

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

On March 11, 2011, a magnitude 9.0 earthquake struck 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. At the same time, 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.

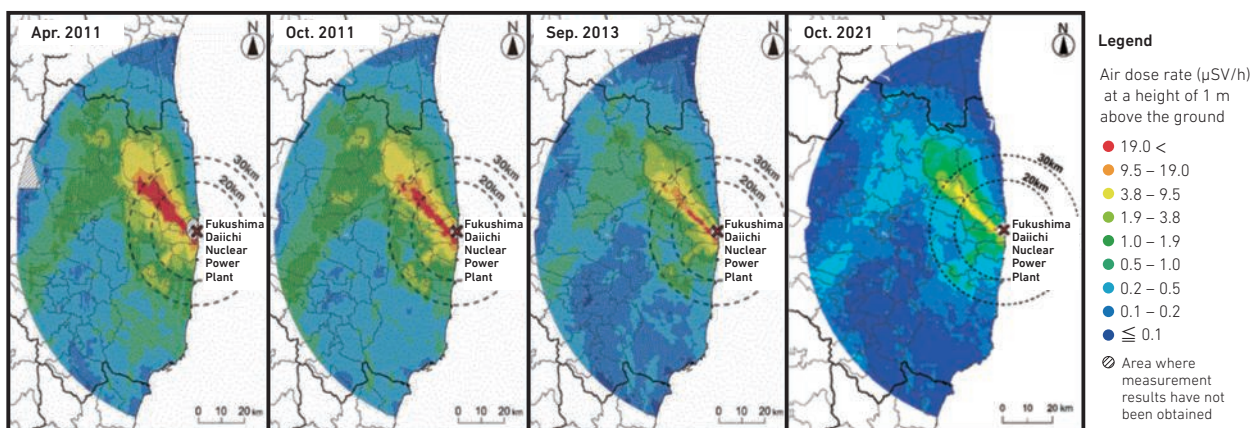
The following sections present the efforts being made toward the reconstruction and revitalization of the disaster areas.

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# 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, as of October 2021, has declined by about 80% compared with the rate in November 2011. In addition, according to monitoring in Fukushima Prefecture and surrounding areas conducted by the Ministry of the Environment, radioactive cesium has not been detected in rivers, coastal area water quality, or groundwater in recent years, and in lakes, radioactive cesium has been detected in only 2 out of 163 spots in 2020.

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



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

\*These maps include air dose rates from natural radionuclides.

# 2 INITIATIVES FOR RESTORING THE ENVIRONMENT IN THE 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 area”. In addition, decontamination work and demolition of houses and other buildings in Specified Reconstruction and Revitalization Bases (SRRBs) have been progressing since December 2017. As of the end of February 2022, in SRRBs, the progress rate for decontamination is over 90%, and the progress rate for demolition (in relation to the number of applications received) is about 83%.

In Katsurao Village, Okuma Town, and Futaba Town, preparatory overnight stays (allowing evacuated residents to return and stay overnight in their homes or neighborhoods) in the SRRBs began on November 30, 2021, December 3, 2021, and January 20, 2022, respectively. The aim is to lift evacuation orders for the SRRBs of these three municipalities from the spring of 2022. Additionally, in Namie Town, Tomioka Town, and Iitate Village, decontamination and other projects are underway with the aim of lifting evacuation orders for SRRBs in the spring of 2023.

Furthermore, in areas outside the SRRBs, according to the “Consideration on the Lifting of Evacuation Orders to Facilitate Return to and Residence in Areas Outside Specified Reconstruction and Revitalization Bases” that was decided in August 2021, care is being taken to carry out decontamination of areas necessary for facilitating residents’ return, based on thorough understanding of the intentions of individual residents regarding their return.

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

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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 from the start of transfer to the Interim Storage Facility.

In order to achieve final disposal outside the prefecture, it is important to reduce the amount of final disposal. To this end, removed soil has been converted into recycled soil, demonstration projects have been conducted to confirm its safety, and technology has been developed to facilitate volume reduction and recycling.

From FY 2021, there has been a fundamental strengthening of activities to foster understanding throughout Japan toward soil recycling and final disposal outside the prefecture, and various initiatives are being carried out, such as holding discussion forums around the country on the necessity and safety of volume reduction and recycling of soil, conducting field tours of demonstration projects for the general public, and presenting lectures on environmental restoration projects for university students.

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## Future-oriented initiatives for a new stage of reconstruction

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In response to the needs within Fukushima Prefecture, the Ministry of the Environment is promoting the “Fukushima Regeneration/Future-oriented Project” to create and rediscover regional strengths from environmental perspectives such as decarbonization, resource recycling, and harmony with nature. 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 carry out measures from the three perspectives of decarbonization, countermeasures against rumors, and countermeasures against weathering.

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## Sea area monitoring and countermeasures against harmful rumors relating to ALPS treated water

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At the Inter-Ministerial Council for Contaminated Water, Treated Water and Decommissioning Issues held in April 2021, in regard to the handling of water treated by Advanced Liquid Processing System (ALPS) and other methods, it was decided as a basic policy to aim for discharge of ALPS treated water into the ocean after a two-year period, on the provision of strict compliance with domestic regulatory standards.

Based on this basic policy, the national government’s “Comprehensive Radiation Monitoring Plan” was revised in March 2022 and the Ministry of the Environment commenced sea area monitoring from FY 2022 before discharge of ALPS treated water.

In addition, as a countermeasure against rumors about ALPS treated water, the Task Force for Countermeasures Against the Effects of the Nuclear Disaster, Including Harmful Rumors (Reconstruction Agency Secretariat), has compiled a “Package of Measures for Disseminating Information to Foster Understanding of ALPS treated Water,” and the national government is working in a united effort to promote these initiatives. Furthermore, explanations about ALPS treated water are being provided at public round-table discussions and seminars both inside and outside of Fukushima Prefecture.

### 3 PROMOTION OF 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 provision of training and dispatching of experts. Additionally, for residents who have returned or are considering returning, risk communication is being carried out through roundtable discussions and so on, regarding on concerns and questions about radiation that may arise in life after returning. Workshops and seminars are also being carried out in response to requests from local governments and educational institutions outside of Fukushima Prefecture.

Regarding the health effects of the TEPCO Fukushima Daiichi Nuclear Power Plant accident, the assessment of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) is that “No adverse health effects among Fukushima residents have been documented that are directly attributable to radiation exposure from the FDNPS (Fukushima Daiichi Nuclear Power Station) accident.” In addition, the assessment of the Prefectural Oversight Committee for the Fukushima Health Management Survey is that “As of this time, no correlation can be found between thyroid cancer cases detected through the Full-Scale Survey (second-round survey) and radiation exposure.” (In principle, the Thyroid Ultrasound Examination (TUE) program is conducted for each subject once every two years, and the first FFS (Full-Scale Surveys) (the second-round survey) was conducted from FY 2014 to FY 2015.)

The public ignorance of accurate scientific knowledge about the health effects of radiation may emerge 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 not be misled by rumors, and the project is promoting efforts to disseminate accurate information on the health effects of radiation throughout the country in an easy-to-understand manner.

Examples

#### Commencement of preparatory overnight stays within Specified Reconstruction and Revitalization Bases (SRRBs)

In three municipalities that aim to lift evacuation orders in SRRBs from the spring of 2022, preparatory overnight stays have commenced.

Evacuees wishing to return and stay overnight at their own homes or neighborhoods have been able to do so since November 30, 2021 in Katsurao Village, since December 3, 2021 in Okuma Town, and since January 20, 2022 in Futaba Town. This became possible with the prospect of the lifting of evacuation orders as a result of the implementation of

decontamination and other measures. With priority on advancing development of infrastructure, etc., steady progress toward recovery is being made step by step, with the aim of enabling full-scale return of evacuees to their homes, starting with preparatory overnight stays. In addition, for “Restricted area” outside of the SRRBs, the policy is to carry out decontamination work so that people who wish to return to those areas can do so within this decade.



Decontamination work at Ono Kindergarten in Okuma Town

Source: Ministry of the Environment



Decontamination work in Futaba Town (aerial view)

Source: Ministry of the Environment