IAEA MONITORS MARINE RADIOACTIVITY

On 10 March 1961, the IAEA concluded with the Principality of Monaco and the Oceanographic Institute, then directed by Jacques Cousteau, an agreement on a research project on the effects of radioactivity in the sea. The opening of the IAEA's marine laboratories in Monaco that same year marked the start of a new era for research into the marine environment.

Determining pollution sources is one of the biggest issues in evaluating the incidence and severity of contaminants in the marine environment.

Isotopic studies are a powerful and unique diagnostic tool to investigate various types, levels and effects of pollution and radioactive contaminants in the marine environment.

In providing comprehensive information on nuclear and isotopic techniques, the IAEA assists Member States in using scientific tools to precisely identify and track nuclear and non-nuclear contaminants, as well as to investigate their biological effects. Determining pollution sources is one of the biggest issues in evaluating the incidence and severity of contaminants in the marine environment. Isotopic studies are a powerful and unique diagnostic tool to investigate various types, levels and effects of pollution and radioactive contaminants in the marine environment.

The laboratories have since provided essential scientific and analytical support for a landmark study of radioactive and non-radioactive pollutant levels in all principal seas. This includes worldwide radioactivity baseline studies of the Atlantic, North and South Pacific, Indian, Arctic and Antarctic Oceans and the Far Eastern, Mediterranean and Black Seas. Regional studies have also been conducted in the Gulf, the Irish, Kara and Caspian Seas, New Caledonia and the Mururoa and Fangataufa Atolls.

Radioactive substances entered the Pacific Ocean following the 2011 Fukushima Daiichi nuclear accident. Countries throughout the region initiated an IAEA technical cooperation project to harmonize measurements of various radioisotopes in marine waters, biota, sediments and suspended matter to determine the impact on the marine environment. The uniform measurement of the radioisotopes in the ocean will ensure that any impact assessment is comparable and verifiable across the enormous volume of the Pacific Ocean. The project will enhance national capacities, which in turn will improve the exchange of data gathered from ocean measurements, as well as the information about the potential impact of these radioisotopes and risks to marine biota and to humans through marine food consumption. Twenty-one IAEA Member States and three non-Member States are participating in the project.

The project was approved by the IAEA Board of Governors at its meeting in June 2011 as a prompt response to the request of the Member States in the region; implementation of the project started on 1 July 2011 and is planned to be finalized in 2015. Extrabudgetary funding for the project was provided by the USA, New Zealand, Australia and Japan. Australia is serving as the lead country in the project.

The majority of countries participating in the project are collaborating under the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA)[1]. Additional countries participating include Cambodia, Cook Islands, Fiji, Nepal, Palau, Marshall Islands and Solomon Islands.

Aabha Dixit and Peter Kaiser, IAEA Division of Public Information

[1]Established in 1972, the RCA is an intergovernmental network of policy-makers and scientists, with the IAEA acting as its Secretariat. RCA countries participating in the project are Australia, Bangladesh, China, India, Indonesia, Japan, Republic of Korea, Malaysia, Mongolia, Myanmar, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Thailand and Vietnam.