

Assessment of Radionuclides Dispersal in Seawater from Fukushima Disaster to the Coastline of Vietnam

In order to assess the dispersal of radionuclides, e.g., Cs-137 and Cs-134, from the Fukushima disaster towards the coastline of Vietnam, the task of monitoring the radionuclides in the seawater has been conducted in the Institute for Nuclear Science and Technology, VINATOM, Vietnam since 2013. Seawater samples of 200 liters have been collected repeatedly every three months in the Gulf of Tonkin. The sampling locations include the geographical center of the Gulf of Tonkin, close to Bach Long Vi Island, which locates at 108.7269E and 20.11556N, together with three off-shore locations, i.e., Cua Dai-Vinh Thuc, Cua Mo-Van Hoa and Cai Rong-Van Don. After chemical treatments, the radioactivity of Cs-137 and Cs-134 in the seawater samples is measured by a Low-Background-Gamma-Spectrometer with an HPGe detector. After correcting the decreasing radioactivity of the radionuclide Cs-134 in the time period between the Fukushima disaster and the monitoring time in March, 2016, the contributing radioactivity of Cs-137 from Fukushima disaster in the sea area of Bach Long Vi Island, Gulf of Tonkin, is approximately 0.72 Bq/m³. Furthermore, the time when the radionuclides dispersed to the coastline of Vietnam is in the first quarter of 2016, confirming the simulation results from other authors.

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