# RECONSTRUCTION AND ENVIRONMENTAL REMEDIATION AFTER THE GREAT EAST JAPAN EARTHQUAKE

On March 11, 2011, the biggest earthquake ever observed in and around Japan (M = 9.0 on the Richter scale) and the accompanying tsunami hit the Pacific Ocean coast of Tohoku and neighboring regions of Japan. The natural disaster was extensive and devastating. The tsunami also attacked the Tokyo Electric Power (TEPCO) Fukushima Daiichi Nuclear Power Plant, which resulted in an accident of a large amount of radioactive materials release into the environment. Many people were forced to evacuate. In this chapter, we describe some of the initiatives taken for reconstruction and revitalization of the region.

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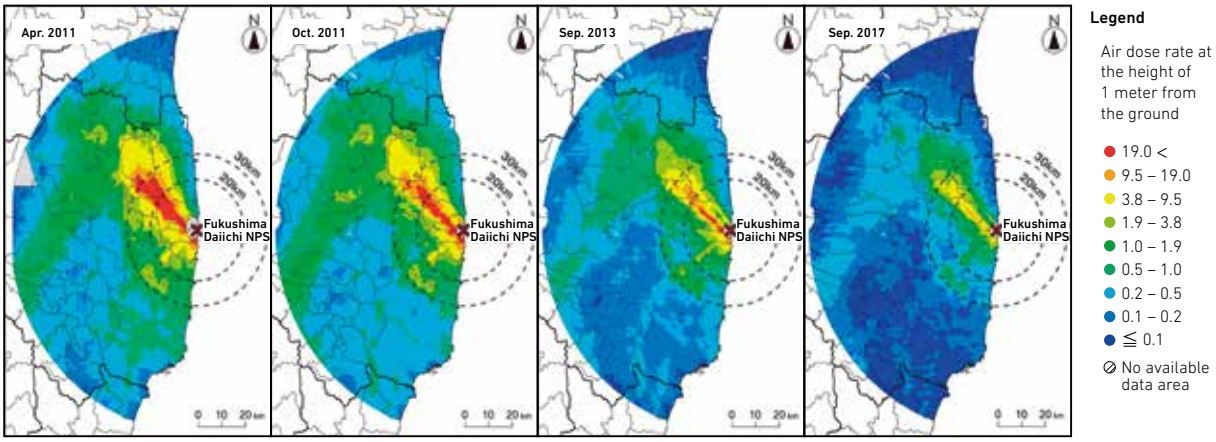
# AIR DOSE RATE

Airborne monitoring results show that the average air dose rate measured at the height of 1 meter from the ground in the 80 km radius area of TEPCO Fukushima Daiichi Nuclear Power Plant in September 2017 was down 74% from the November 2011 level. The radioactive materials that the TEPCO Fukushima Daiichi Nuclear Power Plant accident released were mostly iodine 131, cesium 134, and cesium 137, whose half-lives are 8 days, 2 years, and 30 years, respectively.

Previously, the air dose rate was estimated to go down by about 40% in 2 years and about 50% in 5 years from the August 2011 level, in light of the physical decay of the radioactive materials and the impact of rainfall and other natural factors. The measured decline was faster than the estimate, presumably because of the decontamination work as well as rainfall and other natural factors.

**Air dose rate distribution within 80 km radius of TEPCO Fukushima Daiichi Nuclear Power Plant**




* The figures include air dose rate by natural radioactive nuclide.
Source: Nuclear Regulation Agency

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# ENVIRONMENTAL REMEDIATION IN AFFECTED AREAS

## Decontamination of soil contaminated by radioactive materials and others

In accordance with the law, the national government and municipalities together completed by the end of March 2018 whole area decontamination of 100 municipalities in 8 prefectures, except for Areas where Returning is Difficult (ARD).

Houses in ARD are going to be dismantled and decontaminated in accordance with the Plans for Specified Reconstruction and Revitalization Bases, which is prepared by the municipality and approved by the national government.

To date, the reconstruction and revitalization plans were approved for the town of Futaba in September 2017, followed by town of Okuma in November, town of Namie in December, and town of Tomioka in March 2018. The Ministry of the Environment has already begun some works in accordance with the plans to proceed with the dismantling and decontamination of houses.

## Construction of Interim Storage Facility (ISF)

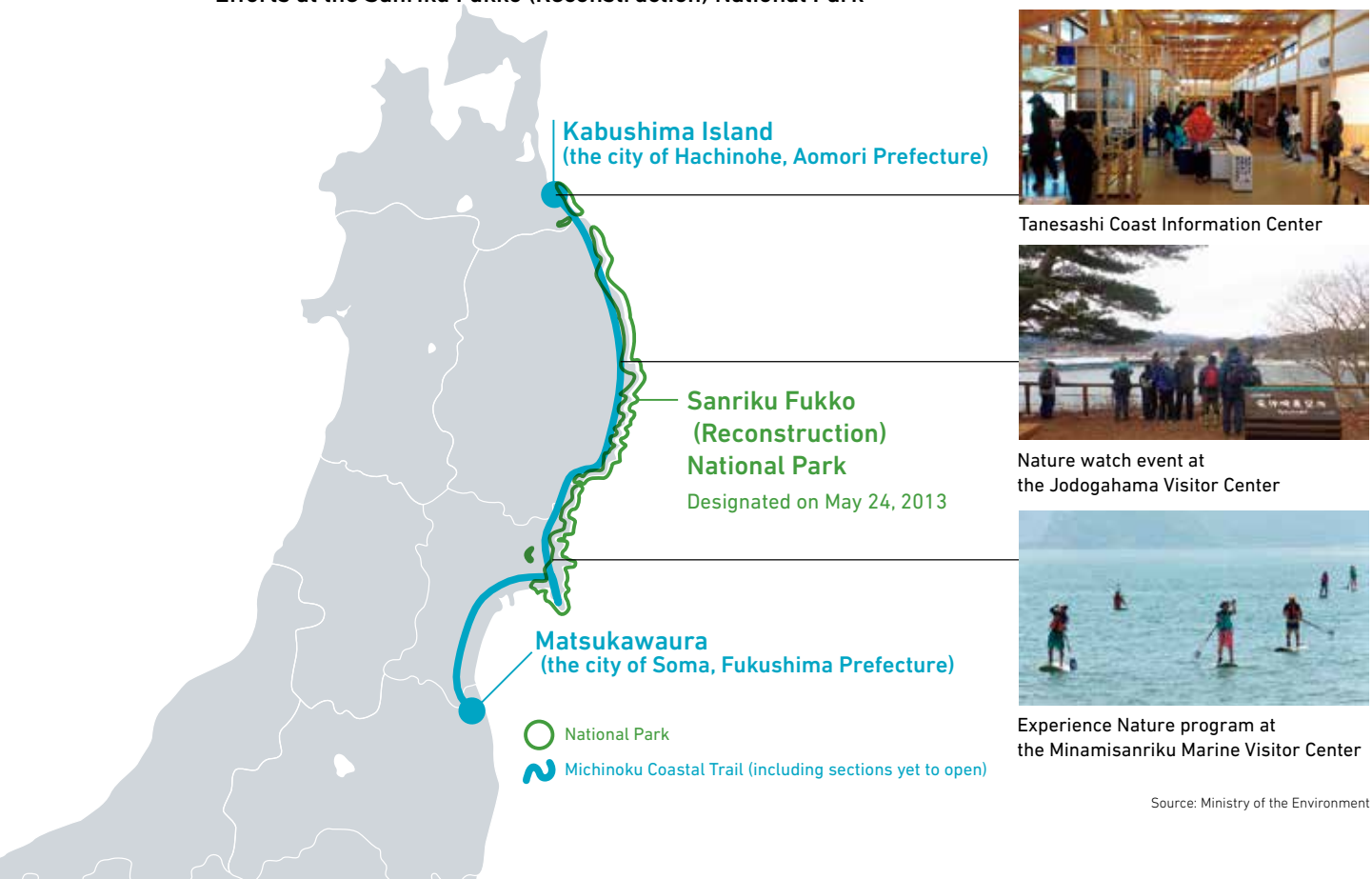
The soil contaminated by radioactive materials generated from the decontamination works in Fukushima Prefecture and the designated waste having radioactive concentration more than 100,000 Bq/kg currently stored in the prefecture are going to be stored in the Interim Storage Facility (ISF) safely and intensively until their final disposal. The planned total amount of delivery into the ISF by FY2020, the final year of the Reconstruction and Revitalization Period, is maximum 12.5 million m3 of the soil and waste. MOE is now making every effort to achieve the goal.

## Green reconstruction

The Michinoku Coastal Trail that would stretch from the city of Hachinohe, Aomori Prefecture to the city of Soma, Fukushima Prefecture, with approximate total distance of 1,000 km, is being opened on a section-by-section basis. Between April and September of 2017, the sections of the town of Onagawa, the city of Minamisanriku, and the city of Rikuzentakata were opened in Miyagi Prefecture (about 250 km in total) and the sections of the town of Otsuchi and the city of Kuji in Iwate Prefecture were also put to service (about 40 km in total). They represent a new addition of about 290 km to the existing trail. Thus, the total length already in use has increased to about 690 km.

Various projects have been implemented in major locations of Sanriku Fukko (Reconstruction) National Park and the Michinoku Coastal Trail including enhanced disaster risk management, refurbishing of disaster-affected park installations, and remodeling and upgrading of tourist attraction spots. Recently, the Ishinomaki Riverside Visitor Center was opened in the city of Ishinomaki, Miyagi Prefecture. It will serve as the core base for the Satoyama Satoumi Field Museum project of the national park.

**Efforts at the Sanriku Fukko (Reconstruction) National Park**





Tanesashi Coast Information Center


Nature watch event at
the Jodogahama Visitor Center


Experience Nature program at
the Minamisanriku Marine Visitor Center

Source: Ministry of the Environment