

A Study on Actual Situation of the Disaster in the Nuclear Power Generation Disaster Village, Iitate and Villager Action and on Support Activity

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Abstract

This study is a detailed study on disaster actual situation and refuge actual situation in Iitate village, Fukushima that suffered great damage by the nuclear plant accident by the East Japan great earthquake disaster. The writers are concerned with the rural planning of Iitate for about twenty years and performs the continuous support activity since this disaster. This study is a disaster support study related to the disaster spot and closeness. From specialty of the radiation hazard, we suggest the long-term refuge and revival plan by building two residence areas to the local government and villagers.

The main subject is an attitude survey of refuge villagers of Iitate. The contents are consciousness of the inhabitants about dissatisfaction to a temporary house and returning to village or emigration from the village in future. The villagers showed the dissatisfaction to the building in the temporary house, the uneasiness to a connection of the community, worry of the health caused by the radioactivity. 40% of the villager has the strong intention to returning to the village. In contrast, 70% realizes the difficulty of returning and hope for the moving to safe area and the construction of a new village there.

Keywords: East Japan great earthquake disaster, Nuclear plant accident, Iitate, Emigration, Revival reproduction

1. Preface

The accident of the Tokyo Electric Power Company Fukushima first Nuclear Power Plant brought radioactive contamination in Iitate village, Fukushima of northwest approximately 28-45km. The writers worked on support for the village administration during the period for approximately 20 years. By the relations, we performed "Iitate support team" to a setup on March 16 of 2011, and have supported the local government and villagers.

2. Ecological village of the villagers participation

The writer supported the making of ecological village of Iitate for approximately 20 years. The village accounts for an average of 450m above sea level, approximately 75% of total area 230.13km² is forest and rural area of the gentle topography. The population is approximately 6,100 people, around 1,700 households. Every 20 settlement made the

planning of "the quality life in village" on the fourth general village formal plan (from 1995 to 2004), and the local government gave the every settlement 10 million yen for activity. In the fifth general plan (from 2005 to 26), the new theme was the low life, "MADEI LIFE" and aimed for the realization of the living with nature and the agriculture. From 2008, the local production for local consumption of the energy began to utilize as fuel of the tip boiler of the nursing home of the villages

"MADEI" means slowly and carefully. as a dialect of the village. Beside the local government office, we built "MADEI Living Center" as the energy-saving model eco house which realized natural and agricultural life. It is one of the models of 20 houses of whole country of Ministry of the Environment. There are a vegetable garden, an orchard, a waterway, a pond with a pumping windmill, too. Because winter is cold, we carry out the insulation of basics, walls, windows, ceilings and roof. It is the model house which the eco-techniques such as the dirt floor heating with the firewood boiler, the solar panel. Five years later, it was the plan that NPO run. For global warming, a problem

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(The publisher will insert here: received, accepted)

of the peak oil, we want to show the rural eco-life and came for the realization of the lifestyle of the agriculture that could not come true in the city. Iitate is the village where it came to for the realization of a careful living beautifully.



Ph1, a rural scenery of Iitate, the spring of 2010, before suffering



Ph2, a rural scenery of Iitate, the spring of 2012, after suffering

3. Work on the actual situation of the radioactive contamination and a variety of our support

I stood and put up quickly Iitate support team from the great earthquake disaster in NPO-ECOLOGY ARCHISCAPE(I am the head," EAS"). We sent the refuge advice to the village, the our radioactivity damage situation survey, advice for revival reproduction, emigration suggestion. EAS cooperated with Dr. Imanaka of Kyoto University, the scholar of atomic energy of the anti-nuclear power generation group, on 29th on March 28, 2011 and carried out aerial dose rate investigation and soil analysis in the whole village. The acuteness of the Chernobyl level was pointed out in the southern soil analysis of the village and showed radioactive contamination findings in the village authorities. However, because the village

mayor, the village authorities didn't like to show it to villagers, we opened it on Web of EAS.

We requested urgent refuge action and decontamination measures in the whole village to the village mayor and the government from the beginning of April. We have done a radioactive contamination situation investigation in the whole village and the attitude survey of the refuge villager, supported to "MAKENEIDO Iitate", which is the villagers action group.

75% of Iitate is the forest. The radiocesium that half-life was 30 years fell there. The decontamination of the forest is not easily possible. Long-term decontamination is necessary. The village authorities should not give priority to decontamination and should give priority to emigrate to the safe place out of a village, and to build the new villages outside and to come back in the long term. I suggested these "two area residence 100 years designs".

We must make the long plan and action for a long time to recover this difficult problem, and support for the long time. As for the present conditions, it is with complicated support activity while I include strain relations with the local government from difference in recognition for the risk of the radiation.

The our support activity is follows.

- (1) Information to the village authorities, about radioactive contamination findings, decontamination suggestion and refuge, and information to medias,
- (2) Collect money for the village, give the money to the local government and villager volunteer groups,
- (3) Radioactivity survey with the expert researchers of the radioactivity, and the disclosure,
- (4) Study session of the health and radioactivity, and support to make the record book for health to radioactivity by "MAKENEIDO",
- (5)New villages plan, de-centralized village construction including houses and agriculture field and suggestion of two area residence for a long time,
- (6) Attitude survey of refuge villagers, and plan of revival reproduction of the village,
- (7) Summer and spring camping of children and family for refresh and establishment of a group of mothers to protect children.
- (8) Artwork shops of healing for villagers,
- (9) Support to make the community vegetable garden near the temporary houses,

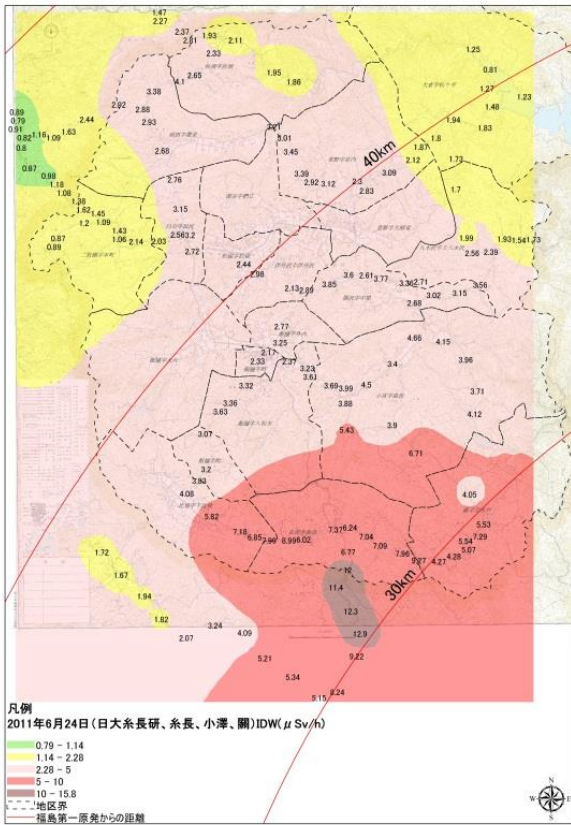


Fig1, Iitate radioactive contamination map, June, 2011, from our survey

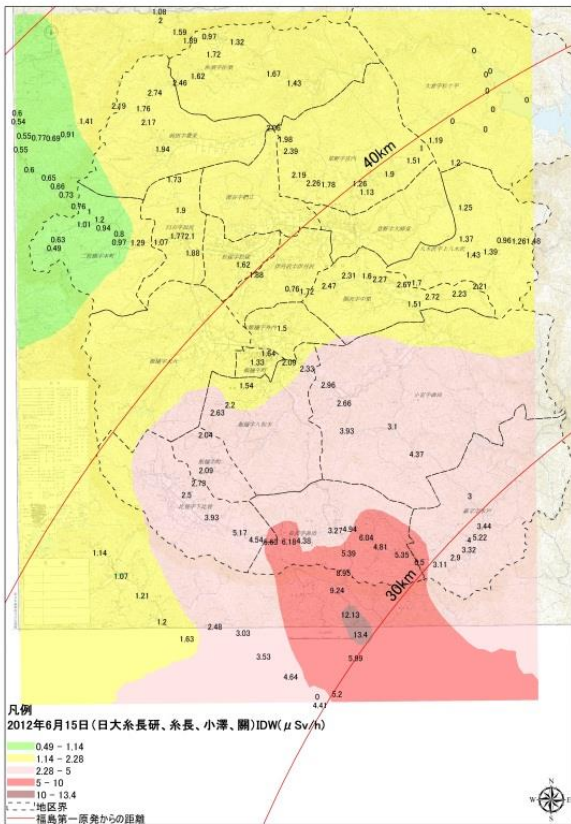


Fig2, Iitate radioactive contamination map, June, 2012, from our survey



Ph3, radioactivity survey and measures symposium with villagers, October, 2011



Ph4, evacuation camping of children of Iitate, the summer of 2011



Ph5, Children taking care of the cows in evacuation camping, the summer of 2011

- (10) Establishment of villagers group to succeed to traditional food culture
- (11) The setting of the support room in Fukushima city,

4. Division of community and family by refuge

1,715 households in the village before the earthquake disaster becomes 3,094 households by June, 2012, and household separation advances. 90% households evacuate to the prefecture, and the inner Fukushima city near the village occupies 57%. 603 households (20%) take it over in nine places of temporary houses in the Fukushima-city and 1,607 households (50%) live by dispersing in a house, an apartment. There are many young households in the apartment in the city that the prefecture pays. whereas there are many elderly people in the temporary construction residential area, because the young household evacuated early, the old household lately.

However, the aid package of the village authorities to the young household living in separately is weak.



Ph5 The temporary house of villagers of Iitate



Ph6 the joint vegetable garden of villagers of Iitate

5. The tangle of the villager to decontamination, return and emigration

We investigated the consciousness of the villagers in the temporary houses in the beginning of October, 2011 with cooperation of "MAKENEDO". The age is in its 80s from 20s and 60 years old or more were 60%, women is 2 for men 1. People to "want to come back to the village" were 40% degree, people who "whom might emigrate to outside the village" were 70% degree. It was a tangle of both thought. Some elderly person talked that it is no suddenness taste he come back to the village, and to live on the situation that children and grandchildren cannot return. They wanted to live with the family and they had the intention to want to improve the present situation that became the household separation in the refuge.

Furthermore, I cooperated with the community leader of Maeda settlement in the north of Iitate in March, 2012 and carried out the questionnaire to all the inhabitants. I distributed the mail of 200 people and obtained the answer of 131 people (65.5%). As for level "to regard as decontamination success", "the state before the accident" is 47%. "under 1mSv/year that a country is based on the security of the time of peace" are 16%. As for the person of "under 20mSv/y that a country assumed grounds of the premeditated refuge", is 2%, "the standards that administration and an expert judged regardless of numerical value if life is possible" are 7%. This showed many villagers didn't understand a standard of 20mSv/y.

By the prediction of the time when the decontamination at the relatively low point of the radiation dose of the village succeeds, "do not understand it at all", is 49%, The person preparing for long-term life as an evacuee is 30%. The village authorities give priority to decontamination business with the goal of the return within 2-3 years. The differences between village authorities and consciousness of inhabitants are clear.

Villagers "want to continue living in a current place of refuge" (temporary houses) are 30%, "(moving) to purchase or build a new house outside the village, and wants to begin new life with family" is 20%. In 16% that "moved in the larger rental house to continue life as an evacuee", these occupied three high ranks. 18% of people approved of that they made a new emigration housing complex with community unit.

As future measures, as for the matter (possible an

answer to three high ranks) which should take first priority except health measures, "compensation, compensation for the radioactivity pollution" is the highest in 63%, "the examination of the new address to be able to live for in peace" is 41% and "improvement and enhancement of the life as an evacuee" is 37%. On the other hand, "the thorough decontamination of the village" that the village authorities make much of is the fourth in 35%. Not a decontamination measure, villagers hope for a policy to be able to live in peace not a decontamination measure.

In addition, 3 new divisions and rezoning of the village which the government pushes forward "does not understand" 31% who "cannot understand" 50%, and there are only 8% who "can understand". It may be said that the rezoning of July 17 was forced without victim inhabitants being able to understand.

6. Tangle of inhabitants in Nagadoro settlement of the area of no return for five years

Nagadoro district located in the southern part of Iitate, highest radiation area dose, is not possible for the return least more than five years and was appointed in the area on July 17, 2012. A barricade is installed in the doorway of the district. I carried out a questionnaire to people of the family nurturer with the leader of Nagadoro in the middle of May, while the village authorities did not carry out the careful attitude survey. We mailed it to 58 family nurturer and collected it, and the number of the answers was 86% of

answers rate in 50 people in naming.

In the high rank of the hope place of long-term life as an evacuee, "other areas that are near to Iitate" are 44% and "a low dose of radioactivity district in Fukushima city, Arai" are 34%. The life as an evacuee hope to the place planning in the ruins that the village authorities decontaminated is low with 6%. The house hope by the long-term refuge is high in the intention to build a house in individuals separately in 38%. Person of the intention that each person builds the house in the new housing development of the community are 28%. The individual house intention becomes 66% as things mentioned above. In addition, the rented house applicant by the public support is 16% and the individual house for revival public housing is 10%.

In long-term life as an evacuee, many generations living together intention is 66%. Intention of the life rebuilding by the family unit is high. About the need of the plan of "the temporary village" by the community unit, 44% approve of it. I did a question to real estate compensation. The intention "to want to leave present" is the highest in 30%. Intention to "want country and Tokyo Electric to purchase all land" is 14%. Intention to "want country and Tokyo Electric to borrow all land while they evacuate" is 10%. Intention to want them to borrow a part or all the land is 24%. Purchase intention is 16%, and intention to borrow it is high. But the person who cannot yet judge it is 26%.



Fig. 3 A figure of image of the refuge village that the writer suggested

7. Investigate a road of the long-term revival reproduction by two area residence beyond the return method

Kremlin took a forced emigration plan at a nuclear power generation disaster in Chernobyl, 1986. As for more than five mSv/year, ironhanded emigration is pushed forward, and, as a result, the area within 30km does not become the compound by the present that passed for 25 years either. On the other hand, in Japan, "a temporary town design" in Futaba becomes the topic of the policy, but cannot but say that an emigration measure is weak in Japan.

The prospect of decontaminating in the village where 70% or more are covered in the forest is severe and difficult. It may cause a disaster except the radioactivity to decontaminate a mountain in urgency thoroughly. Wisdom of the adjustment between long physical time for radioactivity collapse and the time of the human life is necessary.

We need the project which build the new village which may be small where the occupation is compatible with a living in the safe area. We may build several places of de-centralized villages by the village unit. There are a school, a nursery school, the place of the festival, a joint farm, a joint factory, a common market, an interchange market where it will be possible for villagers to reproduce living and work.

We need "two base rights of residence to revive from a nuclear power generation disaster". This is a right of radioactivity polluted people. It consists of the following contents.

- (1)Get a right of the refuge, a right of the new alternative village construction outside and return in future, the three rights,
- (2)As proof of the medical security for the life of all the inhabitants who suffered from, receive a grant of "radioactivity victim health maintenance notebook" (provisionally) from the country.
- (3) Government and TEPCO mediate the place of the alternative village construction, and sets a periodical lease over there and they pay the expense to build the houses. Villagers can have two of a resident's card of Iitate and the resident's card of new land.
- (4) The alternative village will be built as an eco-village by the renewable energy which realized the working of traditional agriculture, MADEI life. After return in future the village utilizes as an experience education center of the good eco-life.
- (5) A periodical lease from 30 through 50 is set on the

land of radioactivity polluted Iitate by government. Government and TEPCO must pay villagers lease charges. If villagers become able to return by a decontamination result, the government returns a right of the land to a villager.

(6)Government will set up land use meeting with villagers (administration) and carries out decontamination and management of the land which did leased land and never makes the dumping places of the radioactivity waste.

(7) For a periodical tenancy, villagers can come back to the village for home management, a visit to a grave, a festival timely.

8.Conclusion

The Iitate authorities devised a revival plan by the organization of several villagers and well-informed people in May. In the plan, the village authorities thoroughly decontaminate the western part of the village and make "a smart village" newly there and let villagers approximately 300 households return there and let you live.

I recognize that villagers have hope to want to return to the village early. On the other hand, under the situation that a radiation hazard risk is undetermined in the long term, villagers give up returning to the village early. They hope to live with a family, a village, friends at the place that can feel relieved more. The village authorities hold a participating workshop of the whole villager. I think that they make alternative revival plan with villagers and that Iitate succeed to a method made with a village of the villager participation in planning that many years built.

The village authorities should support it so that villagers have a variety of choice except the return and should push forward a policy about the emigration of villagers and the residence in two areas. The correspondence of a new regional plan is demanded to deal with a nuclear power generation disaster forcing to long-term life as an evacuee.

(An address of gratitude: I thank villagers of Iitate, Iitate government office, members of EAS, the citizen who contributed money of support, students of my laboratory.)