

IAEA-RCA: Role in fostering Technical Co-operation in Nuclear Technologies in the Asia-Pacific region

Vandana Pulhani^{1,2},

¹*Environmental Monitoring & Assessment Division, Bhabha Atomic Research Centre, Mumbai, India, 400085*

²*Homi Bhabha National Institute, Mumbai, India, 400094*

* e-mail: vanpulh@barc.gov.in corresponding/presenting author

The RCA (The Regional Cooperative Agreement) for Research, Development and Training has been established in 1972 under the auspices of the International Atomic Energy Agency (IAEA). The Technical Cooperation Programme of RCA facilitates collaborative, peaceful applications of nuclear science and technology across Asia and the Pacific. 22 countries from this region are the members of RCA currently and are referred to as Government Parties (GPs). RCA promotes shared developmental goals through joint research, training, capacity building, knowledge exchange, and technical cooperation among the RCA GPs. It contributes to the socio-economic development of its GPs through application of the established nuclear technologies, provision of physical and financial resources and support in form of technical expertise for utilization of these technologies. The RCA Regional Office (RCARO) inaugurated in 2002 in Daejeon, Republic of Korea, has played a critical role in furthering nuclear science collaboration across Asia-Pacific. RCARO has facilitated capacity-building, technology adoption, regional outreach, and intergovernmental partnerships across multiple domains.

RCA realises multifaceted programmes mainly in four thematic areas, agricultural, environmental, human health, energy and industrial sectors. The challenges facing the billions of people living in this Asia-Pacific region are multivariate, including climate change, food production and marine pollution, energy demand, plastic pollution, zoonotic diseases, cancer etc. IAEA has launched Key programmes like Ray of Hope-Cancer diagnosis and treatment, Atom for Food-food security, ZODIAC-Zoonotic disease prevention, NUTEC Plastics-Plastic pollution, ATOM for Net zero-Energy security, decarbonization to address these issues. RCA is in its sixth decade, and to date it has delivered more than 170 projects, launched over 650 regional training courses and 560 workshops, engaged over 10,000 national participants, and recruited over 4,500 experts and lecturers across the region. It remains an indispensable platform for addressing evolving challenges, ranging from climate change, food security to health emergencies and industrial applications, safety, water and environment, through peaceful, scientific cooperation. Among the various Technical Cooperation projects (TCP) related to the health of Marine environment RAS7021, RAS7024, RAS7028, RAS7031 to name a few have been successfully completed and RAS7038 are ongoing with the support of RCA. RAS7028 focussed on Enhancing quality-assured regional capabilities for marine radioactivity monitoring and impact assessment of both routine and accidental radioactive releases in Asia-Pacific marine ecosystems. The project led to development and use of the Asia and Pacific Marine Radioactivity Database (ASPAMARD), hosted in the Philippines, and integrated with the IAEA's global marine database (MARIS). During the Fukushima Daiichi accident, ASPAMARD served as a crucial tool for assessing radioactive dispersion and aiding member states in understanding the marine impact of the releases. Ongoing project on Marine Plastic Pollution Monitoring focusses on enhancing understanding of marine plastic pollution and harmonization of assessment methodologies etc. These collaborative projects involved extensive training-courses, workshops, meetings to assess the capabilities of the GPs and their needs, encouraged sharing of resources and expertise among the members. Financial, technical support was extended to develop and enhance capacity of GPs enabling collective assessments of regional marine environmental health. Quality Management Systems (QMS) were implemented to ensure data integrity. Thus IAEA-RCA plays a major role in fostering Technical Co-operation in Nuclear Technologies in the Asia-Pacific region.

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