

# Initiatives for restoration of the environment

## Health management

In the aftermath of the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant, Fukushima Prefecture sought to evaluate public exposure to radiation, to ascertain long-term effects on health, and to support the maintenance and improvement of health by conducting a survey of residents, the Fukushima Health Management Survey. These efforts received the full cooperation of the national government. In the course of this survey, external exposure doses during the four months following the accident were estimated for about 470,000 individuals, and it was concluded that “There is no reasonable doubt that the radiation has not adversely affected the health of the citizens of the prefecture.”

Later, Japan convened an expert meeting for the health management of the public following TEPCO’s Fukushima Daiichi nuclear power station accident. Held in November 2013, the aim of the meeting was to study these issues from the perspective of health care professionals. Additionally, a variety of information disseminated by relevant government agencies as well as scientific opinion about the effects of radiation on public health was collected and organized into a general set of handouts about the radiation health effects and measures to take following TEPCO’s Fukushima Daiichi nuclear power station accident. Risk communication was promoted as a means of alleviating public anxiety over the effects of radiation.

Following the completion in August 2013 of a review of evacuated areas in municipalities subject to evacuation orders, a system of consultants was created to provide close support for residents who chose to return to their homes, in an effort to reduce their exposure. In addition, support centers were established to provide backing for these efforts, and measures to address public uncertainty were promoted in conformance to local circumstances and intentions. This work was undertaken in coordination with local municipalities.

## Radiation monitoring

Radiation monitoring in association with the accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Plant is performed on land and at sea as well as for food and water resources according to a Comprehensive Monitoring Plan in coordination with relevant government agencies, Fukushima Prefecture, and nuclear power plant operators.

The Nuclear Regulation Authority is responsible for overall supervision of monitoring and serves as command center, performing analysis and evaluation whenever the results of radiation monitoring become available. It serves as a clearinghouse for information, and publishes weekly on its website. In the event of emergencies, it contacts relevant agencies, reviews monitoring results, and issues press releases as necessary to respond to the situation promptly.

## Review on decontamination

The Act on Special Measures Concerning the Handling of Radioactive Pollution specified two categories of contaminated area, Special Decontamination Areas and Intensive Contamination Survey Areas, which formed a basis for undertaking decontamination efforts. During 2013, the Japanese government conducted a general inspection of the progress of these decontamination efforts. The general inspection confirmed that decontamination efforts by the national government in these Special Decontamination Areas are continuing in coordination with reconstruction efforts per revised schedules determined after review of the current situation in the affected municipalities and in consultation with the local community. Also, as a result of interim evaluation for decontamination targets, it was confirmed that these targets had been satisfied in areas where decontamination was performed.

Based on the results of this general inspection, the national government reviewed the situation and established a schedule for the municipalities of Minamisoma, Iitate, Kawamata, Katsurao, Namie, and Tomioka in Fukushima Prefecture as well as revising the Special Decontamination Area implementation plans for each of these municipalities during December 2013. These plans now call for prioritizing the decontamination of major residen-

tial areas and their environs as well as major roads, water systems, sewer systems, and other aspects of the infrastructure, all of which are crucial to facilitating the return of residents. Efforts to ensure the speedy and successful completion of this work include expediting the schedules as much as possible, implementation of thorough project management, and visualization of project progress reports.

## Progress in decontamination

In the Special Decontamination Areas, the national government established decontamination implementation plans in cooperation with the municipalities and other concerned parties, which served as a basis on which the Ministry of Environment undertook decontamination efforts.

Accordingly, these efforts were completed during FY 2013 for the municipalities of Tamura, Naraha, Kawauchi, Okuma, and the Joban Expressway in Fukushima Prefecture. Decontamination efforts in the municipalities of Minamisoma, Iitate,

Kawamata, Katsurao, Namie, and Tomioka are proceeding based on the December 2013 revision of the decontamination implementation plan. Decontamination of residential areas and their environs in Kawamata and Katsurao is expected to be completed during the summer of 2014, while those in Iitate are scheduled to be completed by the end of 2014. Negotiations are currently underway to establish a decontamination implementation plan for Futaba in coordination with other reconstruction efforts.

In areas designated Intensive Contamination Survey Areas, decontamination and other measures have been implemented based on the decontamination implementation plans of each municipality, and as of the end of FY 2013, significant progress upwards of 80% has been achieved both in and outside of Fukushima Prefecture, particularly at public facilities and other locales that are part of the everyday environment for children. In municipalities where decontamination has been completed as planned, monitoring will be implemented as necessary in the decontaminated areas.

### Progress of decontamination efforts undertaken by the national government in Special Decontamination Areas as of February 2014

As of February 21, 2014	Tamura		Naraha		Kawauchi		Iitate		Kawamata	
	Done	Ordered	Done	Ordered	Done	Ordered	Done	Ordered	Done	Ordered
Residential	100%	100%	97%	100%	100%	100%	9%	100%	17%	100%
Agricultural	100%	100%	94%	100%	98%	100%	4%	40%	5%	100%
Forest	100%	100%	98%	100%	100%	100%	5%	45%	14%	100%
Roadway	100%	100%	84%	100%	100%	100%	0.9%	28%	0.3%	100%

As of February 21, 2014	Katsurao		Okuma		Minamisoma		Tomioka		Namie	
	Done	Ordered	Done	Ordered	Done	Ordered	Done	Ordered	Done	Ordered
Residential	59%	100%	89%	100%	—	26%	—	50%	0.1%	4%
Agricultural	0.1%	100%	40%	100%	0.3%	46%	0.2%	42%	—	15%
Forest	99%	100%	76%	100%	0.4%	43%	0.1%	62%	2%	14%
Roadway	1%	100%	75%	100%	0.2%	21%	11%	51%	—	23%

Notes:

1. The Done column indicates the ratio of the area for which vegetation removal, deposit removal, cleaning, or other decontamination effort was implemented to the total area subject to decontamination in the municipality.
2. The Ordered column indicates the ratio of the area for which contracts have been concluded to the total area subject to decontamination in the municipality.
3. The areas subject to decontamination, for which orders were placed, and for which decontamination has been completed are subject to change per the results of future surveys.
4. An em dash (—) indicates that contracts for decontamination have been concluded and that some work is underway.

Source: Ministry of the Environment

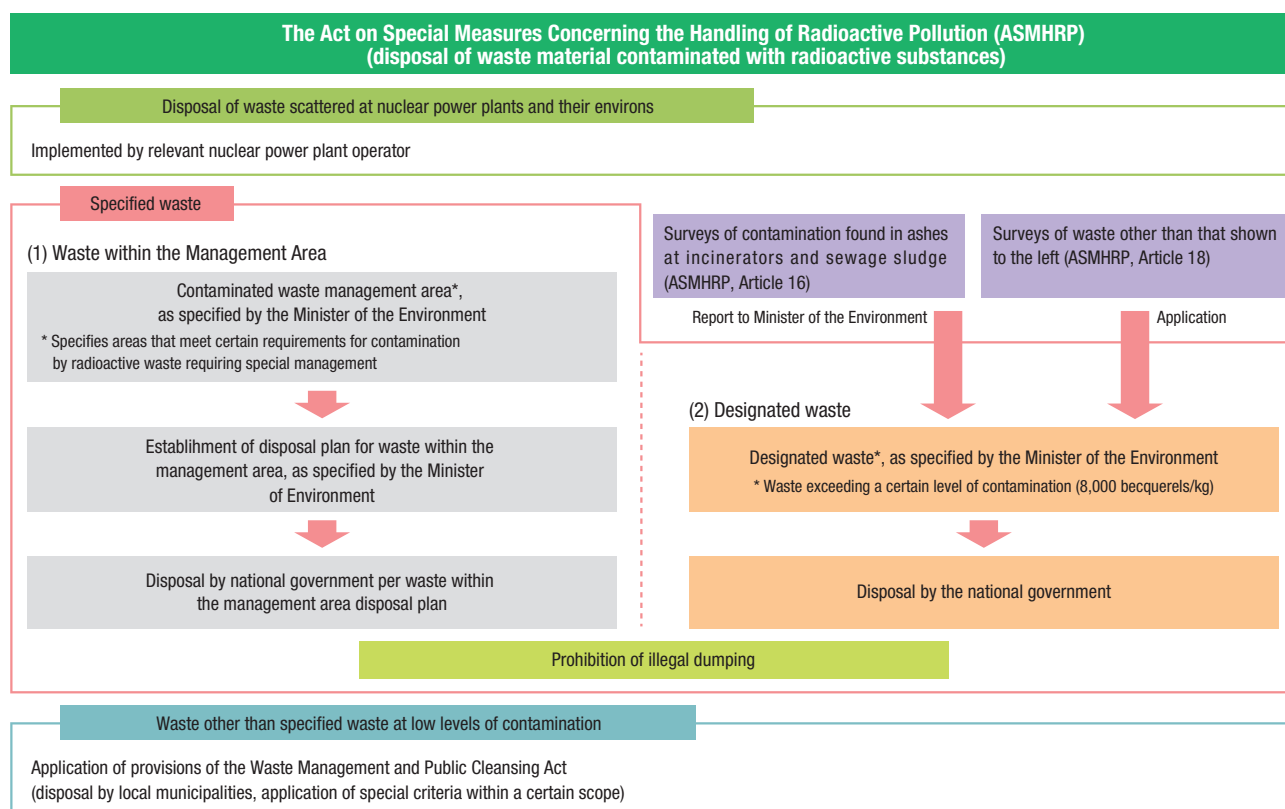
## Disposal of waste contaminated by radioactive material from the accident

The Act on Special Measures Concerning the Handling of Radioactive Pollution makes reference to “waste within the management area” as well as to “designated waste” and designates both these types as “specified waste,” the disposal of which is to be undertaken by the Japanese government. From the perspective of proactively ensuring a smooth return home for the evacuated residents, a priority has been placed on the removal of waste within the management area—particularly in areas preparing for evacuation orders to be lifted or subject to restrictions on residency—from places where it obstructs the return home of residents and its transportation to temporary storage sites. The disposal of designated waste is to be performed within the prefecture where the designated waste was generated in accordance with the Basic Principles formulated based on the Act on Special Measures Con-

cerning the Handling of Radioactive Pollution determined by Cabinet decision in November 2011. During a visit to Fukushima Prefecture in December 2013, the Minister of the Environment and the Minister for Reconstruction requested the establishment of interim storage facilities and the use of managed waste disposal sites in disposing of waste within the management area and designated waste in Fukushima Prefecture. Additionally, initiatives were implemented to undertake incineration and other means of reducing the volume of perishable designated waste.

As for designated waste in areas other than Fukushima Prefecture, the use of existing waste treatment facilities is currently being studied, and in prefectures where large volumes of designated waste stretch storage capacity to its limits, the direction is for the national government to consolidate the necessary final disposal sites or other means within each prefecture. Moreover, future initiatives will seek to ensure necessary final disposal sites for designated waste in accordance with regional conditions.

### Outline of the Act on Special Measures Concerning the Handling of Radioactive Pollution (disposal of waste material contaminated with radioactive substances)



Source: Ministry of the Environment

## Initiatives for improving and maintaining interim storage facilities

Currently, soil and other debris from decontamination efforts is temporarily stored throughout Fukushima Prefecture. Japan considers that a solution to this situation is a necessary step for recovery and reconstruction. To this end, a Basic Policy on Interim Storage and Other Facilities Required for the Handling of the Environmental Pollution from Radioactive Materials Associated with the Accident at the Tokyo Electric Power Fukushima Daiichi Nuclear Power Station was finalized and published in October 2011.

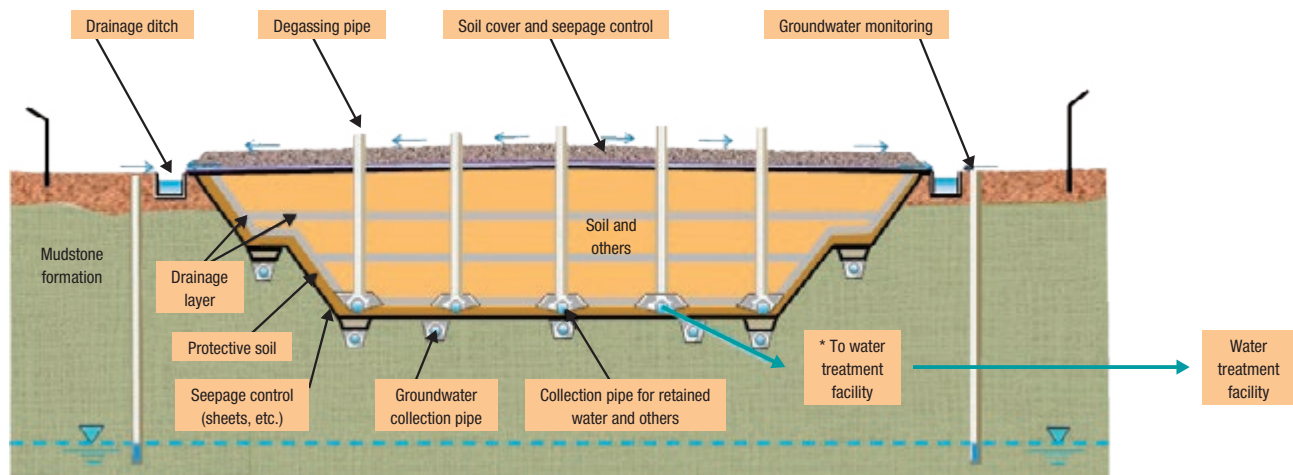
Since then, giving consideration to conditions such as the distance from sites where soil is removed or access to major roadways, there has been a focus on determining sites suitable for interim storage facilities. In addition, basic concepts related to methods for improving and maintaining interim storage facilities, measures for preserving the environment

at interim storage facilities, and other relevant issues have been considered from both scientific and specialized professional perspectives.

Based on the results of these studies, plans for the construction of interim storage facilities were presented to and approval requested of Fukushima Prefecture as well as the municipalities of Naraha, Tomioka, Okuma, and Futaba in December 2013. Following a review of these plans, the governor of Fukushima Prefecture requested in February 2014 that they be modified. After careful revision, a new proposal was made in March to consolidate construction of interim storage facilities in Okuma and Futaba.

Moving forward, every effort will be made to provide the local communities with clear explanations of the need for and the safety of these facilities in preparation for start of transportation to interim storage facilities in January 2015.

### Example of storage facility construction



Source: Ministry of the Environment