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de la théorie à l'expérience vécue*

sous la direction de
Frédéric Le Blay

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cahiers-francois-viete@univ-nantes.fr
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avec la collaboration de CORINNE QUENTIN – *Entretien*

Long-term Evacuation Due to the Fukushima Daiichi Nuclear Power Plant Accident and Its “Invisibility”

Katsuhiro Matsui*

Présentation par l’éditeur

À l’occasion du colloque international tenu aux Utopiales de Nantes en novembre 2017, le programme ATLANTYS avait invité une délégation de l’université de Niigata afin de renforcer les liens et collaborations existant déjà entre nos deux universités. C’est ainsi que le Professeur Matsui put présenter au public ses travaux d’enquête réalisés auprès des victimes de la catastrophe naturelle et nucléaire de mars 2011. Titulaire d’un doctorat de l’université du Tôhoku, la région du Japon qui fut le plus affectée par le désastre, Katsuhiro Matsui est sociologue et étudie notamment la réponse et l’adaptation des populations face aux catastrophes. Il a bien voulu proposer pour ce numéro des Cahiers François Viète un rapport synthétique faisant état de son expérience et de sa réflexion.

Presentation by the editor

In November 2017, Prof. Katsuhiro Matsui as well as a two other colleagues from Niigata University were invited as keynote speakers to the ATLANTYS Third International Conference taking place during the Nantes Utopiales. He was asked to give a presentation of his field work with the victims of the tsunami which hit Japan in March 2011. Holding a PhD from the University of Tôhoku, the area affected by the natural disaster and nuclear accident, he is a sociologist and a specialist on how human populations respond and adapt to major disasters. This text is a summary report of both his experience as an expert and his theoretical approach as a scientist.

* Niigata University (Japan).

More than eight years since the Great East Japan Earthquake and the Fukushima Daiichi Nuclear Power Plant accident, mass media coverage has declined, but the recovery of the affected areas and the victims has not progressed sufficiently. More importantly, because of the accident, around 40,000 people remain evacuated, and a lot of evacuees still cannot go back to their normal lives. They feel a sense of crisis that people might forget about the damage from the nuclear accident. On the other hand, ongoing policies aim for the early “termination” of accidents and evacuations. However, the government appears to be focused on purposely making the accident damage seem “resolved” and “nonexistent.”

In this paper, I would like to present the current situation and problems regarding nuclear power plant evacuation in the context of the ongoing survey of evacuees and their supporters in Niigata Prefecture, located west of Fukushima Prefecture. Niigata Prefecture has repeatedly experienced natural disasters such as earthquakes and floods in recent years (Matsui, 2008, 2011), and the accumulation of such experiences has also been used to support nuclear disaster evacuees.

However, nuclear disasters are different from natural disasters in many ways, with new problems arising with time. In particular, prolonged evacuations in remote areas have led to anxiety among many evacuees, which widens the disparity among them. Considering these points, I would like to discuss what the evacuees have lost as well as the recovery process they should undergo.

Outline of Nuclear Evacuation

- *Nuclear Accident and Evacuation Order*

On March 11, 2011, the Great East Japan Earthquake severely damaged Tokyo Electric Power Company’s Fukushima Daiichi Nuclear Power Plant. The power plant was struck by an earthquake and a tsunami of over 15 meters and shortly lost all of its AC power. The situation worsened after it lost its cooling function, causing containment damage and a meltdown. On March 12, the Unit 1 reactor building suffered a hydrogen explosion, and two days later, Unit 3 fell into a similar situation, and a large volume of radioactive material was released to the environment.

As the situation became tense, evacuation orders for residents expanded around the nuclear power plant. On March 11, the first evacuation order was issued within a 3 km radius; early the next day, the second eva-

cuation order was given to residents within a 10 km radius, which was then expanded to 20 km that night. On March 15, residents within a 20 km to 30 km radius were also instructed to evacuate indoors.

On April 22, 2011, the government designated the area within a 20 km radius from the nuclear power plant as an “evacuation order zone” to which entry was prohibited in principle. At the same time, high-radiation areas outside the 20 km radius, such as Iitate Village, were designated as “planned evacuation zones,” the residents of which were instructed to evacuate within one month. And the areas within a 20 km to 30 km radius were designated as “emergency evacuation preparation zones,” which prepare for evacuation in case of emergency (which was canceled in September 2011). These three zones had a population of 146,500 (Yamashita & Kai-numa, 2012).

On December 18, 2011, the government announced that it would reorganize evacuation order zones to make the environment suitable for the return of residents and to revitalize the area. Depending on the radiation intensity, these areas will consist of a “difficult-to-return zone” (50 mSv and above), a “restricted residence zone” (20 mSv to 50 mSv), or an “evacuation order cancelation preparation zone” (20 mSv and below). There have been several discussions about this zone reorganization among local governments and residents, but from April 2012 to August 2013, the reorganization progressed steadily.

- *Prolonged Nuclear Evacuation*

Immediately after the nuclear accident on March 11, a “nuclear evacuation” was thought to have been conducted. The evacuation of residents began with the first evacuation order that evening or through obtaining personal information. The following day, most residents started evacuating because of evacuation instructions by local governments around the nuclear power plant. Many residents were not told where they should go, and they left their hometowns riding their cars or buses provided by the local government. The local governments around the nuclear power plant that had suffered serious radioactive contamination were designated as evacuation zones (evacuation order zone and planned evacuation zone) as described above. Those from this area, which covered 11 municipalities, were called “forced evacuees.”

At the same time, many residents, including mothers with children, were evacuated from areas where the government failed to give evacuation orders. Residents who evacuated to areas with lower radiation doses were not only from Fukushima Prefecture, such as Fukushima City and Koriyama City, but also from outside it. These evacuees were generally called “vo-

luntary evacuees.” According to Reconstruction Agency data, the number of evacuees as a result of the Great East Japan Earthquake and the nuclear power plant accident in Fukushima Prefecture reached a peak of 164,865 in May 2012 and 39,724 in March 2019. Among these people, those evacuated from Fukushima Prefecture to the outside of the prefecture was 62,831 at its peak (March 2012) and 32,476 in March 2019.

The three reorganized evacuation order zones are associated with differences in compensation amount and duration. Such difference in classification has resulted in conflict even among residents of the same municipality sharing the living area. Most notably, the gap in compensation is large depending on whether or not there was an evacuation order. For example, forced evacuees from the evacuation order zone receive a monthly compensation of ¥100,000 per person, but only a very small amount is paid to those from outside the zone. Moreover, the target areas for voluntary evacuation are limited to 23 municipalities in Fukushima Prefecture. Many voluntary evacuees have been forced to live difficult lives in evacuation sites with poor financial support.

What Was Lost due to Nuclear Evacuation?

Immediately after the nuclear accident, many residents were evacuated to the neighboring Niigata Prefecture, focusing on those living in the area where evacuation orders were issued. Niigata Prefecture reached a peak of about 10,000 people in March 2011, which was the largest number of evacuees at that time. In Niigata Prefecture, although the ratio of forced evacuees was high for a while after the accident, the number of voluntary evacuees has now increased; as of March 2019, the number of evacuees is about 2,500. Due to the emergency evacuation across the prefectoral borders, they were separated from the community services they had received as residents in their hometowns.

After the nuclear accident, I regularly conducted interviews with people being evacuated from Fukushima to Niigata Prefecture. The questions revolved on the following topics: the situation at the time of evacuation, the process of evacuee life, future prospects, thinking about their hometown, what was lost as a result of evacuation, and others (Matsui, 2017).

- *Interview Survey Involving Forced Evacuees*

When forced evacuees arrived at Niigata from the evacuation order zone, they initially expressed hopes for their return to and restoration of their hometown. However, as time passed, they were exposed to serious

radioactive contamination, lack of decontamination, and the reality of a desperate home and were in a situation where they cannot see the future. Here are some of the voices of these forced evacuees.

(Due to the nuclear accident and evacuation) all activities have been taken away, including social contribution activities. At the same time, I was separated from my friends. [...] We did not particularly want to come here (Niigata). We are something like dandelion seeds that were brought here by the wind. (A man in his 40s, July 2013)

We are not evacuees. I am a refugee (*Nanmin*) because I do not stand firmly on the ground. I think this is government abuse. It would be a sin if they abuse. If we were refugees, they had to rescue us but did not support us at all. (A man in his 80s, June 2015)

It was a bit refreshing that all my constraints with community were gone. But it is incomparably smaller than what I lose. [...] I feel that there is nothing I have not lost. Because there is nothing that can be continued. I've given up, but there are a lot of regrets. (A woman in her 40s, April 2013)

The government tries to return the residents even if there is radiation. The government wants to cancel the evacuation order and make it all done. If that is the case, I will stay here as evacuee even with little resistance. I have been in Niigata for a long time and remained an evacuee. That is a small resistance to nuclear power plant as oneself. (A man in his 50s, June 2015)

Some of the evacuees seem to have stable lives, which include such activities as building a home in Niigata. However, they also live with a sense of anxiety and a feeling of fluctuation and of "being suspended." They sometimes feel the severity of the "cold gaze" of their surroundings, with worsening mental anguish and restlessness.

- *Interview Survey Involving Voluntary Evacuees*

Voluntary evacuees from outside the evacuation order zone, mainly mothers and children, are experiencing higher levels of poverty caused by the burden of living double lives. They have been repeatedly forced to decide whether to endure their fear of radiation and return to their hometown or to continue a refugee's life while bearing the cost of living. They are constantly anxious about diminishing human relationships brought about by growing differences in beliefs about radiation risks. Here are some of the voices of such voluntary evacuees.

For me, I do not want to raise my children where I am not sure whether it is absolutely safe or not. However, my feelings were not easily understood by people around me. They regarded me as a very nervous woman. They seemed to think that I should eat Fukushima food because everyone in Fukushima is patient and eating. (A woman in her 40s, February 2013)

I think that voluntary evacuees also need the legitimate “right of evacuation” that everyone agrees with, just like forced evacuees. I do not want to be forced to fake safety. I want the right of evacuation that everyone can choose. I think each person’s way of thinking is different, so I would like everyone to accept such ideas. (A woman in her 30s, February 2013)

I have worked hard every day until now. [...] Even though it has been five years or more, I do not feel that I am living on the ground because of the word that I have been evacuated. (A woman in her 30s, June 2016)

Voluntary evacuees experience a great deal of financial unrest and health concerns. Evacuation life depends on various conditions, including whether evacuees can maintain their family’s health, bear financial burden, or let their children continue schooling. Many have felt anger at the one-sided return policy, which is carried out without consideration for security and safety. On the other hand, evacuees are afraid of being forgotten by people. If voluntary evacuees’ right of evacuation is also recognized, their feelings about their respective situations may become more stable.

- *Questionnaire Survey Involving Evacuees*

The Kashiwazaki-Kariwa Nuclear Power Plant, also by Tokyo Electric Power Company, is located in Niigata Prefecture. The government of Niigata Prefecture has put in place a verification system based on the idea that the verification of the Fukushima Daiichi Nuclear Power Plant accident is necessary as a premise to discuss restarting the nuclear power plant (Tateishi & al., 2018). The Health and Life Committee was established in September 2017 and is examining the health and life effects of evacuation as a result of the nuclear accident. The committee conducted a questionnaire survey in 2017 whose participants were evacuees (945 households) currently living in Niigata Prefecture and households (229 families) who used to evacuate Niigata Prefecture and reside in other prefectures including Fukushima.

From the results, the different statuses of evacuation life are as follows (Niigata Prefecture, 2018): (1) the average number of family members dispersed during the evacuation decreased to 2.66 from 3.30 before the evacuation. (2) The evacuation order zone saw an increase in

“unemployed” evacuees; outside the zone, there was an increase in “nonregular work.” This shows the deterioration of employment. (3) The average household monthly income decreased by about ¥ 100,000, from ¥ 367,000 to ¥ 262,000.

In terms of evacuees’ consciousness, the following was found: (1) Regarding the compensation system, about 60% of the evacuees in the evacuation order zone and about 70% of those outside of the zone are dissatisfied. (2) Anxiety regarding radiation exposure is high in items such as discrimination and prejudice against marriage and childbirth (56.9%), future health effects (54.3%), and others. It also tends to be high for evacuees outside the evacuation order zone. (3) As for the influence of evacuation on human relationships, more than 70% of evacuees feel a decline in connection with their friends and neighbors, which is worse for those in the evacuation order zone.

The committee summed up the survey as follows: “There is no prospect of rebuilding life even six and a half years after the earthquake. And due to the prolonged evacuation period, various ‘losses’ and ‘divisions’ have occurred. It can be seen that it is not easy to regain such as pre-earthquake of social life and human relations” (Niigata Prefecture, 2018). In the case of natural disasters, despite the difference in damage, it is customary for recovery and reconstruction to progress with time. However, when looking at current evacuation life due to the nuclear accident, it is the results that make it difficult to recover.

Characteristics of “Loss” due to the Nuclear Accident

- *Comparison with natural disasters*

In the case of natural disasters such as earthquakes, victims experience difficult times, damage disparities, and various conflicts. However, these victims are local residents, which share a sense of unity in the area (Matsui, 2011). They are able to survive reconstruction, apparently and potentially supported by regional connections. In addition, these victims can accept what happened to a certain extent and can foresee the future.

On the other hand, the regional dispersion and prolongation of evacuation due to the nuclear disaster this time resulted in “loss of hometowns” (Yokemoto, 2016), various divisive situations, unsettled prospects for the future, and the victim’s continued decline in dignity. The evacuees feel that only those who return are residents from the original evacuation municipality, and those who continue evacuation are not seen as residents. At the same time, they have to be aware that evacuation destina-

tions are only that — evacuation destinations. As a result, they feel that they do not have a stable footing anywhere.

Furthermore, unlike natural disasters, nuclear disasters are man-made, and although there are perpetrators, there is no one who is specifically responsible or is offering an apology. Therefore, people around the evacuees can be prejudicial or even “bully” them without properly understanding the extent of the damage. For voluntary evacuees in particular, as evacuation is not recognized as a right, the ambiguity and instability of their position further worsen. They cannot even speak out about the harm done to them, and they hide their identity as evacuees and may even fake their hometown. Nuclear evacuees find it difficult to be properly recognized by their surroundings and to live with a sense of self-affirmation.

- *Loss of the “entire-life dimension”*

Eisuke Wakamatsu identified two human life dimensions: the entire-life dimension (*Jinsei*) and the everyday-life dimension (*Seikatsu*) (Wakamatsu & Wago, 2015). The former is “deeply rooted in our lives vertically, as in vertical lines.” The latter, meanwhile, “spreads sideways more and more like drawing a horizon in daily living.” While both are important, “everyday life” cannot exist without “entire life.” Wakamatsu also raised the issue that, in the press and other media pertaining to the Great East Japan Earthquake, problems related to the entire-life dimension have not been addressed properly.

Based on this argument, I would like to reflect on the “life” of the evacuees. Those who have been forced to reconstruct their lives in unfamiliar lands, far away from their hometowns, have continued to face problems in daily living (the “everyday-life dimension”): housing, work, children’s school and health, care for old parents, relationship with neighbors, and so on. On the other hand, accidents and evacuations have affected the “entire-life dimension” of each evacuee, including their prospects for the future. While compensation for damages will enable the evacuees to make a living in the “everyday-life dimension” to some extent, the “entire-life dimension” does not come into view and does not contribute to its recovery.

Therefore, it can be said that the evacuees are forced to experience the “everyday-life dimension” without the “entire-life dimension.” Even though they have managed to live their daily lives, they have lost the ability to evaluate the extent of their position because of the lack of a live axis that penetrates the past and the future. This is what makes evacuees feel a sense of “suspension”; they are compelled to live a fragmented life somewhere because the “entire-life dimension,” which brings about feelings of integration to their lives, is lost.

The victims of the nuclear accident were unfairly deprived of their right to practice normal living and of the “entire-life dimension” in their transition from the past to the future. No one took responsibility for the nuclear accident, and the victims were not understood from their surroundings. They were forced to evacuate after the accident, and this time there is a growing movement to force them to return even though the conditions are not normal. Furthermore, all these facts are treated as if they are “nonexistent” and are about to be forgotten.

- *Evacuation End Policy and Invisibility of Evacuees*

Policies to declare the “convergence” of the nuclear accident and to end evacuation early began a few months after the accident. As early as December 2011, Prime Minister Noda declared the “Fukushima Daiichi Nuclear Power Plant accident convergence” as having achieved a “cold shutdown” of its reactor. A regional reorganization which sought to phase out evacuation orders and the early return of residents was carried out from 2012 to 2013, and then the orders being gradually canceled. In March–April 2017, six years after the accident, evacuation orders were canceled in most areas except in the difficult-to-return zone.

However, decommissioning work in the Fukushima Daiichi Nuclear Power Plant has been difficult, and forest decontamination has remained largely incomplete. Decontamination and natural attenuation have reduced radiation levels in residential areas, but many residents are concerned that the criteria for canceling evacuation orders greatly exceed the pre accident exposure limit (1 mSv per year). Life infrastructures such as hospitals, shops, and welfare facilities remain inadequate. As a result, even in municipalities where evacuation orders have been canceled, the number of residents who are actually returning is still low. The percentage of elderly people who chose to return is high, and the parenting generation often avoids the risk and stays in the area where they evacuated. The early-return policy which aimed to protect the area and promote its reconstruction, leads to division among the local population and rather hinders long-term reconstruction.

The current policy for nuclear evacuees urges them to choose between early return to Fukushima or settlement in the area where they have been evacuated. It neglects the diversity of beliefs about radiation intensity and the living environment, as well as the complex emotions of evacuees regarding their hometowns. If the end of evacuation is declared unilaterally, there is a risk that the facts surrounding the nuclear disaster will be obscured and forgotten.

For people who continue evacuation outside the prefecture in consideration of the effects of radiation on children, the situation is one where their existence “floats in the air.” They feel that they have been left abandoned by their spatial and administrative disconnection to their hometowns, in addition, they are not completely positioned as residents of the areas in which they have evacuated. Despite the continued financially and psychologically inconvenient evacuation, these evacuees will become “invisible” and will not be eligible for assistance.

Conclusion Time Required for Recovery

Nuclear power plant disasters certainly take more time to recover as opposed to natural disasters such as earthquakes. To protect the dignity of evacuees and help them rebuild their lives, the actual damage they have suffered needs to be as visible as possible rather than hidden. We must listen intently to the sentiments of the victims and evacuees who are hesitant in making their voices heard and then connect their voices toward support. We must deeply understand what they have lost because of the nuclear accident and rebuild the system of compensation and housing support. Furthermore, we need to face the fact that many victims have difficulties in rebuilding their lives, and we need to reorganize the system to support them in the long run.

In addition, even if evacuees outside their origin prefecture are far away from their homes, they will need a mechanism to mend their deteriorated connection with their hometown and be involved in its long-term reconstruction. Currently, among evacuees who chose not to return to their hometown, there are many who would like to return someday or who have doubts or ambivalence about their choices. Therefore, a system such as “double resident registration” is required to systematically guarantee such temporary conditions (Imai, 2014). It is preferable to maintain a loose hometown connection so that evacuees can continue to be residents of their hometown even if they cannot return immediately. Then, they should be involved in the reconstruction of their hometown in the long run, in some cases over generations. For this purpose, it is also essential to redesign the decision-making and resident autonomy systems.

For each of us living with 50 nuclear power plants on a narrow land where natural disasters occur frequently, evacuation caused by nuclear accidents is by no means irrelevant to ourselves. We must learn deeply from this serious experience and pass on these lessons to the next generation.

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