



Managing Coastal Pollution

Concern over the growing incidence of pollution in the Caribbean has been on the rise, as it has the potential to affect livelihoods dependent on fishing and tourism.

The IAEA's Department of Technical Cooperation launched a regional project on the use of nuclear techniques to address coastal management issues in the Caribbean.



1 In 2007, the IAEA launched a regional project on the use of nuclear techniques to address coastal management issues in the Caribbean. Twelve countries are participating: Colombia, Costa Rica, Cuba, Dominican republic, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, and Venezuela. Spain, as well as the IAEA Marine Environment Laboratories in Monaco (IAEA-Mel), provide scientific and programmatic support.



2 Scientists from IAEA-MEL, provide scientific and programmatic support to the Caribbean project, by training counterparts in the use of nuclear techniques to analyse samples taken from the field.

3 Like other regional experts involved in the project, Miguel Gomez Batista from Cuba received laboratory training at IAEA-MEL in Monaco.



4 For the core sampling fieldwork in Honduras, a team of scientists from the country's Center for the Study and Control of Pollutants (CESCCO) was guided by regional expert Miguel Gomez Batista from Cuba on proper procedures for collecting surface and sediment samples

5 The Honduran navy provided tactical and logistical support to the CESCOCO team during the exercise. In Honduras, as well as in other Caribbean nations, cooperation among government agencies was a key factor in many of the successful missions conducted thus far.



6 Plotting precise locations of sampling zones first had to be done before sampling could begin. Working under the principle that 'quality of results is no better than quality of samples collected,' the team had to ensure the mission was conducted according to plan.



7 Surface and sediment samples are immediately packed and labelled for easy referencing.



8 Scientists first check that the quantity and quality of the samples are adequate for laboratory testing. Should the sediments contain impurities, they are returned and the process begins anew. Once the sediment samples are determined to be of good quality, the process of removing the corer from the plastic cylinder begins.



9 The Honduran naval boat returns to port at the end of a full day of work collecting sediment samples along the coasts of Puerto Cortes, Honduras.



10 At the CESCO laboratory in San Pedro Sula, Miguel Gomez Batista demonstrates how best to slice the sediment samples from the vertical core.



11 Dr. Karhen Rodriguez-Waleska, head of CESCOCO Laboratory in San Pedro Sula, then weighs the sediment samples.



12 Preparing the samples for analysis is a complex process that requires varied tasks. Here, Dr. Dennys Canales-Cruz, Honduran project team leader, carefully removes a slice of the sediment sample from the vertical core.



13 Other members of the team then label and tag the sediment sample according to color, texture, smell, etc. Later, samples are dried at controlled temperature in an oven before being shipped to participating laboratories that will analyze them.



By donating substantial equipment to laboratories in the participating Caribbean countries, the IAEA has helped improve the technical and analytical capability in the region on the use of nuclear techniques for coastal pollution studies.



14 The Caribbean coastal pollution project, also known as RLA/7/012, has built up a network of talented individuals, institutions and laboratories across the region which are actively sharing information, resources and capabilities.

Photos: D.Calma/IAEA • Text: R.Quevenco • Design: Ritu Kenn