

SUMMARY REPORT (2019)

IAEA/RCA RAS7028 Project “Enhancing Regional Capabilities for Marine Radioactivity Monitoring and Assessment of the Potential Impact of Radioactive Releases from Nuclear Facilities in Asia-Pacific Marine Ecosystems (RCA)”

Issues of the recent times, the Fukushima Daiichi Nuclear Power Plant accident in 2011 emphasized the importance of monitoring radionuclides in the Asia-Pacific region's marine environment. Moreover, more than 100 new nuclear power plants are expected to be built in the Asia/Pacific region in the next 10 years. Atmospheric transport and regional ocean currents will disperse any future nuclear discharges throughout the region, potentially resulting in trans-boundary contamination. Continuing harmonized regional approach is essential to optimize and coordinate.

The implementation of the RAS7028 project program as discussed and planned in the coordination meeting (updated in the mid-term review meeting) is working on the schedule. The outcome of this program to have an active network of GPs that can support each other and provide at regional level reliable measurement, monitoring and assessment were reached during the year of 2019. The contribution of GPs was interpreted in the cooperation in preparing of monitoring guidelines technical document that has been drafted during the year. Moreover, GPs were contributed to supporting the regional database through ASPAMARD data contribution, a significant increase in the volume of data submitted by GPs was observed. Reliable data from GPs was generated from the improvement of analytical capabilities gain from the project program activities (regional training course, regional workshop, etc.). During 2019, two RWSs in Indonesia and Malaysia also two RTCs in Australia and China was successfully conducted. Representatives from GPs have shared knowledge and experience with the national member team which contributes to improved implementation of the National Project.

In order to enhance regional skills in the marine environmental sampling of seawater and sediments, this project prepared the technical document guidelines besides RTC on Sampling of Seawater and sediments that have been conducted in Indonesia in 2017. The guidelines provide guidance on the recommended method for harmonizing marine sampling and sample preparation methods to support both the Regional and National Marine Monitoring Program that will allow better comparison of results for the Asia Pacific Marine Region. As represented in the submitted country reports, GPs conducted and create future work plans of their National Marine Monitoring Program and document guidelines on marine sampling very much help GPs in implement their national program.

Through the project regional coordination meeting, it was discussed and agreed that data quality should become one of the important priorities to consider. Participation most GPs in the Proficiency Test was recorded, it was be able to identify and target effective training needed to enhance their capability to accurately and reliably detect and quantify contamination across Asia-Pacific, which combined with harmonized sampling method and program, support comparability of measurement result and mutual confidence in detection and measured levels across the region if release is occurs. In addition, ASPAMARD (Asia-Pacific Marine Radioactivity Database) recorded all data reported by GPs, a total of 29,611 data submitted since the website was developed in phase 3 (2011-present). Eleven countries reported radionuclides Cs-137, Cs-134, Sr-90, Pu-239/240, K-40, U-238, Ra-226, Ra-228, Th-232, Po-210, Ag-110m and Gross beta from seawater, sediment and marine biota samples. GPs encouraged to report also H-3 result, H-3 being an important radionuclide for the region. However, GPs were reported facing some challenge including reduce funding for national project implementation that affected to their achievement. Although facing challenge, the implementation of national and regional project plan is on track for this mid-term stage of the RAS7028 project. It is recommended that the project continues to be implemented according to the framework and work plan developed mutually among the participants.

Table1. Status event during 2019-2020: Completed and planned Remaining Events

No	Title of Event	Country	Date
1.	The RTC on Gamma-ray Spectrometry: 2 weeks. (completed)	AUL	26 Aug-6 Sept 2019
2.	The RTC on Dose Assessment and Risk Analysis Modelling: 1 week. (completed)	CHN	28 Oct – 1 Nov 2019
3.	RWS on Monitoring Guidelines: 1 week. (completed)	INS	4-8 March, 2019
4.	RWS on Implementation of Quality management System: 1 week (completed)	MAL	29 April – 3 May, 2019
5.	Proficiency Test for Radionuclides in Marine Environmental Samples (completed)	-	2019
6.	RWS on Radiological dose assessment and communication including seafood consumption : 1 week (completed)	PHI	24-28 Feb, 2020
7.	RTC on Radioecology Laboratory Studies, 2 weeks. (planned)	AUL	(Q2) 4-15 May 2020
8.	RWS on Marine Radioactivity Data Analysis and Reporting: 1 week (planned)	PLW/Vienna	(Q3) 10-14 August 2020
9.	Proficiency Test for Radionuclides in Marine Environmental Samples (planned)	-	2020
10.	Project Final Review Meeting: 1 week. (planned)	SIN	(Q4) 2-6 Nov 2020