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RECONSTRUCTION AND RESTORATION OF THE ENVIRONMENT AFTER THE GREAT EAST JAPAN EARTHQUAKE

On March 11, 2011, East Japan was struck by the largest earthquake ever recorded in or around Japan. With magnitude 9.0, it triggered enormous tsunamis that caused immense, widespread damage, primarily along the Pacific coast of the Tohoku region. The tsunami caused accidents at Tokyo Electric Power (TEPCO) Fukushima Daiichi Nuclear Power Plant, which resulted in the release of large amounts of radioactive materials into the environment. Here we introduce our efforts for restoration of the environment, taking action on pollution by the radioactive materials associated with the accidents at the Fukushima Daiichi Nuclear Power Plant.

Recovery of the environment from radioactive pollution

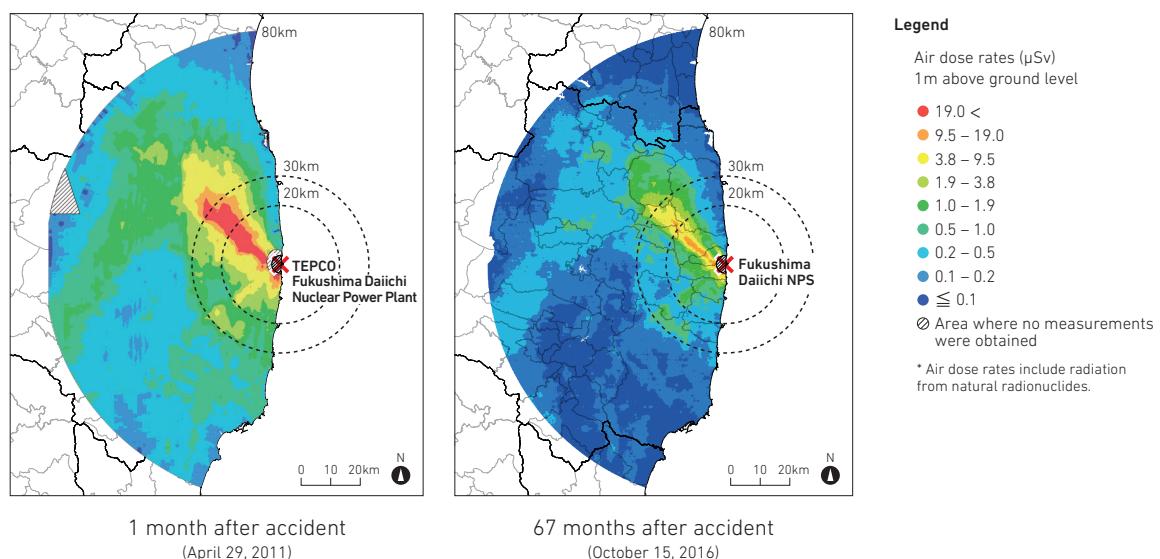
As of October 2016, radiation levels within an 80-kilometer radius of the Fukushima Daiichi Nuclear Power Plant had declined by 71% from November 2011 levels (where comparable data is available). Predictions of the decline of radiation made in August 2011, taking into account estimates of the physical decay of radioactive material and the influence of rainfall, suggested that radiation would decline by about 40% in two years, and by about 50% in 5 years. The actual decline has been preceding at a

greater pace than predicted, probably due to the effect of decontamination work, and to greater than expected effects from natural factors such as rainfall.

The Ministry of the Environment has also been monitoring radioactive materials in water since 2011. Levels of radioactive cesium have been virtually undetectable in ground water and in public water bodies such as rivers, lakes, and coastal areas since 2012.

Distribution of air dose rates in 80-km radius

Source: The Secretariat of the Nuclear Regulation Authority



Decontamination of soil contaminated by radioactive materials

The Ministry of the Environment (MOE) undertook the decontamination of the 11 municipalities designated as the Special Decontamination Areas (SDA). By the end of March 2017, whole area decontamination in the SDA was completed except for the designated Areas where Returning is Difficult. Furthermore, operation of temporary incinerators installed by the MOE in the SDA has enabled good progress to be made in the treatment

of disaster waste contaminated by radioactive materials. This process has already been completed by some municipalities.

In the Intensive Contamination Survey Areas, almost all the decontamination work handled by municipalities has been completed for homes, public facilities, and other places closely connected with daily life.

Interim Storage Facility

The Interim Storage Facility has been established and will eventually provide a centralized facility for safely managing and storing soil containing radioactive materials generated from decontamination work in Fukushima Prefecture, and designated waste exceeding 100,000 bq/kg being stored in Fukushima Prefecture, until final disposal is conducted. Negotiations with landowners in order to secure land needed for the facility are progressing steadily, and construction

work started on the soil storage facilities and some other facilities in November 2016. At the same time as working to gain the further understanding and appreciation of landowners for this project, the construction of facilities and the transportation of soil into the site will continue, using the land already available. Efforts are also being made to develop technology for volume reduction and soil recycling in preparation for future final disposal outside Fukushima prefecture.

Lifting of evacuation orders

With the exception of the designated Areas where Returning is Difficult, whole area decontamination had been completed by March 2017 in all municipalities that had previously been subject to evacuation orders. Judging that the infrastructure and services essential to daily life had been restored, evacuation orders on Habitation Restricted Areas and on Preparation Areas for Lift of Evacuation Order had been lifted by April 1, 2017, with the exception of Futaba and Okuma. Consequently, residents have begun to return.

Evacuation order status (As of April 1, 2017)

Areas where Returning is Difficult	[Grey Box]
Habitation Restricted Areas	[Orange Box]
Preparation Areas for Lift of Evacuation Order	[Green Box]
Former Areas under Evacuation Orders (areas where the evacuation orders were lifted by spring 2017)	[Dashed Purple Box]

Source: Cabinet Office

