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Status quo of exposed workers in Fukushima and Japan's first unified spring labor offensive for nuclear workers

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1. Inauguration and Startup of Radiation-exposed Workers' Solidarity Network*

Do the readers of this journal know that the operation of a nuclear power plant requires a far greater number of nuclear workers hired by the electric power company's subcontractors than the company officials sitting in the plant's control room? In Japan, the plant workers exposed to radiation while working experience extremely harsh conditions, exploited by many companies in the multi-layer subcontractor system, not covered by social safety nets, treated just like disposable products and fired easily without prior notice. They are considered to be the workers suffering from the most severe exploitation and treatment in Japan.

In the wake of the nuclear accident at Tokyo Electric Power Co.'s Fukushima Daiichi Nuclear Power Station (FDNPS) in 2011, the clean-up operation and the preparation work for decommissioning of the crippled reactors drew much popular attention. The mass media took up various problems involving nuclear workers, such as sloppy safety management, cheating on their exposure-dose calculations, fake subcontracts, and illegal dispatching of workers. Moreover, they reported some cases in which impoverished people were forced by underground criminal syndicates, "yakuza" to work in the nuclear plant. These cases were not necessarily exceptional cases that occurred in the emergency situation immediately after the nuclear disaster. This dark side of the plant workers' employment system has continued to



Spring labor offensive for nuclear workers in front of Maeda Corp (Tokyo). (Photo by Akira Imai)

exist throughout the 50 years since the start of commercial nuclear power generation in this country. However, the nuclear power industry worked hard to conceal such questionable practices. Recently their maneuvering has gradually slackened and the public have begun to focus their attention on nuclear plant workers. As a result, the darker aspects of nuclear labor have been brought to light and have received a certain amount of exposure.

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Meanwhile, radioactive contamination has spread not only within FDNPS but also extensively in eastern Japan. Workers engaged in many kinds of work that previously had no connection with radiation exposure, such as cleaning work, sewage processing, and transport work, are now facing the risk of exposure to radioactive substances. Moreover, the government-organized decontamination work has led to the creation of new industrial sectors based on occupational radiation exposure. Despite this trend, occupational exposure has not necessarily been taken up as a major problem in Japan's popular movement against nuclear power generation.

Amid this situation, the Radiation-exposed Workers' Solidarity Network (RWSN) was organized by individuals with a strong awareness of safety and the rights of the FDNPS workers, especially those considered to be exposed workers employed by subcontractors. The individual members held a preparatory meeting in October 2011, and officially established RWSN in November 2012 after they received inquiries from a number of exposed workers on unpaid danger allowances** in decontamination work. Since then, they have been providing workers with full-fledged consultation services on various labor problems and supporting them in labor disputes.

2. Labor disputes involving decontamination workers

The first case tackled by RWSN was a dispute involving a firm undertaking decontamination work on roads and other infrastructure in Naraha Town, Fukushima Prefecture. A worker hired by the firm told RWSN that he got the job through Hello Work (the official job-placement office) on the condition that the daily pay was 10,000 yen and that the company would pay room and board. He allegedly began decontamination work in July 2012. After the monthly wage for July was paid, he was notified by the firm that the government would pay him the danger allowance. But at the same time the company told him that the daily wage would be reduced to 5,500 yen (almost the same level as the minimum wage in Fukushima Prefecture) retroactive to the day when he started work on the job, and that the room and board costs would be deducted from his monthly pay.

The result of this was that the worker's daily, all-inclusive wage dropped to 12,000 yen, although he was eligible to receive 20,000 yen, the 10,000 yen daily wage and 10,000 yen in danger allowance. This is nothing but the

company's confiscation of the danger allowance. The employer's unilateral change of working conditions and pay cut without obtaining consent from the worker in accordance with the official labor-management agreement are a violation of the Labor Standards Law. A co-worker also received a smaller wage because more subcontractor companies were illegally involved in his employment.

Four workers who sought support from RWSN joined the Iwaki chapter of the National Union of General Workers with which RWSN is cooperating, and negotiated with their employer, a higher-level subcontractor, and Shimizu Corp., the original contractor. As a result, both sides reached an agreement that the 20,000 yen daily wage would be paid in full, along with the unpaid extra wages. Later, two other co-workers also succeeded in obtaining the unpaid wages.

Up to the point when this labor dispute occurred, most decontamination workers did not know of the system under which the government provides danger allowances to such workers. For this reason, media reports on this labor dispute have greatly contributed to popularization of the danger allowance for decontamination workers, and the number of inquiries received by RWSN from such workers has increased considerably.

The next labor dispute handled by RWSN involved a company undertaking decontamination work in Tamura City, Fukushima Prefecture. A number of workers from the company came to us when our group provided a consultation service on labor problems, medical care and welfare in Iwaki City in the same prefecture in late November 2012, and that was the start of this case. The workers complained about unpaid danger allowances, unpaid extra wages, and also the cost of the health check-ups, just as the workers involved in the case above. In addition, they bitterly complained about the appalling accommodation and meals, poor working equipment, the employer's refusal to accept applications for workers' compensation, and violent acts committed by the work site superintendent, among other problems. They also expressed strong indignation against the employer's inhumane treatment of the workers.

A total of 25 workers from the company joined the Fukushima chapter of the National Union of General Workers and launched a labor dispute against their employer, a second-tier subcontractor, the first-tier subcontractor and the original contractor, Kajima Corp. It took nearly six months to settle the dispute. Consequently, the settlement money, equivalent to the total amount of their unpaid wages was paid to the workers.

** The danger allowance is paid to decontamination workers as compensation for physical and mental burdens caused by the work.

The employer also agreed to take the procedures for workers' compensation. Yet the "settlement money" the workers received was not the unpaid danger allowances, despite the fact that their employer officially admitted that he did not pay the allowances.

3. Labor dispute fought by workers engaged in the FDNPS accident clean-up and decommissioning preparations

Some of the FDNPS workers engaged in accident clean-up operations and preparation for decommissioning of the plant have also made use of our consultation service. Many of them were employed by fake subcontractors or unqualified job placement agents that constitute the lowest level of the multi-tier subcontractor system. They had problems with unpaid wages, appalling working conditions, and dismissals resulting from these problems.

A case involving a construction company in Iwaki City, Fukushima Prefecture, was exceptionally malicious. This company was an illegal job placement agent recruiting workers through a website. On the site, it advertised a job opportunity for decontamination and debris clean-up workers, offering daily wages of 15,000 to 30,000 yen, as well as transportation and accommodation. A worker saw this advertisement and drove all the way from Kagoshima in the southern island of Kyushu to Iwaki in his own car. After arriving in Iwaki, he was told that the daily pay was only 12,000 yen, and was forced to sleep on a mattress spread in the corner of a prefabricated warehouse.

Later, he was moved to a "dormitory" which was simply a rented house, and did various jobs, such as construction and debris clean-up inside and outside FDNPS. On working days, he was forced to pay a dormitory fee of 2,000 yen per day, and had to buy gasoline to commute to work. He became short of money and received an advance on his salary. At the beginning, he had to cook his own meals using rice provided by the employer. Later he began receiving boxed meals on workday evenings. Worried about his low wages and snowballing debts, he fled from the dormitory and sought help from the Iwaki chapter of the National Union of General Workers, of which RWSN is a member. He then filed an application with the Iwaki Labor Standards Inspection Office involving unpaid wages.

This construction company is owned by a gangster group and has not been officially registered. On its website, the company

openly recruited workers by declaring that "a considerable number of syndicate members and people with criminal records are working at our decontamination work sites." This company was engaged in questionable businesses for poor people at the same time, forcing them to apply for welfare benefits and then ripping off their subsidies.

Despite the disclosure of the company's illegal business practices, the company president ignored the Labor Standards Inspection Office's instructions. Consequently, the fourth-tier subcontractor paid the unpaid wages to the workers on behalf of the company.

RWSN coped with several more cases that originated from our consultation services. Compared with the cases involving decontamination work, the number of cases involving accident clean-up work and preparation for FDNPS decommissioning is far smaller. Clean-up and decommissioning workers came to RWSN to seek our help, but did not seem to have the courage to start labor negotiations with the employers. This may be partly because some of them chose the work with a sense of mission that the accident clean-up operations and reconstruction of the disaster-hit areas was necessary for the country. But a more important reason seems to be that the FDNPS workers are controlled far more strictly, both physically and mentally, than other workers.

4. Distribution of advertising leaflets in Fukushima

Instead of just waiting for troubled workers to come forward, we decided to carry out an active search for problematic cases, and on February 17, 2014 launched a campaign to distribute leaflets about our consultation service in the areas where nuclear workers frequently go, such as J-Village and convenience stores in the surrounding areas. J-Village is a soccer training complex near FDNPS, now serving as an operation base for those battling Japan's nuclear disaster.

Quite a large number of workers responded to our campaign favorably, receiving the leaflet attached to pocket tissues or a disposable pocket warmer. Some of them expressed surprise, exclaiming, "I didn't know that this kind of organization existed." Some others said after reading the leaflet that the problems of poor working, safety and sanitary conditions mentioned in the leaflets also exist in their company's work sites. One of the workers engaged in traffic control in the village said there is no worker in that area that doesn't have complaints.

As soon as this campaign came to an end, we received requests for our consultation service from two groups of clean-up workers, and two other groups of decontamination workers. One of the workers was employed by a company constructing welded-type water storage tanks. He claimed that the workers there were forced to do two hours of overtime work both early in the morning and at night in addition to the regular eight-hour workday. He also said they sometimes had to work nearly 13 hours per day.

They were pressured into doing their jobs in a hurry, and the assigned work increased two-fold or three-fold each week. They were not allowed to go to the toilet during working time, and were ordered to excrete and urinate in the Tyvek protective clothing. This extremely difficult situation continued for some time and the workers became exhausted. One day, two of them complained of the excessively heavy work and refused to do the work. In response, the company president announced that they would be fired immediately, and ordered them to leave the dormitory the same day.

Jobs that have a risk of worker exposure to radiation are categorized as dangerous work under the Industrial Safety and Health Law, and it is illegal to force exposed workers to do more than two hours of overtime work per day. Moreover, the employer is required to notify workers of dismissal at least one month in advance. Otherwise, the employer would be charged with violation of Article 20 of the Labor Standards Law. The employer did not calculate the amount of additional pay for overtime work correctly. Among these questionable practices by the employer, the most disgusting one cited by the worker was that the employer treated them just like worms or garbage. In this labor dispute, we are currently demanding payment of the unpaid wages and allowances, as well as discontinuation of illegal practices and the implementation of improved treatment of workers.

5. Unified actions taken in Japan's first "exposed workers' spring labor offensive"

After these efforts, we made various kinds of preparations for the "exposed workers' spring labor offensive" during the February-March period. Based on our consultation service data, information we provided to the workers, records of their labor disputes, and other data, we compiled unified demands concerning accident clean-up work, preparation for the plant's decommissioning, and decontamination work.

In the morning on March 14, 2014 we visited the head office of TEPCO, the implementing body of the accident clean-up operations, and Maeda Corp., the primary contractor for the decontamination work in Naraha Town, Fukushima Prefecture, and handed our written demands to the two companies. Initially, officials of the two companies refused to accept the demands in front of their head offices, but under pressure from the outcry of around 200 workers, including those fighting labor disputes, the officials eventually agreed to accept the demands.

In the afternoon of the same day, we visited the Ministry of Economy, Trade and Industry, the Ministry of Health, Labor and Welfare, and the Ministry of the Environment to negotiate with officials concerned in an attempt to obtain replies to the demands.

That night, we held a meeting to report on the unified actions taken for the "exposed workers' spring labor offensive." About 130 people participated. The guest speaker, the former mayor of Futaba Town, Fukushima Prefecture, Katsutaka Idogawa, told the audience about his experiences. He had once participated in construction and piping work at FDNPS, and had held negotiations concerning safety and treatment of plant workers with TEPCO as town mayor.

It is said that the plant workers' families and residents of the town where the plant is located decline to comment on radiation damage they suffered before and after the nuclear accident. We, therefore, felt the need to handle these cases delicately and with caution. The "exposed workers' spring labor offensive" is probably the first of its kind in Japan, and simply holding this campaign itself is a great step forward.

We plan to continue our efforts in Fukushima by offering consultation services to workers engaged in the clean-up, decommissioning preparation and decontamination work, supporting them in labor disputes, and helping them resolve their problems. Through these efforts, we hope we will enhance mutual trust with the workers. At the same time, we will strive to spread anti-nuclear power campaigns and the anti-nuclear power labor movement while raising popular awareness of safety, better labor conditions and the protection of workers' rights. To this end, we hope many people will extend us their support and join in our activities.

Report of the Iitate Villagers' Early-stage External Radiation Exposure Assessment Project

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As we reported in the March/April 2013 issue of *Nuke Info Tokyo* (No. 153), we started on a project entitled "Assessment of the Initial Radiation Exposure to Residents in Iitate village up to Evacuation after the Fukushima-1 NPP Accident" in autumn 2012, sponsored by the Japanese Ministry of the Environment. (The expression early-stage exposure here refers to the exposure dose received by Iitate villagers during the several months between the time when the village was radioactively contaminated in March 2011 and the evacuation of the villagers after the village was designated as a planned evacuation zone.) In FY2012, we developed a method for estimating the external radiation exposure received by the villagers on the hypothesis that they remained in the village continually and through an estimation of the radionuclide depositions at the location of every household in Iitate Village using the airborne survey data available from the U.S. Department of Energy National Nuclear Security Administration (NNSA). In FY2013, we interviewed villagers to determine the specific radioactive exposure of individuals, to learn about what activities they were engaged in and where they were during the several months before the evacuation. Data was collected from 1,812 villagers, 30% of the total population of Iitate Village, which was originally home to about 6,000 people. We determined how much early-stage external radiation exposure they received. This paper is a brief summary of this project.

Summary of research activities in FY2012

Firstly, we analyzed the airborne survey data available from NNSA by means of the geographic information system (GIS) technology, and created a Cesium-137 (Cs-137) deposition contamination map of the entire Iitate Village area. Next, we determined the longitude and latitude of every household in Iitate Village (about 1,700 households in total), using commercially available housing maps and Japanese Geographical Survey Institute maps. We determined the amount of Cs-137 deposition at the location of each house in the village by combining the location data and contamination map. In the village, the average Cs-137 deposition was 890 kBq/m² and the highest Cs-137 deposition was 2,360 kBq/m².

We calculated the depositions of radionuclides having relatively short half-lives, such as radioactive Iodine-131, based on the data from soil sampled at the end of March 2011, hypothesizing that the ratio of these depositions to the Cs-137 deposition was constant across the village. We also hypothesized that the depositions of radionuclides in Iitate Village occurred at one time, 18:00, March 15, 2011, and calculated changes in the air radiation dose rate thereafter, along with cumulative air dose. The result of the calculation was that at a location where the Cs-137 deposition was 1,000 kBq/m², the cumulative air dose (air absorbed dose) at the height of one meter from the ground reached 32.6 mGy at the end of June 2011.

Interview survey of Iitate villagers

In early July 2013, we established an office near the Japan Railway Fukushima Station, and began to carry out the Iitate Village Initial Dose Assessment Project. Project members visited one member of each Iitate family and collected information about the behavioral patterns of all of the person's family members during the period between March 11 and July 31. Requests for interviews were made in three forms: by mailing a written request, visiting villagers at the temporary housing to which they had evacuated, and by making contact by telephone when the villagers were known to project members. Before the end of October 2013, the project had collected information on the behavioral patterns of 1,812 villagers from 496 families.

Of the villagers whose behavioral information was collected, 16% were 20 years of age or under, 42% were from 20 to 50, and 42% were 50 or over 50. Because many of those interviewed at the temporary housing were elderly, we gained the impression that the group we interviewed might be biased toward older villagers. Nevertheless, of the total Iitate population of 6,132 people, 18% were 20 years of age or under, 44% were between 20 and 50, and 38% were 50 or over (as of March 3, 2011), indicating that the interviewed group was similar to the actual Iitate population in terms of age distribution. We consider that the results of our interview survey correctly represent the entire population of the village.

Assessment of early-stage external radiation exposure

We assessed the external radiation exposure received by the 1,812 villagers whose behavioral information for the period between March 15 and July 31, 2011 was obtained. The following are the major hypotheses used for the assessment.

1. Only the external exposure received during the time people were actually present in Iitate Village was counted and the exposure outside the village was hypothesized to be zero.
2. The villagers were hypothesized to have been resident in their houses when they were in Iitate Village; they were hypothesized to have been indoors for 16 hours and outdoors for 8 hours daily. The indoor radiation reduction factor 0.4 was used.
3. As the conversion factor for determining effective dose based on air absorption dose (Sv/Gy ratio), 0.8 was used for children under 10 years old and 0.7 for people of 10 years of age or over.

The early-stage external radiation exposure estimated for the 1,812 villagers was distributed as shown in **Figure 1**. The average dose was 7.0 mSv, and the maximum was 23.5 mSv, received by a 60-year-old male. **Table 1** shows the average doses among different age groups. The dose received by children under 10 years old was low, indicating the fact that children were evacuated earlier than adults. In comparison between males and females, the average male dose was 7.5 mSv, which was slightly higher than the average female dose of 6.5 mSv.

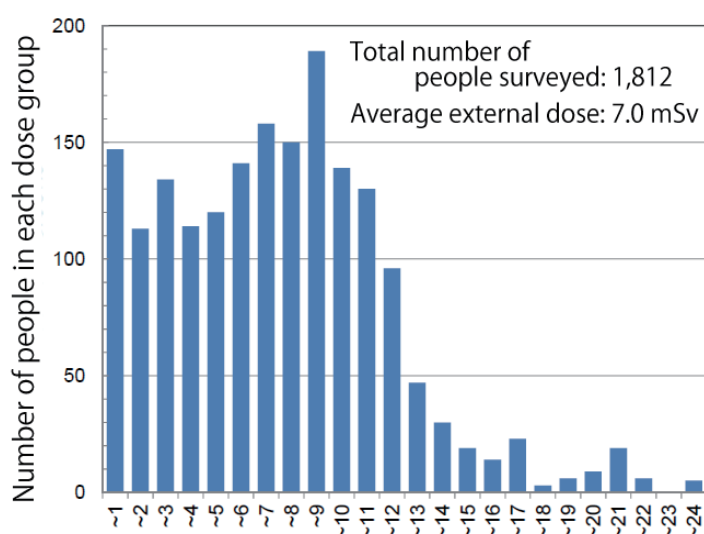


Figure 1. Cumulative external dose up to July 31, 2011, mSv

Iitate Village is divided into 20 administrative districts (**Figure 2**). Table 2 shows the average dose in the individual districts. In the Nagadoro, Hiso and Warabidaira districts, where contamination was high, people received greater exposure. In Nimaibashi–Sugaya and Okura, where contamination was relatively low, the dose received by villagers was also low.

Iitate villagers' provisional return to the village

As we proceeded with the interview survey, we learned that many of those who relocated swiftly after the March 11 earthquake and the nuclear accident temporarily returned to Iitate Village after a while and then evacuated again after the village was designated a planned evacuation zone. **Figure 3** is a graph of the percentage of villagers who were in the village. This graph explicitly indicates an interesting tendency in the change in population in the village; namely, those who evacuated immediately after the earthquake started to return to the village after March 21 and evacuated again after April 22, when the village was designated a planned evacuation zone. If the planned evacuation zone had been designated one month earlier, a major part of the early-period exposure in the village would have been prevented.

The reasons for the return of those who had evacuated quickly were as follows:

- The life in evacuation areas was difficult in many ways.
- Villagers were assured by hearing lectures organized by the government that the radioactive contamination would not pose a problem.

Age group	Number of people	mSv
< 10	155	3.8
10 ≤ 20 yr	128	5.1
20 ≤ 30 yr	139	6.3
30 ≤ 40 yr	171	5.5
40 ≤ 50 yr	151	7.6
50 ≤ 60 yr	315	8.1
60 ≤ 70 yr	262	8.5
70 ≤ 80 yr	292	7.5
Over 80 yr	194	7.3

Table 1. Average external dose by age group

- Companies in Iitate Village requested employees to return in order to restart business.

Let us note that March 21 was the day when Prof. Shunichi Yamashita, who had come from Nagasaki University to Fukushima as the prefectural risk advisor and who is well known for stating that “Radioactivity is nothing to worry about if you keep smiling,” delivered his first talk in Fukushima.

Comparison with the Fukushima Health Management Survey

It was surely the Japanese government’s job to assess the radiation dose received by people in the areas surrounding the Fukushima Daiichi Nuclear Power Station accident, but this responsibility was entirely thrown over to the Fukushima Prefecture at an early stage after the accident. The notorious Fukushima Health Management Survey (FHM survey) is being conducted as a result. In the FHM survey, the early-stage external radiation exposure has been assessed on the basis of the results of an activity questionnaire survey filled out by Fukushima residents. This questionnaire is used as the basic survey. Based on the FHM survey report, the average exposure of the 3,102 Iitate villagers who responded to the questionnaire was an estimated average dose of 3.6 mSv, which is about half our estimation. The differences between our survey and the FHM survey in the estimation of exposure dose are as follows:

1. Estimation of air dose rate: The FHM survey used the terrestrial survey data collected by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT). The MEXT data was collected more directly than the data taken by the airborne survey, but the MEXT measurements are fewer during the early stage immediately after the accident, during the time when people were exposed to large doses.
2. Collection of activity information of residents and the handling of hours: We interviewed Iitate villagers and collected the information concerning their residence and activities after March 11, 2011 on a daily basis. In the FHM survey, the questionnaire asked for more detailed information on peoples’ activities; residents were asked to enter where they had stayed and what they had done on an hourly basis.
3. Period of cumulative exposed dose calculation: We accumulated the exposure data of residents up to July 31, 2011, while the FHM survey covered the period up to July 11, 2011.
4. Exposure outside Iitate Village: Our estimates do not include exposure villagers may have received outside Iitate Village, but the scope of the FHM survey includes the entire area of Fukushima Prefecture, and the FHM survey includes the dose received after residents evacuated from Iitate Village.



Settlement	Persons	Average Cs-137 contamination (kBq/m ²)	Average external dose (mSv)
Kusano	203	682	5.8
Fukaya	71	789	6.3
Itamizawa	96	737	8.0
Sekisawa	77	867	7.8
Komiya	182	934	8.4
Yagisawa-Ashihara	45	546	5.8
Okura	50	343	3.5
Sasu	76	491	4.6
Miyuchi	101	661	5.7
Itoimachi	83	730	5.8
Maeda-Yawagi	103	802	7.1
Okubo-Sotouchi	65	736	6.0
Kami iitoi	117	755	6.2
Hiso	72	1087	11.0
Nagadoro	104	1789	12.5
Warabidaira	53	1321	9.3
Sekine-Matsuzuka	83	763	6.3
Usuishi	58	746	8.1
Maeda	120	685	5.5
Nimaibashi-Sugaya	48	396	3.5

Figure 2. The twenty administrative districts in Iitate Village

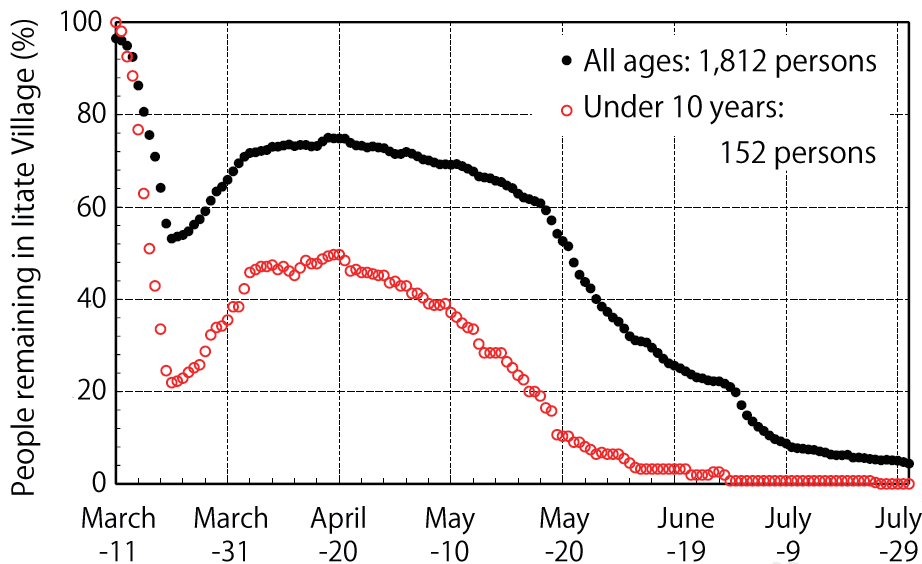


Figure 3. Percentage of Iitate villagers who remained in the village after March 11, 2011

In consideration of these differences in estimation methods, the author has the frank impression that our estimation results, which are double those of the FHM survey, are more consistent with each other than we had expected. We used many hypotheses in the estimation process and the results include many uncertainties. The specific reasons for the differences between our results and those of the FHM survey is a matter we intend to examine in the future.

Cancer death risk assessment based on early-stage exposure

What we are principally concerned about regarding the influence of the average roughly 7 mSv exposure dose is an increase in the number of cancer cases in the future. There have been many discussions about the relationship between exposure and cancer risk (dose and effects). The linear model, in which the cancer probability increases in proportion to exposure even when the exposure is small, is the model most consistent with the actual observation data, and best withstands criticism. Based on the linear model, we discuss here the risk of cancer in association with the early-stage external radiation exposure of Iitate villagers. The expected number of cancer deaths increases in proportion to the collective dose. The collective dose is the sum of individual doses, and has the unit man-Sv. If 1,000 people each received an exposure of 1 mSv, the collective dose is 1,000 man-mSv, which is 1 man-Sv. As for the 1,812 Iitate villagers we surveyed for the period ending on July 31, 2011, the collective exposure was 12.6 man-Sv. When this estimate

is applied to the entire Iitate Village population (6,132), the collective exposure is 42.7 man-Sv. Supposing that the risk factor for radiation-induced cancer death is 0.055 per Sv, as per the International Commission on Radiological Protection (ICRP) Recommendations, the future excess cancer deaths in Iitate Village will be 2.3 cases. According to research by Dr. John W. Gofman of the United States, the risk factor of radiation-induced cancer death is 0.4 per Sv, and when

this factor is applied, the future number of excess cancer deaths is 17. Today, one out of two Japanese contracts cancer and one out of three Japanese dies of cancer. Therefore, of the population of Iitate Village of roughly 6,000 people, about 2,000 would likely die of cancer even if the nuclear accident had not occurred. Based on our risk assessment, the early-stage external radiation exposure in Iitate Village will add two to seventeen extra cancer deaths, or will result in about a 0.1% to 1% increase in cancer deaths.

(I presented the research results in this paper at the Reviewer Meeting of the Ministry of Environment Research Grants in December 2013. In response to the presentation, an expert reviewer committee member commented: "There are doubts about the appropriateness of estimation of cancer deaths using scientifically uncertain risk factors in the low-level exposure range." It seems that discussion using specific death tolls is considered inconvenient for the "risk communication" promoted by the Japanese government.)

Although there were many problems and challenges involved in this research, I find it significant that we were able to independently assess the early-stage external radiation exposure of people in Iitate Village. As for the thyroid exposure due to the intake of radioactive Iodine-131, we intend to use a different method from that used for external exposure (and this will be investigated in research that is separate from the research sponsored by the Ministry of the Environment).

Basic Energy Plan Formulated for the First Time since the Great East Japan Earthquake Disaster

On April 11, the Japanese cabinet approved the new Basic Energy Plan. The Plan, originally proposed by Liberal Democratic Party (LDP) and New Komeito Party Diet members who are considered to be pro-nuclear power, is formulated by the government on the basis of the 2002 Basic Energy Act. The original motivation of the establishment of the act was that the Diet members who considered that nuclear power plant construction would become more difficult due to advances in the deregulation of the power industry could put the brakes on deregulation by deemphasizing it with respect to the need for a stable supply of energy and environmental suitability.

Specifically, the Advisory Committee on Energy and Natural Resources, a consultative body of the Minister of Economy, Trade and Industry held meetings to formulate the Plan and the proposal put forward by the Advisory Committee became the government's plan. The Plan was first formulated in 2003, and revised in 2007 and 2010.

As the Fukushima nuclear accident had occurred in March 2011, however, it became necessary to revise the Plan since implementation of the existing pro-nuclear power Plan had become problematical. In October of that year, the Advisory Committee on Energy and Natural Resources set up a Fundamental Issues Subcommittee, which began deliberations. After deliberations in the Committee, a call for public comments, public hearings and a deliberative poll, in September 2012 the Democratic Party of Japan (DPJ), the governing party at the time, released its "Innovative Strategy for Energy and the Environment," which called for "putting all available policy resources into achieving zero nuclear power in the 2030s" (*Nuke Info Tokyo 151, The Innovative Strategy for Energy and Environment and its future*).

Dissatisfied with this policy, the chairperson of the Fundamental Issues Subcommittee, Akio Mimura, invalidated the functioning of the Committee by abolishing it until the change of government to the LDP/New Komeito alliance, and altering the location of the formulation of the Basic Plan by establishing a new Strategic Policy Committee with fewer members committed to a nuclear

phaseout. The "Opinion on the Basic Energy Plan" finalized by the new subcommittee in December 2012 reversed policy back to support for nuclear power.

Thus it was stated that "the use of nuclear power is to continue as the important base load power forming the basis of support for a stable energy supply and demand structure." The plan also called for "the promotion of restarts of nuclear power plants whose safety has been confirmed by the Nuclear Regulation Authority."

It was perhaps considered that this overly explicit mode of expression was unwise from a public relations point of view. The approved Basic Energy Plan, with some consideration for the pro-nuclear power group within the governing parties, toned down the pro-nuclear rhetoric by deleting the phrase "the use of nuclear power is to continue," and employed standard power industry terminology by stating that nuclear power was to be "the important base load power contributing to the stability of the energy supply and demand structure." Nuclear power plant restarts were also to "respect the judgment" of the Nuclear Regulation Authority. Furthermore, the introduction to the Plan emphasizes "a reduction in dependence on nuclear power as far as is possible."

Nevertheless, the Plan does in fact "promote" nuclear power. "A reduction in dependence" does not mean a complete nuclear phaseout, and there is no indication about how far the reduction might go. Far from it, the construction of new nuclear power plants is mooted under the pretext of "replacing (old) nuclear power plants with safer ones." It is reported in the media that these are all clearly stated in the original proposal for the "Opinion on the Basic Energy Plan" drawn up by the Advisory Committee on Energy and Natural Resources, later toned down to read "will clarify the scale (of nuclear power generation) to be secured." Even so, this would still allow the construction of new nuclear power plants. At the same time, aged plants that would cost too much to refurbish to meet the new safety standards would have to be decommissioned, necessitating the construction of new plants to secure the required scale of power generation.

(Continued on page 11)

Court ruling bans restart of Ohi Nuclear Power Plant



Plaintiff's group heading toward Fukui District Court

On May 21, 2014, the Fukui District Court handed down a verdict recognizing outright the plea of residents living within 250 km of the Kansai Electric Power Company's (KEPCO) Ohi Nuclear Power Plant to ban the restart of the plant's Units 3 and 4 (PWR, both 1,180 MW), stating that "the nuclear power plant must not be operated." This is the first court decision in the more than 20 lawsuits calling for injunctions against NPP construction or restarts that have been newly brought since the Fukushima Daiichi Nuclear Power Station accident occurred. The reason why the verdict in this trial has been handed down before those in trials that were already in progress at the time of the Fukushima nuclear accident is that the plaintiffs, the residents, narrowed down the number of points of contention in order to expedite the court's ruling. It can be said that the result is a revolutionary verdict that fundamentally alters previous legal judgments.

The verdict points out the effect on personal rights by stating that if a nuclear accident were to occur there would be a "possibility of bringing about a situation

where people are deprived of fundamental rights over an extremely extensive area" and that "economic activities that entail, even hypothetically, such a danger, while considering that the existence itself of those activities is impermissible under the Constitution may be an extreme argument, even if there is at least the slightest concrete risk of bringing about such a situation, it is natural that its prohibition be recognized."

Having said that, the ruling stated that "the nuclear power plant in question has the following defects in the cooling function and containment structure at the time of an earthquake" and carefully enumerated the specific risks. The verdict also made it clear that although new reference seismic movements had been established for the so-called test of compliance with the new safety standards now being carried out by the Nuclear Regulation Authority (NRA), and it has been concluded that NPPs can withstand earthquakes that are likely to occur, this was considered to be unsound. This signifies that the court believes there are insufficiencies in the reference seismic motions formulated by each of the power companies.



Lawyers hold signs reading 'justice is alive' and 'a suspension has been ordered' at the Fukui District Court

citizens who put down roots and live their daily lives there are the national wealth, and this court believes that the inability to reclaim this is what we should term a loss of national wealth.”

These grounds for the decision are not limited to risks relevant to Ohi Units 3 and 4 alone, but are true of all NPPs. There is a strong possibility that this verdict will be repeated in restart prohibitions in the trials that are now ongoing throughout the country. On May 22, KEPCO appealed the ruling at the Kanazawa Branch of the Nagoya

In response to the claim of the defendant, KEPCO, that the suspension of operations of NPPs resulted in “an outflow and loss of national wealth,” the verdict stated that “even if the suspension of operation of the NPP in question resulted in a large trade deficit, this should not be termed an outflow or loss of national power, since an abundant national territory and the

High Court. In the past, verdicts blocking NPP operations have twice been overturned by rulings of higher courts, but if a series of verdicts banning NPP restarts is handed down, it will likely become much harder for higher courts to overrule them.

Baku Nishio (Co-director of CNIC)

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Looking at the nuclear fuel cycle, the 2010 Basic Energy Plan stated that “The nuclear fuel cycle for effective use of plutonium, uranium and so on recovered by reprocessing spent fuel is necessary to further raise the competitive edge of nuclear power generation, and in the future will be firmly promoted as a robust state strategy that ‘will not be altered for the mid-term future.’” In the new Plan, this has changed to “In order to resolve the issues involved in the disposal of spent fuel and to alleviate the risks and burdens for future generations, the role of the fuel cycle will be to reduce the volume of high-level radioactive waste, reduce its degree of toxicity and contribute to the effective use of resources. Reprocessing, plutothermal generation and other efforts will be promoted with sufficient consideration for previous activities, efforts being made while continuing to gain the understanding of the related local governments and the international community.”

Spent fuel has transformed from a source for “raising the competitive edge” of nuclear power to an “issue” that has to be resolved. The term “fast breeder reactor” has disappeared and is no longer a development goal. R&D on a “fast reactor” through international cooperation is mentioned, but there is no plan for a new reactor to be constructed inside Japan. Monju has been “positioned as an international research base for the reduction of the volume of nuclear wastes, the reduction of toxicity, and the advancement of technologies and so on related to nuclear non-proliferation.”

As a document, the completed Basic Energy Plan is not realistic. As with former Plans, it will immediately be consigned to the dustbin of wishful thinking.

(Baku Nishio, Co-director of CNIC)

Who's who

***Professor Harutoshi Funabashi,
Chairperson of the Citizens' Commission on Nuclear Energy***
Tsunehide CHINO*

Professor Harutoshi Funabashi is a sociologist who has carried out research on various themes concerning pollution and environmental issues since the 1980s. As one of the founders of the Japanese Association for Environmental Sociology, formed in 1992 and which boasts one of the largest memberships in the world (roughly 600 members), he continues to lead the Association despite being over 65 years of age.

Prof. Funabashi serves as chairperson of the Citizens' Commission on Nuclear Energy, established in April 2013, organizing the discussions which have included the participation of many citizens and specialists over the last year. The agenda for pursuing a nuclear phaseout is systematically organized and policy principles and criteria for the resolution of the issue are clearly set out in the "Road to a Society with Zero Nuclear Power Stations – The Citizens' Nuclear Phaseout Policy Outline."

Since 1989, Prof. Funabashi has been grappling with the issue of the nuclear fuel cycle facilities in Rokkasho Village, Aomori Prefecture, and visits the area each year. He has conducted hearings with a large number of people in the Aomori Prefecture council and administration as well as with residents and journalists, has critically analyzed the policies that gave rise to this concentration of radioactive waste, of which there are few examples of its kind in the world, and has published many books and papers on the subject. His research attitude of getting to know the area well has gained him the trust of many people, and he is displaying leadership in such organizations as the Science Council of Japan and the Japan Sociological Society.

Prof. Funabashi is actively involved in civil society, making policy proposals for the realization of a recycling-based society and making efforts in many regions to support the startup of renewable energy projects run by local citizens. He has also been active in the local residents' movement in Oiso Town, Kanagawa Prefecture and serves as a director of the "Oiso Eneshift" formed in the town in 2013.

Prof. Funabashi's research is not limited to energy issues. He has also conducted research on a wide range of themes including the two areas that have Minamata disease, Kumamoto and Niigata, noise and vibration pollution associated with the construction of the Shinkansen (bullet train) and waste issues, but his career as a sociologist began as a theorist. Later, advancing to research in social



Professor Harutoshi Funabashi

problems, touched off by the experience of meeting ecologists while studying in France, he began to concentrate on research in environmental issues from the age of about 40.

It is not well known that Prof. Funabashi studied aeronautical engineering at the Faculty of Engineering, the University of Tokyo. Faced with the university uprisings of the late 1960s, he apparently decided to study sociology after seeking a path for his future life. Prof. Funabashi has a 5 kW solar panel system installed on the roof of his home. Originally, this was a 250 W panel system that he made himself in 1993 from parts bought in Akihabara (Tokyo's electrical parts and appliance district), and which he has continued to improve and upgrade since that time. This is a practical project that was made possible by his experience of studying engineering as an undergraduate, and is symbolic of his posture of pushing forward with local social reform while analyzing modern society at a high level of abstraction.

Prof. Funabashi's hobbies are trekking and music. However, extreme hard work in recent years has kept him away from the mountains. He is fond of Beethoven's symphonies and also likes to sing. At the alumni even every March (I was also one of Prof. Funabashi's students) it is possible to see Prof. Funabashi singing the Hosei University anthem in ringing tones.

*Associate Professor of Environmental Sociology,
The Faculty of Arts, Shinshu University

NEWS WATCH

Pumping to Begin at the Fukushima Daiichi Nuclear Power Station Ground Water Bypass Plan

On April 4, the Fukushima Prefecture Fisheries Cooperative Federation (FPFCF) secured a written response from TEPCO promising strict observance of effluent standards in its plans to divert ground water from the mountain side before it reaches the nuclear plant as a contamination countermeasure at the Fukushima Daiichi Nuclear Power Station. The FPFCF made a formal decision to accept the response. On April 9, pumping began at special purpose wells. On April 17, however, tritium was detected in excess of standards in water that had been drawn from one of the wells on April 15. Water drawn on April 18 and 22 had returned to within standards, and thus pumping from that well was resumed on April 24. Release of water into the ocean was begun on May 21.

A Mistake or an Intentional Act? Highly Contaminated Water Misrouted

On April 11, the water level failed to rise at a processing building to which contaminated water from a turbine building at the Fukushima Daiichi Nuclear Power Station was being temporarily routed, but instead was falling. An investigation was initiated on April 12 and on April 13 it was discovered that temporary pumps that had been installed in June 2011 as an emergency measure for transferring contaminated water were running, and were thus stopped. On April 14, TEPCO announced that 203 tons of contaminated water had been mistakenly routed to an incineration building. The pump had been actuated by hand, possibly deliberately, but on May 2, TEPCO announced that there was a strong likelihood that it had been human error as a result of mistaking the pump switches for air conditioning equipment switches. Other incidents due to human error have occurred frequently at this nuclear plant, and there continue to be cases which could be either accidental or deliberate.



Ground water storage tanks at Fukushima Daiichi Nuclear Power Station (Photo by TEPCO)

Hakodate City Files Suit to Halt Construction of Ohma Nuclear Power Station

The Ohma Nuclear Power Station (ABWR, 1,383 MW) being built in Ohma Town, Aomori Prefecture by the Electric Power Development Co. was planned for plutonium-thermal generation as the world's first commercial nuclear power plant to have all of its reactors equipped to handle MOX fuel. Hakodate in Hokkaido is located just across the Tsugaru Strait from the Ohma Nuclear Power Station, a mere 23 km away. Because the "right to life" of the municipality would be threatened by the effects of an accident at the Ohma Nuclear Power Station, if one were to occur, on April 3, Hakodate City filed a lawsuit in the Tokyo District Court seeking to halt construction of the Ohma Nuclear Power Station, the first time a municipality in Japan has undertaken such a suit.

A ferry connects Hakodate and Ohma, taking an hour and thirty minutes to make the journey, and many of Ohma Town's citizens travel regularly to Hakodate, which has large hospitals and commercial facilities and other urban functions, for medical care or shopping for daily necessities. In this way, Hakodate and Ohma Town have historically had strong economic and cultural ties.

Vitrified Residue Returns Shipment Arrives from the UK

Vitrified high-level radioactive waste being returned to Japan from the UK, where it had been sent for reprocessing, has arrived in Rokkasho Village, Aomori Prefecture, where it has been transferred to a storage facility belonging to Japan Nuclear Fuel Ltd. Returns of nuclear waste entrusted to France for reprocessing have ended, but this is the fifth shipment from the UK. The Pacific Grebe departed from the British port of Barrow-in-Furness on February 14, traveled via the Cape of Good Hope and the southwestern Pacific, and arrived at the port of Mutsu-Ogawara on April 22. Two of the transport flasks were unloaded on April 22 and the remaining three on April 23, with the ship departing on the same day, immediately after unloading.

Between ten and twenty people gathered early on the morning of April 22 for a protest rally, but their voices were drowned out occasionally by roars from fighter jets circling on practice runs above the adjacent Amagamori firing range. About 30 people participated in a protest in front of the Aomori Prefectural Government offices.

Fukushima Daiichi Decommissioning & Decontamination Engineering Company Inaugurated

On April 1, TEPCO established the Fukushima Daiichi Decommissioning & Decontamination (D&D) Engineering Company as an internal entity. The company is attempting to create underground frozen walls as a means of solving the problem of water contamination from the Fukushima Daiichi Nuclear Power Station. On April 24, the company announced that it had confirmed the efficacy of frozen soil in small-scale experiments conducted in March through April. The Nuclear Regulation Authority (NRA) says there are safety issues with this, and is not satisfied with TEPCO's explanation regarding the necessity for underground frozen walls. On May 26, the NRA recognized a partial start to the construction of the walls in June.

Working Group Compiling a Report on Locations for High-Level Waste Processing Facilities

The radioactive wastes working group established by the Ministry of Economy, Trade and Industry's Advisory Committee on Natural Resources and Energy, produced an interim report on April 30 on the problem of high-level radioactive waste disposal. A formal decision was announced on May 23 after revision of the report. Hideyuki Ban, Co-director of CNIC, who is a member of the working group, called for continued deliberation on the basis of the large number of public comments the issue had drawn, but he was overruled and the revision of the report was entrusted to the chairman.

The interim report said that making a necessary thorough review of measures taken so far had been considered, but it rejected the proposed "provisional storage for a period of several tens of years to several hundreds of years" put forth by the Science Council of Japan in September 2012, and the main thrust of the report is reconfirmation of the policy of deep geological disposal.

Furthermore, regarding the disposal site selection process, the interim report says, "The national government must explain the characteristics of the geological environment of the candidate regions from a scientific standpoint, indicating areas which are more highly scientifically suitable, and seek to promote understanding of the site selection."

A conference of the concerned ministers on December 17 of last year determined that the national government should indicate prospective sites based on scientific studies, and then take a leading role in efforts to gain residents' understanding of the important points and making proposals to a number of regions. It recommended choosing disposal sites through public solicitation of candidate sites, but met with strong criticism from the pro-nuclear faction because little progress was apparent. However, if the government makes proposals without first achieving agreement on nuclear energy policy, the result will only be chaos among the regions and the problem will remain unsolved. It will be necessary first to ascertain anti-nuclear sentiment in order to achieve the other proposal by the Science Council of Japan for "total volume management."

Nuke Info Tokyo is a bi-monthly newsletter that aims to provide foreign friends with up-to-date information on the Japanese nuclear industry as well as on the movements against it. It is published in html and pdf versions on CNIC's English website: <http://cnic.jp/english/>

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