the so-called construction boom of nuclear power plants in Fukushima Prefecture that lasted between 1970s to 1980s. In the 90s when there were many accidents at the nuclear plant, I worked as a local newspaper reporter covering the problems and concealment of accidents at Fukushima Daiichi, as well as the criticality accident[11] that occurred at the JCO nuclear facility in Ibaraki Prefecture. I am currently a freelance reporter continuing to write about Fukushima after the nuclear accident.

One thing I have experienced is the fact that the words spoken by the people of Fukushima after the accident has changed considerably. The first time I experienced this was in May 2011 in Fukushima City, the prefectural capital. The city was facing an extraordinary situation where, because it was not designated as evacuation zone after the accident, it had sheltered many evacuees coming from the evacuation zone of and around the nuclear power plant, however, at the same time, the city had many citizens who voluntarily evacuated to areas outside the city under his/her own determination. The accident caused radioactive substance fall on to the city and the level of air dose rate in places where people spend their everyday lives, such as rice and vegetable fields and school playgrounds, had become high compared to how it was before the accident. There was a time when I happened to see a

[1] Criticality accident that occurred at a JCO uranium processing facility in the village of Tokai, Naka District, Ibaraki Prefecture. It was the first accident in Japan where two people had died from radioactive exposure.

few women chatting in front of a supermarket as I went in to the store. Even after I finished shopping and came out of the store, they were still continuing with their conversation.

As I passed by them, I could pick up some of what they were saying. “What is happiness?” “What’s going to happen in the future?” “What lies ahead for our children? Should we let them evacuate?” “Who is going to take responsibility for this situation?” “I want them to hurry up and decontaminate the area” The women were mothers looking very serious. After this experience, the people whom I interviewed, or the “disaster victims” of the earthquake and nuclear accident who suddenly had their everyday lives destroyed continued to ask me the same type of “philosophical questions.” Considering how the name Fukushima translated into English means “Fortune Island,” it is ironical to think of the fact that after the nuclear accident, people started to think about the real meaning of “fortune.” Under such an emergency situation, people had started to seriously “seek the meaning of life” while at the same time they “strongly desired safety.” They continued to question themselves: “Is it safe or not to drink tap water?” “Is it safe to eat locally-grown vegetables or not?” “Should we evacuate or remain in the city?” People were forced to make tough decisions while being faced with the risk of radiation. What is important about the issue of radioactive contamination is that the simple “distance between the nuclear power plant” is not the only factor that determines an area where people’s everyday lives are destroyed. Radioactive plume flies over and across city, town, village, and prefectural borders forming an area of downwinders or downwind victims of radiation. This is how the mothers of Fukushima City, which is not the location of the nuclear plant nor an evacuation zone, were exposed to the threat of radioactive contamination. There is the possibility of some health effects being discovered some years later. It is “a threat that goes beyond the borders of time and place.” Radiation also cannot be seen or smelled. It also has no color or shape, and therefore it is a kind of “invisible threat.” Contrary to the “Atoms for Peace” speech given in 1953 by the then U.S. President Eisenhower during the post WWII communist-era, it was the beginning of a situation where people are robbed of a peaceful everyday life, and a struggle against “continuing risks” that could last for at least several tens of years to come.

In a situation filled with anxiety and threat many people, even after eight years, are still being faced with unsolved problems as well as new problems involving radioactive contamination. This is how they live their “present” after the nuclear accident.

2. Nuclear power plant and the safety myth – The system of the government and the so-called nuclear power village that downplays the damage and effects

The most serious problem in Fukushima after the nuclear accident is the situation involving “evacuation.”

The most serious damage is that even after eight years there are still many evacuees who cannot go back to their home town or to their homes.

There was a total of 146,520 evacuees from the evacuation order zone, planned evacuation zone,

and emergency evacuation preparation zone as of August 2011 immediately after the nuclear accident, which was about the same as the number of evacuees during the Chernobyl nuclear accident (NAIIC Report p.351). It is said that the number of evacuees reached the peak around May 2012 at 164,865 (Fukushima Prefecture and Reconstruction Agency)

Now, after eight years the number has decreased to 32,476 in March 2019 (Fukushima Prefecture and Reconstruction Agency). However, there is still a problem with this number because even during the entire period between 2011 to present, there are many evacuees who are not included in the statistics. When we look at the lives of all evacuees, there are two large groups of evacuees: those "forced evacuees" who are from areas designated as evacuation zones, and those who evacuated from the other non-evacuation zones or the "voluntary evacuees." The total number of evacuees still remain inaccurate because the government does not have an accurate grasp of the number of voluntary evacuees.

Under the government statistics system, number of evacuees is counted and made open to the public through the "National Evacuees Information System," but because the system relies on a self-reporting policy where evacuees report to the local government, many evacuees are left out of the statistics. In addition, reliability of the local and national government statistics on evacuees are being questioned because the numbers do not always match.

Because there are many voluntary evacuees who are not included in the statistics, there is no investigation on how they are leading their lives, and no programs to assist them on how (life reconstruction) and where they can go (resettlement) to start a new life. These programs should be executed under the responsibility of the state government considering how the evacuees have and are still moving to different places throughout the country. However, the amount of such public support is not enough and there is no sign of improvement.

Emergency period has passed and we are now in the reconstruction period, but the government policy of capturing the size of the damage as being small still continues. Its policy of terminating housing assistance to evacuees is also follows this government tendency. The following shows how the government housing policy for evacuees has changed overall.

→① School gymnasium and other public facility (evacuation shelter; No charge)
→② Emergency temporary housing (Prefabricated houses and other public housing; No charge)
→③ Housing constructed after disaster (Public housing operated by municipalities of city, town, and village; No charge)
→④ If possible, building a new house or return to old house

During the eight years period, there have been many evacuees who were not prepared nor had the intention to leave the evacuation homes but were nevertheless forced to move out because the evacuation zone designation was lifted, or those who were told they were no longer eligible to the no-charge housing.

Immediately after the accident, the government issued an evacuation order to residents. The

evacuation zone expanded concentrically from 3 kilometers diameter to 10 kilometers, and then to 20 kilometers from the nuclear plant. Nevertheless, it was extremely difficult for the government to get a grasp of the radioactive dispersions and release timely evacuation orders. Because the government expanded the evacuation zone from small limited area to a wider area, the evacuation routes (roads and evacuation shelters) became the bottleneck and prevented smooth evacuation. In addition, because the evacuation routes mainly consisted of roads formed by cutting through mountains, when the wind blew toward inland instead of the Pacific Ocean (At the time of reactor No.3 explosion on March 15, 2011) the radioactive plume drifted along these roads scattering radioactive substances to on top of the cars moving to evacuate.

The residents of Iitate Village, which is known as a downwind region, received considerable damage from this plume that drifted inland. Iitate is 50 to 60 kilometers away from the nuclear power plant and because of this, it was not designated as evacuation zone for one month after the accident, thus its residents and evacuees from other areas remained inside the village.

This kind of government response is in contrary from that of the U.S. government when it ordered American residents in Japan and its government institutions to evacuate from an area of "50 miles around the nuclear plant" and other countries moving their embassies from Tokyo to Kansai region.

The Japanese government spent 20 billion yen to develop and install System for Prediction of Environmental Emergency Dose Information (SPEEDI), a revolutionary computer simulation system used to predict dispersions of radioactive substances, after the 1999 JCO accident (a criticality accident occurred inside a nuclear facility and evacuation of neighboring residents was delayed). SPEEDI was in operation during the Fukushima nuclear accident and the Japanese government notified Fukushima Prefecture of the wind direction. However, because an official of the Fukushima prefectural government had mistakenly erased the data, the information never reached the residents, therefore they could not avoid being exposed to radiation. Furthermore, in October of 2014, the Nuclear Regulatory Commission decided that in the future the system will not be used for making decisions involving evacuation because "the data of the system alone cannot eliminate uncertain elements." Thus, we are about to lose the lessons we learned from the past nuclear accidents.

The government's policy to downplay the number of victims in order to keep the assistance budget as low as possible is seen in its statistics and measures regarding children with thyroid cancer. According to a survey by Fukushima prefecture, there were 211 children who were diagnosed to have or were suspected of having thyroid cancer by April 2019. However, Dr. Hokuto Hoshi, chairman of the Prefectural Oversight Committee for the Fukushima Health Management Survey said, "We cannot see any clear causal relationship with the nuclear accident."

On the other hand, Dr. Shunichi Yamashita of Nagasaki University who was appointed as adviser of radiation and health for the prefecture immediately after the nuclear accident, explained in a citizens' lecture that chances of getting "thyroid cancer is only about 2~3 out of 100 people," which contradicts the result of the Fukushima survey. Dr. Yamashita is an authority on the issue who went to Chernobyl

right after the accident and diagnosed many patients at local hospitals. Despite his experience, he said soon after the Fukushima accident that "radiation effects people who are anxious. It doesn't affect people who are smiling and happy," in lectures he gave to citizens in March and April of 2011, and was criticized for giving unscientific explanation and treating the audience as if they were ignorant.

Thus, after the nuclear accident in Fukushima, despite the fact that scientists, scholars, and politicians were most needed, they lost the trust and respect from the people because of the lack of explanation and communication, and their discriminatory attitude of looking down on the citizens. In the mayoral elections held in Fukushima Prefecture after the accident, 80% of the incumbent lost. This is a typical case where the discord between the incumbent leaders and citizens regarding evacuation became serious and people decided to throw the incumbents out.

There is obviously criticism toward the national government. Prime Minister Abe has said, "I will bring down the number of evacuees to zero by 2020." The year 2020 is the year of the Tokyo Olympics. In Fukushima, some people point out that the government is "trying to make Tokyo Olympics the opportunity to end all disaster measures."

Anand Grover, Special Rapporteur to the United Nations Human Rights Council has pointed out the following: "The state is responsible for the accident. The health of the victims is being ignored but the state should take responsibility and offer support to those victims. Evacuation is a right that should naturally be granted to the people considering the international covenants on human and social rights, and the personality rights stipulated in article 13 of the Constitution, and the state cannot limit those rights." Thus, whether it be within or outside evacuation zone, people should be granted the right to evacuate and the government and municipalities should take the responsibility of giving support.

3. Role of the activities of a civil society – People who resist government policy on "separate governance of evacuation zones"

It is clear through government statistics and measures that "forced evacuees" and "evacuees from outside evacuation zone" are differentiated and divided, and there is disparity between the assistance measures. In places like Tomioka-machi and Namie-machi, which are both strongly affected by the accident, there is a case where the right side of a road is still designated evacuation zone and is still eligible to receive assistance, but the designation has been lifted for the left side meaning there is no more assistance provided to that area. Although the local residents had many community activities in the area before the earthquake, people became divided one after another because the government and the administration did not provide proper orders and governance, and there were also no political initiatives.

However, when the outside force started to affect the community, citizens started to resist and joined hands to ease and overcome the difficulties with knowledge and network. One such activity is the opening of citizens' radioactivity measuring stations through civic cooperation, NGOs, etc.

After the nuclear accident, not only "external exposure," where the body is affected by radioactivity from the outside, but also "internal exposure," where the internal body such as organs

and bones are affected by the radioactive substance contained in water and food, became people's concern. In order to avoid internal exposure, one needs to choose water and food that do not contain radioactive substances.

Immediately after the earthquake, the state government or Fukushima Prefectural government did not start measuring food quickly. Because of this, citizens began to get a hold of radiation measuring instruments and started taking measurements by themselves. It is said that after the earthquake, several tens of these measuring stations run by citizens started operating throughout Japan.

Tanpopo-sha, a similar facility that opened in Tokyo after the 1986 Chernobyl accident, is still provides assistance to newly-opened citizens' measuring stations. The "30-year project" that started in Fukushima City after the earthquake not only measures drinking water, vegetables, and fruits, but also soil. It also conducts tests on internal exposure. Tarachine in Iwaki City of Fukushima Prefecture measures not only gamma rays but also beta rays, and also conducts health checkup at its clinic built next-door. Minnnano Hoshano-sokuteishitsu Teto Teto in Ogawara-machi of Miyagi Prefecture regularly opens a vegetable store called Teto-ichi, where vegetables that have been measured at the station are being sold and local residents gather to chat.

About 20 of these citizens' radioactivity measuring stations collaborated at the end of 2018, and measured the soil contamination in various places to make maps and put them together in a book. Although the government had also measured soil in places far more in number than that of citizens' measuring stations, they were criticized because "it did not measure places where citizens are interested in knowing the results." Because of this, citizens' measuring stations in various places got up and started measuring the soil at parks, roads, and other places in the neighborhood and created maps. The results are supported by the IT society and are publicly available on the Internet. This is something that did not happen in the Three Mile Island accident in the U.S. nor the Chernobyl accident in the Soviet Union, and could be recorded as a form of citizens' activity in a modern nuclear accident.

In April 2019, World Trade Organization (WTO) reached a final ruling saying South Korea's import ban on Japanese seafood from eight prefectures including Fukushima was reasonable, and turned down Japan's claims which said the import restrictions were "unfair." There are eight other countries and regions besides South Korea, such as Hong Kong, China, Taiwan, Singapore, Macao, the U.S., and the Philippines that restrict food import from a certain part of Japan. 14 other countries and regions, such as Indonesia, Egypt, Russia, and EU require the submission of test certification. (Nikkei Shimbun, April 14) Although Japan and Fukushima Prefecture has explained that "Fukushima's food products that are put on the market have been measured for its radioactive substance and are safe," but there is still a gap between the awareness of overseas countries. I believe that from the early stage, the absence of governance toward food safety and internal exposure issues, and the fact that it was unclear as to who was actually responsible, may have had an influence on this problem.

Mizue Kannno, a downwinder who was exposed to radiation in Tsushima of Namie-machi, an area without an ocean and distant from the nuclear power plant, and has thyroid cancer said: "I feel

uncomfortable when I hear the phrase ‘We will not forget Fukushima.’ This is because when you say ‘We will not forget,’ you are referring to something that is over and finished. But the truth is, Fukushima is not finished. I think it’s better to say, ‘I think about Fukushima and am still watching over Fukushima’.”

“I want to tell as many people as possible what happened in Fukushima. I want to say to them that it is something that could happen to you next.”

When you look at the risk of radioactive contamination that destroys the lives of citizens, the next “Fukushima” can happen anywhere anytime. The lessons of Fukushima, especially the risk captured at the level of ordinary citizens as well as measures to deal with them are, as Ms. Kanno has said, important “shared knowledge” that should be spread widely beyond national borders.