

Citizens' Action in Response to Radiation from Chernobyl

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Over twenty years have passed since the nuclear accident at Chernobyl. As a result of this accident, the world, in particular Europe, moved towards a phase out of nuclear energy. In Japan too, the Chernobyl accident led many citizens to face up to the problems associated with nuclear power plants and a wide variety of campaigns sprang up around the country.

However, Japan continues to promote nuclear power. At the time of the accident, there were 32 nuclear power reactors in operation in Japan. There are now 55 reactors and the Rokkasho Reprocessing Plant is about to begin commercial operations.

Radiation from Chernobyl Reached Japan

The Chernobyl accident occurred on 26 April 1986. About a week later, radioactivity reached Japan, which is 8,000 kilometers away from Chernobyl. Rain which fell at the beginning of May was far more radioactively contaminated than expected. Quite high levels of radioactivity were recorded in leafy vegetables, fresh tea, milk from cows which ate contaminated grass, and so on.

The Ministry of Health and Welfare set a provisional standard of 370 Bq/kg (combined Cesium-134 and Cesium-137) for imported food and established an inspection system. Beginning with hazelnuts from Turkey, which in January 1987 recorded 520~980 Bq/kg, food from Europe exceeding the provisional standard kept turning up.

The Japanese government and the Ministry of Health and Welfare announced that "Japan's food is safe and imported food is being strictly controlled". Nevertheless, citizens' anxiety about contaminated food rose abruptly. Citizens' Nuclear Information Center (CNIC) received dozens of phone calls each day from people asking questions such as, "Which foods are contaminated?" or "What are the health effects?" In Japan, many people who discovered that the spaghetti that they ate and the tea that they drank was contaminated due to the Chernobyl accident faced up to the problems of nuclear energy for the first time. Until then, most city residents saw nuclear energy as someone else's problem, but in response to the Chernobyl accident many people began to take an interest in nuclear power as an issue of relevance to them personally.

CNIC's Activities

Through its newsletter, CNIC published the state of contamination throughout Europe and data obtained through measurements by Kyoto University Research Reactor Institute's Nuclear Safety Research Group and university researchers who supported a nuclear phase out. It also responded to inquiries from citizens and the media.

In April 1987 CNIC published a booklet, which covered the basics of nuclear power and radiation and also provided measurement data and information about the foods and regions for which

precautions should be taken. The title of the booklet translates as “Fallout on the Dinner Table – Food Contamination from the Chernobyl Accident”. The impact of the booklet far exceeded expectations. In response to popular demand new information was provided in further publications: Part 2 (August 1987) and Part 3 (December 1988) of the same booklet and “Fallout on the Dinner Table” by Takagi Jinzaburo and Watanabe Mikiko (Kodansha Gendai Shinsho series, 1990).

In October 1987 a symposium on food contamination was held under the title “How to Protect the Dinner Table from Fallout”. In the same month, Nuke Info Tokyo, a bimonthly English newsletter from the Japanese movement, was launched with a view to actively disseminating information from Japan to the rest of the world. Through these initiatives, the range of CNIC’s activities and its support base expanded greatly.

Anti-Nuke Delivery Shop

Taking a hint from the Dutch grass roots “Science Shop”, Takagi Jinzaburo suggested starting an “Anti-Nuke Delivery Shop”. This started from the desire of non-expert citizens to communicate the problems of nuclear power in their own words.

It began in Tokyo in January 1987 with an “Anti-Nuke Delivery Shop” to train teachers with a accurate knowledge of nuclear power. After receiving 10 training lessons, in response to requests from citizens groups around Japan, the “shop keepers” began explaining the problems of nuclear power and communicating their concerns in their own words at study sessions around the country. Requests arrived for sessions ranging from study meetings for a few people to lectures for over a hundred people. A wide range of topics were covered, including food contamination, the structure of nuclear power plants and their dangers, accidents, energy and so on.

Training courses were also held in Hokkaido, Aomori, Chiba, Kanagawa, Nara and “Anti-Nuke Delivery Shops” sprang up throughout Japan.

Citizens’ Radiation Measurement in Japan

Citizens were very anxious, because Japan is very dependent on food imports. Incidents of shipments of hazelnuts, herbs and spices, mushrooms, etc which had to be returned continued to arise and there were also incidents of imported food processed in third countries that was contaminated with European ingredients.

Stimulated by activities in Europe, there were calls in Japan for an independent center to measure radioactivity. In September 1987 CNIC installed a radiation measurement device (Sodium Iodine Scintillation Counter) and began taking measurements where the demand was greatest, for example baby milk powder and spaghetti. In November, the device was moved from CNIC and an independent center (“Radioactively Contaminated Food Measurement Center” - Director Fujita Yuko) began taking orders for measurement. The Center had a management committee comprising staff involved in taking measurements, citizens, experts, consumers groups and cooperatives.

At the same time, several other organizations independently installed radioactivity measuring equipment and began carrying out measurements for citizens. In Aomori, members of the students’ group “Environmental Medicine Research Group” at Hirosaki University Graduate School began taking measurements. “Hamamatsu Radioactively Contaminated Food Measurement Center” and the

Tokyo-based Tampopo House radioactive contamination measurement team began in the middle of December 1988, while in Osaka the “Committee to Measure Radioactivity in Food” began in April 1989 in the Environmental Monitoring Research Center.

Also, there was an active movement all over Japan to encourage local governments to install not thrown away. It was turned into animal feed, so it will return as contaminated cows milk and meat. It will also make its way to third world countries, so a strict international information and monitoring network is needed to prevent this.

What is the Value of Continued Measurement?

As time went by the trend was for measurements not to detect any radioactivity. Citizens became less interested as contamination of imported food was brought under control and requests for measurement became fewer. We faced the problem of how to maintain testing activity. There was a fundamental debate about the purpose of continuing measurements. However, we learnt that it is strict monitoring activities by citizens that brings pressure to bear on the government and companies.

Chernobyl showed us that one accident at a single nuclear power plant can spread radioactivity throughout the whole world and leave lasting effects. Some people said that they felt despair when they thought of the problems for the next generation of children facing contamination of food and of the environment. On the other hand, there were also many people who found hope in the friendships formed through their activism.

Measurement equipment is now approaching its use by date. In some places lack of funds to replace equipment and the failure of local governments to provide continuing funding have forced programs to close. Many groups are involved in numerous local issues besides measurement. Along with younger people, they continue their steady efforts, screening films and taking up themes closely connected to daily life such as sustainable energy, nuclear disaster prevention, etc..

The Criminality of Japan’s Radiation Effects Researchers

Five years after the accident, in May 1991, the IAEA’s International Advisory Committee concluded, “There were no disorders directly attributable to radiation exposure, but the survey did find many health disorders. The accident affected people psychologically, and also worsened the socioeconomic situation (the report suggests that these were related to the health disorders).” It also dismissed the increase in child thyroid cancer which had begun to appear as follows: “There are no definite pathological records of increases in thyroid cancers caused by radiation,....”

We at CNIC promptly criticized the report in a special 15 June 1991 edition of our Japanese newsletter and in a special edition English newsletter of our entitled ‘Erasure of the Chernobyl Accident is Unforgivable, A Critique of the IAEA/ IAC (International Advisory Committee) “Assessment of Radiological Consequences and Evaluation of Measures for the Chernobyl Accident” (May 21, 1991) ’.

We also sent our protest overseas through our English newsletter, Nuke Info Tokyo. An article in the July/August 1991 (No. 24) reported on a demand by anti-nuclear groups’ for the cancellation of an IAEA seminar held in Tokyo in relation to the report.

The chairperson of this Committee was Shigematsu Itsuzo, who at the time was head of the Radiation Effects Research Foundation in Hiroshima. It was criminal that the head of an organization

tasked with researching the effects of radiation exposure at Hiroshima and Nagasaki played such a role. Before pursuing the question of whether the illnesses suffered by victims of the accident were the result of radiation, the first priority should have been to clarify what type of illnesses there were and to provide relief. Based on the precautionary principle of protecting people's health, it was necessary to respond promptly to suspected causes.

At the center of those strongly refuting the claims of a sudden increase in thyroid cancer were Shigematsu Itsuzo and researchers from the Radiation Effects Research Foundation. They should admit that the 1991 report got it wrong, but to this day we have heard no statement from them admitting their mistake.

To say there is no effect and ignore the issue, just because it has not been scientifically proven, is not a scientific response. They should carefully examine the data to find the trend in the incidence of cancer and the rate of death from cancer over the period since exposure, then extend that to estimate the incidence of cancer and the number of deaths from cancer into the future.

Epidemiological studies of victims of the nuclear bombs in Hiroshima and Nagasaki are still continuing 60 years after the bombs were dropped and as time goes by valuable new information keeps emerging. In regard to solid cancer, the latest Life Span Study (Report 13) report (Preston et al. *Radiation Research*, 2003), "The excess solid cancer risks appear to be linear in dose even for doses in the 0 to 150 mSv."

Japanese researchers into the effects of radiation should thoroughly come to terms with this fact and spread the message to the world. They should also strive to clarify the effects of long term exposure to low doses of radiation, including the effects of internal exposure.

The American National Academy of Sciences' BEIR-VII report (Biological Effects of Ionizing Radiation VII, National Research Council of the National Academies, 2005) concludes, "current scientific evidence is consistent with the hypothesis that there is a linear dose-response relationship between exposure to ionizing radiation and the development of radiation-induced solid cancers in humans."

There are new moves in Europe. In regard to the assessment of the effects of radiation from the Chernobyl accident and for people living near nuclear facilities, the European Committee on Radiation Risk (2003 Recommendations of the ECRR, Green Audit 2003)) is demanding that, instead of depending on a risk model based on exposure data from Hiroshima and Nagasaki, organizations which promote nuclear energy such as IAEA and ICRP should conduct Europe-wide epidemiological research employing a new scientific basis.

Most of Japan's radiation effects researchers are ignoring these moves. They still refuse to engage in deep debate. They continue to dismiss the effects of low radiation doses to Chernobyl victims, victims of the JCO criticality accident, people living in the vicinity of reprocessing and nuclear power plants, and nuclear workers saying, "There were no effects on the hibakusha of Hiroshima and Nagasaki at these levels of exposure, besides which the dose is unclear."

We must engrave these problems in our hearts and continue to monitor and critique the situation.