

Fukushima: Radiation-contaminated area spans 800 square km, new map shows

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The total area contaminated with radiation from the Fukushima No. 1 nuclear power plant is estimated at about 800 square kilometers, or about 40 percent the size of Tokyo, according to a radiation map created by the science ministry and U.S. Department of Energy.

The report uses the same level of contamination (555,000 becquerels or higher of cesium-137) that was used to issue compulsory evacuation orders in the Chernobyl nuclear accident in 1986.

To determine whether the current evacuation zone is appropriate or when residents can return home, the Nuclear Safety Commission of Japan plans to set up focal sites to heighten its monitoring of the possible further spread of radioactive contamination.

The report's radiation levels were determined in April by measuring, from about 150-700 meters above ground, levels of accumulated radiation on the ground. The areas measured were divided into 1- to 2-square-kilometer zones.

According to the map, about 800 square kilometers are contaminated with accumulated cesium-137 of 600,000 becquerels or higher per square meter. The substance has a half-life of about 30 years.

This area is largely the same as the Fukushima no-entry zone and planned evacuation zone designated by the central government. The total area is about one-tenth the size of the contaminated area in the Chernobyl nuclear accident.

The nuclear safety committee will pin down sites where constant monitoring is needed by the combined use of this radiation map and measurements taken on the ground. Using data collected from monitoring, the committee plans to prepare the way for residents to return home to normal life after the crisis at the plant is brought under control.

About 370,000 to 630,000 terabecquerels of radioactive substances are estimated to have been released by the crippled plant, according to a report by the Nuclear and Industrial Safety Agency and the Nuclear Safety Commission of Japan.

This radiation amount equals about one-tenth the amount released from the Chernobyl nuclear power plant, whose nuclear reactor was destroyed.

From April 1 through 6, highly radioactive water of 520 tons was discharged from the plant, while radiation of 4,700 terabecquerels was leaked, according to Tokyo Electric Power Co., raising concerns over severe environmental pollution.

Currently, cesium and iodine are still being detected 40 km offshore of the plant. Levels of cesium higher than the safety standard have been found in bamboo shoots, shiitake mushrooms and mountain vegetables.

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P.S.

* The Asahi Shinbun, May 12, 2011:

<http://www.asahi.com/english/TKY201105110159.html>