

Japan two years after: Cesium levels in water, plankton baffle scientists

Sunday 30 June 2013, by [AOKI Mizuho](#), [Jiji Press](#) (Date first published: 8 June 2013).

Plankton and seawater sampled at 10 points less than a year after the Fukushima meltdowns found concentrations of radioactive cesium were highest at different locations in the Pacific, puzzling scientists.

The group collected zooplankton and surface seawater at 10 points between Hokkaido and Guam, 500 to 2,100 km from the crippled power plant, between Jan. 14 and Feb. 5, 2012.

Cesium 134, with a half-life of two years, and cesium 137, with a half-life of 30 years, were detected in plankton and seawater at all 10 locations, according to their report. Plankton with the highest concentrations of cesium 134, at 10.5 becquerels per kilogram, and cesium 137, at 14.9 becquerels, were found around 25 degrees north latitude and 150 degrees east longitude, the report said. The samples were taken from the surface to a depth of 200 meters.

“Plankton are thought to play a key role in the dispersion of the cesium because they are eaten by bigger fish. We want to study further what is influencing the accumulation of radioactive cesium,” said Minoru Kitamura, a marine ecologist and senior researcher at the Japan Agency for Marine Earth Science and Technology, who led the group.

The plankton could have been contaminated by eating even smaller plankton and through seawater, Kitamura said.

Meanwhile, the concentration of radioactive cesium in surface seawater was highest - at 41.5 becquerels per kilogram - from around latitude 36 to 39 degrees north, where the Oyashio Current meets the Kuroshio Current from the south, the report said.

The amount of radioactive cesium in seawater at other locations was low, it said.

Kitamura said they haven't figured out why the concentrations of contamination differed in plankton and seawater.

“Our concern is the high level of (radioactive cesium found in plankton) taken from waters around latitude 25 degrees north, and we don't know why the level got high around that area,” Kitamura said. “We need to study whether the concentration will decline, or stay the same.”

The finding was released at the Japan Geoscience Union at the Makuhari Messe international convention center in Chiba Prefecture on Tuesday.

Kitamura said he and his fellow members plan to conduct a followup study in July in the Pacific.

He said they have no plans to study contamination of bigger ocean fish because they lack the equipment to catch them in statistically significant amounts.

Mizuho Aoki, *Japan Times* Staff Writer, May 23, 2013

(Information from Kyodo added)

<http://www.japantimes.co.jp/news/2013/05/23/national/cesium-levels-in-water-plankton-baffle-scientists/#.UaLccNiz640>

Fishermen to Tepco: Scrap plan to release No. 1 plant water into Pacific

SOMA, FUKUSHIMA PREF. — Fishermen in Fukushima Prefecture have voiced opposition to Tokyo Electric Power Co.'s plan to release groundwater from its crippled nuclear power plant into the Pacific.

Some expressed concern Friday about the harmful rumors that might be triggered by such a discharge of water from the Fukushima No. 1 plant, while others said they don't trust the utility.

Previous releases of radioactive water led to widespread contamination of the surrounding sea and a halt in local fishing activities.

The fishermen's views were expressed at a meeting between the Soma Futaba fisheries cooperative and representatives of the utility and the Agency for Natural Resources and Energy, under the industry ministry.

Tepco promised to check the groundwater before its release to ensure it is not radioactive, but the fishermen remained distrustful.

"We need more explanations," the head of the cooperative, Fusayuki Nanbu, told reporters after the meeting, complaining that Tepco failed to acknowledge his members' fears.

It was Tepco's second briefing of the fishermen about the plan. The Fukushima prefectural association of fisheries cooperatives will meet June 24 to establish a unified response.

Tepco hopes to discharge groundwater into the Pacific from under the Fukushima No. 1 plant before it flows into the basements of the buildings housing the reactors that suffered meltdowns in March 2011. The step is intended to limit the volume of water contaminated with radioactive materials in those buildings.

Jiji Press, June 8, 2013

<http://www.japantimes.co.jp/news/2013/06/08/national/dont-dump-radioactive-groundwater-into-sea-fukushima-fishermen-tell-tepco/#.Ubp47NjuLRY>

Tepco seeks fishermen's OK for groundwater dump

FUKUSHIMA — Tokyo Electric Power Co. met Monday with fishermen in Fukushima Prefecture to seek approval for its plan to dump some of the groundwater accumulating at the Fukushima No. 1 nuclear plant into the sea.

Afterward, Tetsu Nozaki, head of the Fukushima Prefectural Federation of Fisheries Cooperative Associations, said the federation had not yet approved the plan and will make a decision after gathering members' opinions.

Because groundwater seeps into the plant's reactor buildings and mixes with the highly radioactive water accumulating inside, Tepco has created a system to direct some of the groundwater into the Pacific Ocean before it gets into the buildings. The accumulated water will be dumped after radioactive content is confirmed to be sufficiently low, Tepco said.

About 400 tons of groundwater is seeping into the reactor buildings and adjacent turbine buildings each day, Tepco said.

Kyodo News, May 14, 2013

<http://www.japantimes.co.jp/news/2013/05/14/national/tepcos-seeks-fishermens-ok-for-groundwater-dump/#.UZqhVNiz640>
