

RECONSTRUCTION AND ENVIRONMENTAL REMEDICATION AFTER THE GREAT EAST JAPAN EARTHQUAKE

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, accidents at the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi Nuclear Power Plant released a large volume of radioactive materials into the environment, forcing many residents to flee to other areas.

The following examples introduce work that is being done to reconstruct and revitalize the disaster areas.

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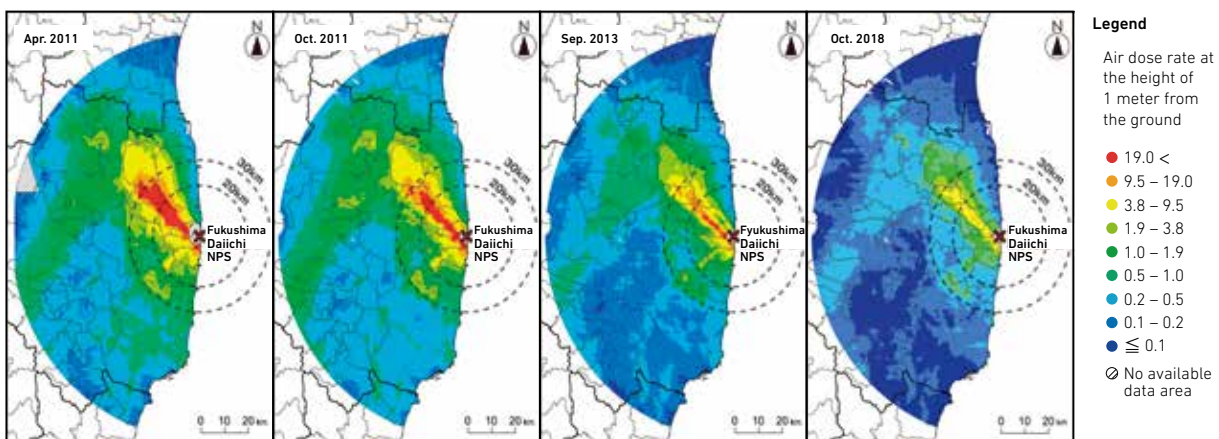
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AIR DOSE RATES

According to airborne monitoring data, the air dose rate at a height of 1 m above the ground in the 80-km zone (within 80 km of TEPCO Fukushima Daiichi Nuclear Power Plant) as of October 2018 had declined by about 77% compared with that in November 2011. The radioactive materials released in TEPCO Fukushima Daiichi accident included mainly Iodine-131, Caesium-134, and Caesium-137, which have half lives of about 8 days, about 2 years, and

about 30 years, respectively. From the half-lives of the radioactive materials and expected attenuation by rainfall and other natural causes, it was estimated that the amount of radiation compared with that in August 2011 would decline by about 40% after two years and about 50% after five years. Actual radiation amounts declined faster than these estimates. This is probably due to decontamination work as well as to rainfall and other natural phenomena.

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 other remediation work

Decontamination in affected areas is mandated by law. By the end of March 2018, the national and local governments completed whole area decontamination of 100 cities, towns, and villages in eight prefectures, excluding the Difficult-to-Return-Zones (DRZ).

Soil and waste derived from the decontamination works are managed at Temporary Storage Sites (TSS). In accordance with the Guidelines on Restoration of TSS, which were approved in March 2018, TSS are restored to their original condition after removal of the contaminated soil and waste. In the DRZ, the municipalities in those areas have

drawn up plans to make reconstruction and revitalization bases, in accordance with the provisions of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima, as amended in May 2017. Coordinated work under these plans include the demolition of houses and other buildings, soil decontamination, and

construction of infrastructure.

The Ministry of the Environment is carrying out decontamination and demolition work in all Specified Reconstruction and Revitalization Bases: Futaba, Okuma, Namie, Tomioka, Iitate, and Katsurao.

Establishment of the Interim Storage Facility

Interim Storage Facility (ISF) has been established to enable safe and centralized storage of soil containing radioactive materials that has been removed during decontamination work, and for specified waste (more than 100,000 Bq/kg of radioactive concentration) stored in Fukushima Prefecture. The ISF is used for storage until the time of final disposal. The interim storage project is guided by the “Policy on Interim Storage Facility Project in FY2019” announced in December 2018. According to this policy, transport of all removed

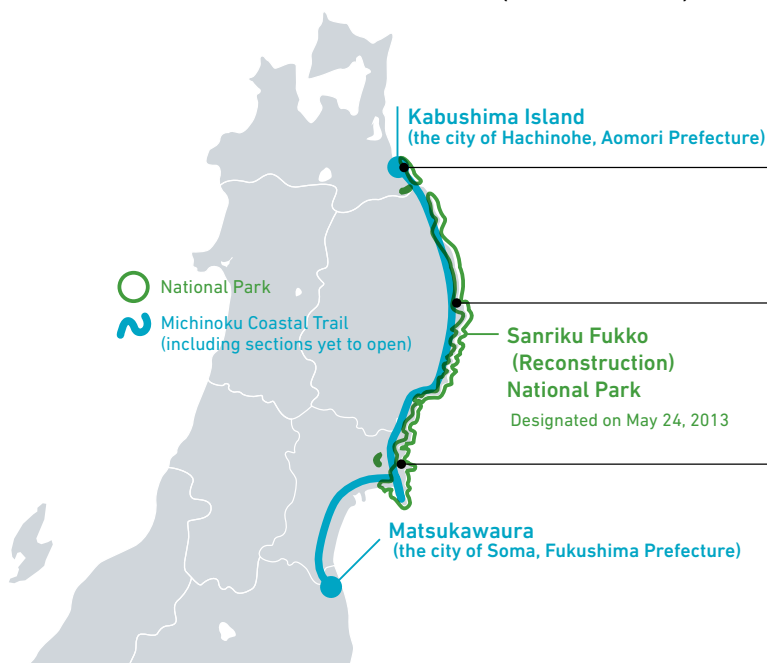
soil and waste (except in DRZ) from TSS to the ISF will be for the most part completed by FY2021. Among the 14 million m³ of soil and waste to be delivered to the ISF, about 2.62 million m³ was transported by the end of FY2018. The removed soil and waste derived from decontamination works will eventually be transported for final disposal outside of Fukushima Prefecture. To this end, the Ministry of the Environment is studying ways to reduce the volume of stored soil and enable safe reuse.

Green reconstruction

The Michinoku Coastal Trail is a long nature trail that follows the Pacific coastline from city of Hachinohe in Aomori Prefecture, the northernmost prefecture on the main island of Japan, to city of Soma in Fukushima Prefecture, more than 1,000 km to the south. Sections of the trail were defined in cooperation with communities along the route. Since 2013, sections have opened one by one. The entire route opened in June 2019.

The trail passes for much of its length through the Sanriku Fukko National Park. A major objective of the project was to make the park and trail safe against natural disasters, to rebuild park facilities that were damaged by the 2011 earthquake and tsunami, and to help the disaster area recover as a tourist destination. Management of the trail is entrusted to the Michinoku Coastal Trail Natori Trail Center, established in the city of Natori in Miyagi Prefecture.

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