EFFORTS FOR RECONSTRUCTION AND REVITALIZATION AFTER THE GREAT EAST JAPAN EARTHQUAKE AND NUCLEAR POWER PLANT ACCIDENT

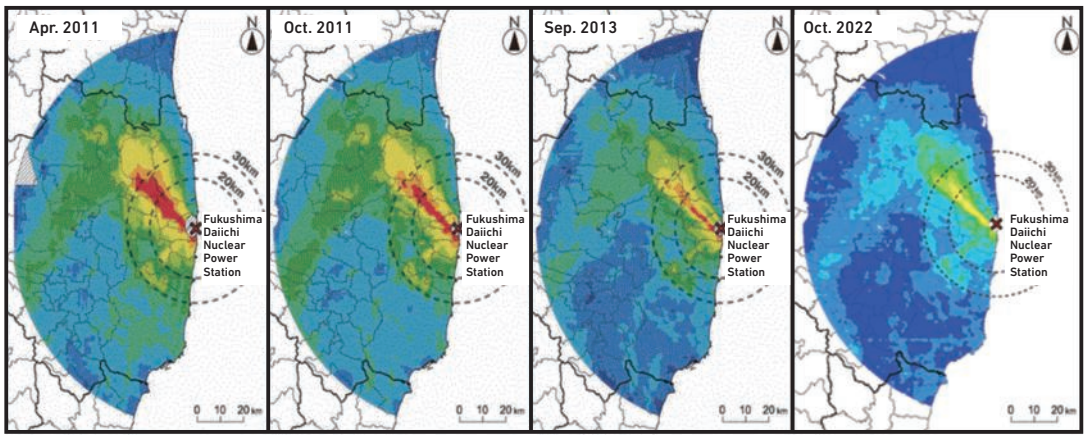
3

On March 11, 2011, a magnitude 9.0 earthquake occurred off the coast of Japan. It was the most powerful earthquake ever recorded around Japan. It generated a tsunami that caused massive damage across a wide swath of northeastern Japan, particularly along the Pacific coast. Simultaneously, the accident at the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi Nuclear Power Station released a large volume of radioactive materials into the environment, forcing many residents to evacuate to other areas. The Ministry of the Environment has been engaged in the efforts aimed at the reconstruction and revitalization of the affected areas, including the decontamination and construction of Interim Storage Facilities, the disposal of specified wastes, and the administration of the Specified Reconstruction and Revitalization Bases (SRRBs) in the Restricted Areas.

1 STATUS OF ENVIRONMENTAL RESTORATION FROM RADIOACTIVE CONTAMINATION

Airborne monitoring within the 80-km zone around the Fukushima Daiichi Nuclear Power Station has shown that the average air dose rate of radioactivity at a height of 1 meter above the ground continues to decline as of October 2022. In addition, according to monitoring in Fukushima Prefecture and surrounding areas conducted by the Ministry of the Environment, no radioactive cesium has been detected in rivers, coastal area water, or groundwater in recent years. Further, in lakes, radioactive cesium has been detected in only 3 out of 164 spots in FY 2021.

Distribution of air dose rates within 80 km radius of TEPCO Fukushima Daiichi Nuclear Power Station



Note: The April 2011 chart was mapped using a different method than is used now.
Source: Secretariat of the Nuclear Regulation Authority

2 INITIATIVES FOR RESTORING THE ENVIRONMENT IN AFFECTED AREAS

Decontamination measures for soil contaminated by radioactive materials

By the end of March 2018, whole area decontamination of 100 cities, towns, and villages in eight prefectures was completed, excluding Restricted Areas. In addition, decontamination work and the demolition of houses and other buildings in SRRBs have been progressing since December 2017. By the end of February 2023, the progress rate for decontamination was over 90%, while that for demolition in relation to the number of applications received was approximately 86% in the SRRBs.

As a result of these efforts, evacuation orders for the SRRBs were lifted for Katsurao Village and Okuma Town in June 2022, Futaba Town in August 2022, Namie Town in March 2023, Tomioka Town in April 2023, and Iitate Village in May 2023.

Regarding areas outside the SRRBs, the Nuclear Emergency Response Headquarters and the Reconstruction Promotion Council issued a document titled “Consideration on the Lifting of Evacuation Orders to Facilitate Return to and Residence in Areas Outside Specified Reconstruction and Revitalization Bases” in August 2021. Accordingly, efforts will be made to decontaminate necessary locations and lift evacuation orders so that residents who wish to return home may do so over the course of the 2020’s. To implement this government policy, we had a draft law to partially amend the Act on Special Measures for the Reconstruction and Revitalization of Fukushima approved by the Cabinet in February 2023 and submitted it to the 211th Session of the Diet.

Efforts toward final disposal of removed soil and waste within Fukushima Prefecture

Regarding removed soil and waste generated by decontamination work within Fukushima Prefecture, necessary measures are to be taken to complete the final disposal outside Fukushima Prefecture within 30 years of the start of interim storage.

To achieve final disposal outside the prefecture, it is important to reduce the amount of final disposal. To this end, demonstration projects to convert removed soil into recycled soil and to confirm its safety, and the development of technologies for volume reduction and recycling have been carried out. In FY 2022, a new demonstration project for road embankment was launched to investigate the possible use of recycled soil for road construction. In addition, preliminary coordination with related organizations has been started to conduct demonstration projects outside Fukushima Prefecture.

Following FY 2021, to foster an understanding throughout Japan of soil recycling and final disposal outside the prefecture, various initiatives have been implemented, including dialogue forums around the country on the necessity and safety of volume reduction and recycling of soil, site tours of demonstration projects for the general public, lectures on environmental restoration projects for university students, and others.

Future-oriented initiatives for a new stage of reconstruction

In response to local needs in Fukushima Prefecture, the Ministry of the Environment has promoted environmental restoration initiatives and initiatives for a new stage of reconstruction by identifying Fukushima's strengths from an environmental viewpoint, such as decarbonization, resource circulation, and natural symbiosis. Based on the "Cooperation Agreement on Promotion of Future-oriented Environmental Measures for the Reconstruction of Fukushima" concluded with Fukushima Prefecture in August 2020, the Ministry of the Environment is working with Fukushima Prefecture and relevant local governments to implement various measures.

Sea area monitoring and countermeasures against adverse impacts on reputation relating to ALPS treated water

At the Inter-Ministerial Council for Contaminated Water, Treated Water, and Decommissioning Issues held in April 2021, regarding the handling of water treated by the Advanced Liquid Processing System (ALPS) and other facilities, it was decided as a basic policy to aim for the discharge of ALPS treated water into the sea after a two-year period based on the premises of assured safety and full measures against adverse impacts on reputation.

Following up to this basic policy, the national government's Comprehensive Radiation Monitoring Plan was revised in March 2022. The Ministry of the Environment commenced sea area monitoring of the concentrations of tritium and other radioactive nuclides in seawater, fish, and seaweed in FY 2022 in advance of the planned discharge of the ALPS treated water. The discharge of ALPS treated water into the sea has been scheduled for FY 2023. The Ministry of the Environment plans to increase the frequency of analysis after the discharge.

In November 2022, experts from the International Atomic Energy Agency (IAEA) and other countries visited Japan to conduct joint sampling as part of an interlaboratory comparison program. Regarding interlaboratory comparisons made since 2014, the IAEA's report for the 2021 results confirmed that Japanese analytical institutions participating in the sea area monitoring program continued to demonstrate their capabilities for accurate and precise measurements.

3 PROMOTING RISK COMMUNICATION RELATED TO RADIATION HEALTH EFFECTS

As a countermeasure against anxieties regarding radiation in Fukushima Prefecture, technical support is being provided to counselors and local government staff to help them respond to consultations from residents, including providing training and dispatching experts. Additionally, for residents who have returned or are considering returning, risk communication is being carried out through round-table discussions and other efforts regarding concerns and questions about radiation that may arise in life after returning. Furthermore, Workshops and seminars are being conducted in response to requests from local governments and educational institutions outside Fukushima Prefecture.

Regarding the health effects of the TEPCO Fukushima Daiichi Nuclear Power Station accident, the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) assessed that "Future health effects directly related to radiation exposure are unlikely to be discernible." In addition, the assessment of the Prefectural Oversight Committee for the Fukushima Health Management Survey is that: "At present, no causal relationship between thyroid cancer detected during the first Full-Scale Survey (the second-round survey) and radiation exposure can be identified." In principle, the Thyroid Ultrasound Examination (TUE) program is conducted for each subject once every two years, and the first Full-Scale Survey (the second-round survey) was conducted from FY 2014 to FY 2015.

Public ignorance of accurate scientific knowledge regarding the health effects of radiation may generate anxiety and rumors, which in turn may lead to discrimination and prejudice. For this reason, the GuGuRu Project was launched in July 2021 to help people develop sound judgment and avoid being misled by rumors; the project is promoting efforts to disseminate accurate information on the health effects of radiation throughout the country in an easy-to-understand manner.

Best Practice

GuGuRu Project

Under the GuGuRu Project, seminars have been organized in many parts of the country. A major theme of these seminars is the importance of not believing everything one hears but rather perusing it on one's own and developing the ability to make correct judgments. We also provide opportunities for people to think about and send messages against discrimination and prejudice by learning to improve their self-expression capability by trying to make presentations and writing drama lines. Starting in FY2022, we have been carrying out strategic public relations activities from the perspective of behavioral economics, such as tailoring content according to the attributes of different audiences (those with scientific knowledge and no anxiety, those with scientific knowledge and anxiety, those indifferent to radiation, and so on).

The spread of false or misinterpreted information can lead to discrimination and prejudice. The GuGuRu Project also provides opportunities to learn about academic papers, such as the process of publishing a paper and the differences between papers and official reports issued by international organizations. Thus, the methodology of critical thinking related to the reliability and interpretation of scientific knowledge, including the health effects of radiation exposure, is shared with the audience.

Poster for raising awareness

Seminar for students

Publicly soliciting lines to create a drama

Open lecture for the media

Source: Ministry of the Environment