

“Co-expertise” of radiation protection and solidarity for the rehabilitation of living conditions in Fukushima – Report on recommendations of the second ICRP dialogue seminar 2012 in Date City

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Introduction

The radiation problems that followed the Great East Japan Earthquake and the subsequent nuclear power plant disaster is truly an international problem. The International Commission on Radiological Protection (ICRP), a non-governmental organization that advises governments and international institutions on regulatory matters on radiation protection, is keeping watch over the course of the nuclear disaster with great concern, and taken occasions to make necessary recommendations.

In this column, I would like to look back on a detail of recent events, in particular the direction of the discussions and recommendations of the second ICRP Dialogue Seminar. The seminar was held February 25-26, 2012, in Date City, Fukushima Prefecture.

ICRP and its connection to the Fukushima nuclear disaster

ICRP has had substantial involvements with the nuclear disaster three times during the year until March 2012. The first was March 21, 2011, when ICRP released the special recommendations for Japan. This emphasized the importance of the ICRP's new recommendations (2007-2009) for dealing with “emergency radiation exposure situations” (radiation exposure during the disaster) as well as “existing radiation exposure situations” (radiation exposure that remains after the disaster).

The second time was when Japanese and English versions of the ICRP publication containing these new recommendations was released free of charge in early April 2011, namely ICRP-Publ.111 “Application of the Commission’s Recommendations to the Protection of People Living in Long-term Contaminated Areas After a Nuclear Accident or a Radiation Emergency” (2009. Hereafter ICRP-111) as an important reference for radiation protection management (the realization of this release was also due to active approach from Japan). (Note from GEPR editorial: In March 2012, the free release of the Japanese version ended. The English version (ICRP) continues to be available for free. The Japanese version is currently for sale (Japan Radioisotope Association).)

The third time was when “dialogue seminars” which can be thought of as one form of “local forum” as described in ICRP-111, were actually held in Japan. These seminars offered a place for discussion or dialogue among officials, experts and local people concerned from the different areas affected by the disaster, each of which had a different response to the situation. In these seminars, methods of information sharing and problem solving began to be put into practice.

From the ETHOS project of Chernobyl to the new ICRP recommendations

Current Japanese laws and regulations related to radiation protection (enforced from 2001) are mainly based on ICRP-60 (1990 recommendations). However, the 1990 recommendations did not include the international experience from the 1986 Chernobyl accident. This is because there was insufficient recognition and information concerning the accident at the stage of 1990.

After the former Soviet Union ended in 1991, relocation policies were enforced in the Republics of Ukraine, Belarus and Russia that were contaminated in the accident. These are now known as the four category divisions based on the levels of soil contaminations by cesium-137 etc. The result of this was that the local inhabitants were again sent into a state of confusion by national administrations, which may have deepened distrust in politics, administrations and experts.

The European Commission (EC) called for the activities they were involved in to help restore these people's lives in this situation, namely the ETHOS project. Inhabitants' participation in decontamination, agricultural recovery and radiation protection initiatives was voluntary and prerequisite. (Site where citizen volunteers are attempting to implement the project in Japan, with various reports and translation of documents on the ETHOS project)

The ETHOS project is considered almost the sole successful example among the many support activities conducted in the area around Chernobyl. It began 10 years after the accident. Including the experience the so-called 2007 ICRP recommendations ICRP-103 was released as the first one to incorporate the experiences of Chernobyl. One of the central to the ETHOS project was Dr. Jacques Lochard, who later chaired the preparation of a document regarding ICRP-103's practical applications such as radiation protection and restoring people's living conditions in areas with existing exposures.

This is the above-mentioned ICRP-111 published in 2009. The content of ICRP-111 is rigid, and has the abstract style of a generalized theory. However, as any Japanese alive today who reads it, we would attest its substance is incredibly human.

Report on the second ICRP dialogue seminar

Thus the local support activities that were documented in ICRP-111 began to be put into practical applications. The first ICRP dialogue seminar was held in November 2011 in Fukushima City. On November 28, Lochard explained "Rehabilitation of Living Conditions After a Nuclear Accident - Lessons From Chernobyl" to the Cabinet Office, Government of Japan. The second dialogue seminar, which the author attended, was held in February 2012 in Date City, Fukushima Prefecture.

Laws and regulations in Japan concerning radiological decontamination were enacted in August 2011 and executed from January 2012. However, actual decontamination efforts were underway before this, with several forward-thinking endeavors undertaken by municipalities and experts in the fields of nuclear power and radiation protection. In Date City, Fukushima Prefecture, the site of the seminar, Dr. Shunichi Tanaka, deputy chair of the Japan Atomic Energy Commission and an expert on radiation shielding, has become a municipal advisor and, with the understanding of the mayor, various initiatives have been making progress. Date City, which is on the other side of the mountains from Iitate Village, one of the locations with high ambient dose, is dotted with houses where integral radiation dose is foreseen to exceed 20mSv per year (the suggested evacuation level), and officials have racked the brains for ways to handle the situation.

Seminar participants

The first day of the seminar began with self-introductions by all the participants (61 people) and audience members (about 40 people), to encourage voluntary participation and initiative. The presenters included the mayor of Date, chairperson of local neighborhood association, primary school principal in the City, fruit and rice farmers, and officials of JA (Japan Agriculture) Date, Co-op Fukushima and Co-op Tokyo.

Presenters on day two included two guests from Belarus, two from Norway, and representatives of the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD) and two from French Nuclear Protection Evaluation Center (CEPN).

Japanese participants included representatives, Ms R. Ando from "ETHOS IN FUKUSHIMA" (Iwaki City, Fukushima Prefecture), Mr. T. Hangai from AFTC (Association for Future's creation of Tamura and Children, an NPO in Tamura City, Fukushima Prefecture), Dr. K. Nakagawa from the University of Tokyo, and Dr. I. Yasui from United Nations University, as well as Mr. S. Nishida the mayor of Date, Dr. S. Tanaka of the Radiation Safety Forum, and officials of the Fukushima Medical Association, local newspapers Fukushima Minpo and Fukushima Minyu, NHK science department, and the Fukushima prefectural decontamination measures division. The participants related their particular viewpoints and experiences with each other, and there was a vigorous exchange of opinions.

Seminar day 1

The mayor of Date graduated from an engineering department, and he showed a quantitative understanding of the problems he faced, as well as a strategic decisiveness. In an environment of distrust, anxiety, incredible damage, and complex problems, he impressed me with his precise and realistic way of coping with the situation.

I also paid a sincere respect to the way primary school has cooperated with parents to deal with the situation. With their continued monitoring using glass-badge dosimeters, they have clarified concrete issues. Amid a difficult school management, they have shown a tangible sense of responsibility.

Date City is a famous fruit producer, but now people say, "We've lost the bountiful land our ancestors created." However, you also hear, "We're aiming for complete ND (non-detectable) fruit production." A cumulative total of 33,327 people have carried out high-pressure cleaning of the entire 2,205 hectares of orchards, as well as shaving bark under freezing conditions (from mid-December 2011 to the end of March 2012). Their overwhelming, tremendous efforts still continue. This was the presentation from JA-Date under the title "Uniting producers and consumers."

I also recall with sympathy their empathy of Co-op Fukushima with its study, research and support, and Co-op Tokyo's efforts amid such wavering thoughts in the circumstances.

Also, the inhabitants of the Oguni area in Date City, which has a notably high ambient dose rate, established an NPO at a general meeting on September 16, 2011, with 38 founders and the endorsement of 211 people. The residents are actively battling the radiation problems by carrying out detailed ambient dose rate measurements with a then highest density of 100-meter mesh.

Seminar day 2

The first half of the second day of the seminar was for a special session on introducing the initiatives from overseas. The representatives from Belarus described regional risk communication. They have 50 regional information centers, but these were only set up in 2007. Why so late? Because they are necessary, these new independent initiatives are in action. Some of these presenters have had experience with the ETHOS project, which has now developed on a nationwide scale.

There was also a report on the traditional diet of the Sami people of northern Norway and radiation-exposure countermeasures. It was a statistical analysis of about 500 people and it was the first time I had seen it, but the results showed the countermeasures were successful.

The second half of day two was for introducing the support activities and NPOs. Each reported their unique development, explained how they had come to be. All seem to have identified each area's particular issues through the process of trial and error. They continue to search for the best possible solutions through dialogue and cooperation with people living and concerned experts. This can be said that they are employing the "co-expertise" conception as suggested in ICRP-111. This is not a mere sharing of disconnected pieces of information, but the co-ownership and co-employment of certain kinds of coherent and experiential knowledge.

The strong will, wisdom and power displayed by all the NPO staffs in coming up with solutions to the problems they faced nearly overwhelmed me. Battling enemies you cannot see like radiation and radioactivity is not easy. Alongside the macro issues of national support policy and the compensation problems, these regional micro problem-solving efforts, which provide a feedback micro-macro loop of actual practice, are the true progress.

Conclusions and recommendations

To finalize the meeting, the recommendations (*draft*) of this second ICRP dialogue seminar were read aloud in European style. The document was released with all the names of the participants (made public March 8, 2012).

Some examples of the contents are: "e. Build radiological protection culture and practices in the community by supporting the development of places of dialogue that encourage and facilitate the sharing of information and experience. This should be based on judgments and local knowledge of residents, advice from experts, and with the support of NPOs."

"f. Encourage authorities and experts to develop practical information and support for distribution including measurements, assistance with interpretation, and advice on day-to-day actions to reduce and maintain exposures as low as reasonably achievable."

“i. Support community expectations that decisions on recovery actions reflect their priorities, be based on their knowledge of the local context, and support their current and future interests.”

As with damage of the tsunami, the effects of this radiological disaster differ between areas and communities. Being aware of the importance of giving serious consideration to these differences from the beginning may be the biggest lesson from this seminar.

In closing

The following phrase is from the introduction of ICRP-111, “After all, isn’t it true that what most people really want is to continue living their lives, and that they are willing and able (sometimes with a little guidance) to help make that happen?”

The aim of this document is to offer a concrete plan for people who wish to continue living in affected areas, that is based on careful considerations after investigating and understanding of a wide variety of real-life information. Conversely, there is no doubt room for further improvement place to place by responding to the diversity of the needs of daily living conditions. However, this way of thinking would have an element of universality.

There has likely never been a time when expert knowledge has had such a close connection with the needs of daily life. This experience suggests the necessity for solidarity or “co-expertise”, whether internationally or in regional cooperative knowledge. As a matter of fact, the true foundation for practical radiation protection is no other than protecting the life of people. I hope that learning from this historical ordeal my country is undergoing will lead to the creation of a new era through global studies and local lives learning together.

(Reference sites; provided by GEPR editorial)

1) The “ETHOS IN FUKUSHIMA” initiative is being conducted through civilian volunteers. [Site](#)

2) Jacques Lochard “Stakeholder Involvement in the Rehabilitation of Living Conditions in Contaminated Territories Affected by the Chernobyl Accident: the ETHOS Project in Belarus”

3) Jacques Lochard “Fundamental theory for developing a practical culture of radiation protection: lessons of the ETHOS project”, international seminar “Restoration of living environments in areas contaminated by the Chernobyl disaster: contribution of the ETHOS approach” November 15-16, 2001, presentation slides (Japanese translation)

The original French “[Eléments pour le développement d’une culture radiologique pratique: les enseignements du Projet ETHOS](#)”