

Special Report: “Radioactivity in the Marine Environment and in Fishery Products during the Five Years after the Fukushima Dai-ichi Nuclear Power Plant Accident”

Foreword

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It has been over five years since the accident at the Fukushima Dai-ichi Nuclear Power Plant of the Tokyo Electric Power Company on 11 March 2011. Before the accident, we at the Marine Ecology Research Institute (MERI) were engaged in research on radioactivity in the ocean. Immediately thereafter, we responded by expanding the marine areas surveyed, increasing the number of monitoring sites, and beginning to monitor radioactivity in marine products. We used our observations to chronologically organize and compare data from before and after the accident to understand and evaluate the current state of radioactive contamination of the ocean.

Our results suggest that concentrations of radionuclides in the seawater, marine sediments, and fisheries products of the surveyed marine areas are decreasing for these 5 years. The concerns arising from radioactive contamination, however, cannot be allayed solely by increasing the number of studies, as it is important to renew people’s trust in the safety of these marine environments.

MERI not only conducts surveys but also publishes scientific findings in an endeavor to disseminate accurate and clear scientific information, and it considers this MERI’s mission to prevent the spread of misinformation associated with radioactivity. As part of this initiative, on 24 June 2016 we held a symposium on radioactivity in Tokyo entitled “Radioactivity in the Marine Environment and Fishery Products during the Five Years after the Fukushima Dai-ichi Nuclear Power Plant Accident.” Dr. M. Kusakabe from MERI opened the symposium, describing the global distribution and fluctuations of each radionuclide in the ocean, while touching on historical events such as nuclear tests, among others. He was followed by Dr. H. Takata, MERI, who discussed the changes in radioactivity in seawater and marine sediments around Japan by summarizing our survey results of over 30 years. Mr. M Yokota, MERI, reported the changes in radioactivity in fisheries products from East Japan. Furthermore, Mr. Y. Nemoto of the Fukushima Prefectural Fisheries Experimental Station discussed the levels of radioactivity in fisheries products and the current conditions of the fishing industry in Fukushima, including information on trial fishing. Finally, Dr. T. Ishimaru, an honorary professor from the Tokyo University of Marine Science and Technology, chaired a panel discussion addressing questions from the audience. There were over 100 participants from the government, fishing industry, electric power industry, and analytical and research institutions, in addition to the general public, and discussions were very interactive.

Here, we summarize the presentations and discussions from the symposium as a special issue of the Report of Marine Ecology Research Institute to aid accurate understanding of the current conditions of radioactivity in the marine environment and marine products. Because there is still widespread misinformation about marine products from East Japan outside the national border, we intend to distribute the English version of this report to international research institutions. Moreover, this report will be available on our website so that we can reach a broader audience and promote comprehensive and accurate understanding of this topic.

MERI was established in 1975 as a research institute using scientific methods to elucidate the impact of thermal

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discharges from power plants on the habitat of marine organisms; since then it has conducted various surveys and researches on the marine environment and marine organisms. We thank you for your ongoing support of our work for over 40 years. In particular, the Fisheries Agency, Nuclear Regulation Authority, associated institutions and associated groups have been extremely supportive in monitoring radioactivity in the ocean. Our research on radioactivity in the ocean has also been extensively evaluated by the International Atomic Energy Agency (IAEA). MERI will continue to contribute to the recovery of the fishing industry in Fukushima along with the recovery and rebuilding from the Great East Japan Earthquake.

In addition to radioactivity, there are many other challenges in the marine environment, such as the effects of climate change and acidification of the ocean. MERI will actively tackle these issues through various initiatives and hopes to maintain your continued trust and support in the future.