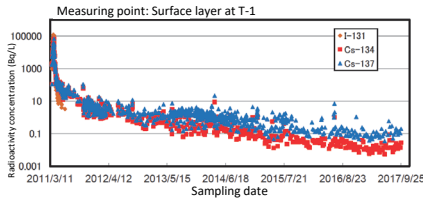


Since October 2011, radiation monitoring of radioactive cesium (Cs-137) in seawater and sea-bottom soil has been conducted jointly by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (at that time), Secretariat of the Nuclear Regulation Authority (at present), Fisheries Agency, Japan Coast Guard, Japan Meteorological Agency, Ministry of the Environment (MOE), Fukushima Prefecture and TEPCO. With regard to samples collected near outlets, analysis has been conducted not only for radioactive cesium, but also for radioactive iodine (only for seawater samples), radioactive strontium, plutonium, and tritium (only for seawater samples).

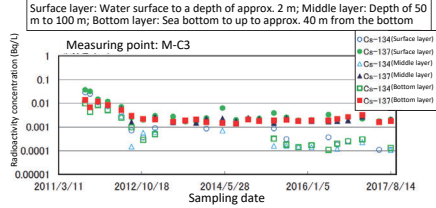
Included in this reference material on March 31, 2013
Updated on March 31, 2017

Changes in Radioactivity Concentrations in Seawater

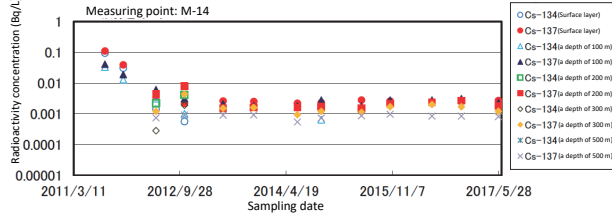
Changes in Radioactivity Concentrations in Seawater in Coastal Areas in and around Fukushima Prefecture



Changes in Radioactivity Concentrations in Seawater Offshore of Fukushima Prefecture



Changes in Radioactivity Concentrations in Seawater in the Open Sea



From the day of earthquake disaster to September 25, 2017

* For measuring points, see p.36 of Vol. 2, "Radioactivity Concentrations in Seawater and Sea-bottom Soil."

Results of the Sea Area Monitoring by the Nuclear Regulation Authority: <http://radioactivity.nsr.go.jp/ja/list/428/list-1.html> (in Japanese)

Soil with radioactive cesium is transported to coastal areas via rivers.

Radioactivity concentrations in seawater samples collected in the coastal areas near Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS rose to 100,000 Bq/L immediately after the accident, but dropped to one-thousandth (100 Bq/L) in one and a half months. The concentrations further decreased to 10 Bq/L in one and a half years and are 1 Bq/L or less at present.

In six months after the accident, soil containing radioactive cesium was transported from the coastal areas to 30 km offshore, but the concentration detected at Measuring Point M-C3 was 0.05 Bq/L or one-200th of the concentrations detected in the coastal areas. In 2012, radioactivity concentrations were as low as 0.008 Bq/L in samples collected from bottom layers, where radioactivity concentrations are relatively higher. Radioactivity concentrations detected in samples collected from surface layers and middle layers also decreased.

In the open sea, 180 km away from the land, radioactivity concentrations detected in surface layers were 0.1 Bq/L, the same level of concentrations detected 30 km offshore, in six months after the accident. The concentrations further showed a two-digit decrease to 0.001 Bq/L in two years after the accident.

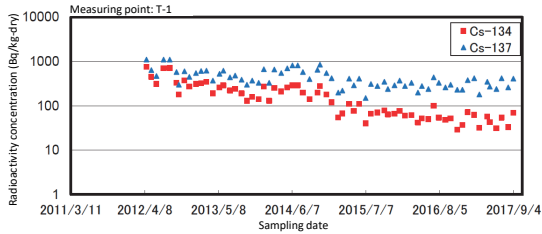
(Related to p.179 of Vol. 1, "Distribution of Radioactive Cesium in the Ocean")

Included in this reference material on March 31, 2014

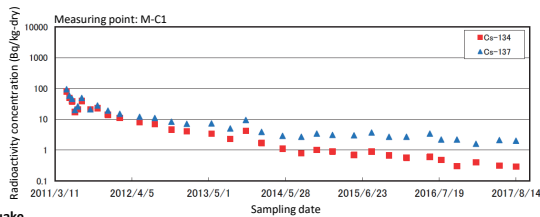
Updated on February 28, 2018

Changes in Radioactivity Concentrations in Sea-bottom Soil

Changes in Radioactivity Concentrations in Sea-bottom Soil in Coastal Areas in and around Fukushima Prefecture



Changes in Radioactivity Concentrations in Sea-bottom Soil Offshore of Fukushima Prefecture



From the day of earthquake disaster to September 4, 2017

* For measuring points, see p.36 of Vol. 2, "Radioactivity Concentrations in Seawater and Sea-bottom Soil."

Results of the Sea Area Monitoring by the Nuclear Regulation Authority: <http://radioactivity.nsr.go.jp/ja/list/428/list-1.html> (in Japanese)

As a result of measuring dried sea-bottom soil samples collected in the coastal areas near Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS, the concentrations of Cs-134 and Cs-137 were initially 1,000 Bq/kg but decreased in two years after the accident to 200 Bq/kg (down by 80%) and 500 Bq/kg (down by 50%), respectively.

Radioactivity concentrations detected from sea-bottom soil samples collected 40 km offshore (Measuring Point M-C1) rose to 100 Bq/kg immediately after the accident but decreased to 10 Bq/kg a year later.

(Related to p.179 of Vol. 1, "Distribution of Radioactive Cesium in the Ocean")

Included in this reference material on March 31, 2014

Updated on February 28, 2018