

**RCARO Director's Report on
the Progress of the 2018 Work Plan**

The 40th NRM decisions relevant to the RCARO 2018 Work Plan

For preparing project concepts and designs, the resource documents should be available on the RCA website.

The Meeting noted that the RRU information will be updated in 2019 after RCARO's survey is completed.

1. Increasing the awareness of the RCA

1.1 Enhancing RCA information service through the RCA Website

RCARO has been providing RCA information service through the RCA website for the RCA GPs and related end users. Since its renewal in 2011, a number of menus, resource documents and functions have been added to the website to accommodate the needs of the GPs. For effective information management and improve technical compatibility, RCARO has made an overall upgrade of the website including design, storage and software in a more user-friendly manner in 2017.

1.1.1 Updating data on the RCA and RCA projects

Supported by the RWAs, RCARO continued its efforts to further update the data on the RCA and its activities: meetings, projects, and news.

At the 40th NRM, it was recommended that the resource documents for 2020-2021 RCA Programme be available on the RCARO website for NRs to conduct briefing sessions for preparing project concepts and designs. RCARO uploaded the resource documents in consultation with the RCA PAC Chair on the website accordingly.

Based on the recommendation of the WG on the MTS coordination, RCARO will collect and update the information on the Regional Resource Unit (RRU) by integrating information received by the GPs.

1.2 Participation in regional/international events and support for the promotion of RCA activities

RCARO made efforts to fulfill its mandate by promoting RCA to target audiences at appropriate occasions through presentations and exhibitions as well as providing support to RCA experts participating in such promotional activities.

1.2.1 Presentation and exhibition on RCA/RCARO activities to target audiences

RCARO continued to promote the RCA/RCARO activities to target audiences by means of

making presentations and exhibitions at some relevant occasions and meetings including RCA events in the region.

For the 2018 plan, according to the recommendation of the SAC, RCARO conducted a survey of NRs and IAEA and collected information on 15 conferences. Amongst those, the 46th GCM approved the two conferences below for RCARO's participation in 2018:

- 12th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB), 20-24 April 2018, Melbourne, Australia
- Global South-South Development (GSSD) Expo, October 2018, venue to be decided

RCARO participated in the 12th Congress of WFNMB and will participate in the GSSD Expo on 28-30 November in New York, USA for promotion of the RCA and its activities.

In addition, RCARO supported NZE's promotion of the RCA at the Australasian Environmental Isotope Conference held on 26-28 March 2018 in Wellington, New Zealand, and at the International Workshop on Global Atmosfer Watch (GAW) Activities 2018 held on 7-8 August 2018 in Jakarta, Indonesia, by providing promotional materials such as brochures, Success Stories and souvenirs.

Also following the recommendation of the 26th SAC and request by the IAEA, RCARO will attend IAEA Ministerial Conference on Nuclear Science and Technology: Addressing Current and Emerging Development Challenges, to be held on 28-30 November 2018 in Vienna, Austria.

For 2019 plan, RCARO collected information on 8 conferences and made the following shortlist of possible conferences to attend in 2019 for consideration of SAC.

- 6th Asia-Pacific Forum on Sustainable Development (APFSD 2019), May 2019, venue to be decided
- 13th Regional Conference on Nuclear Science and Technology, August 2019, Viet Nam

RCARO will participate in those events based on the decision of the 47th GCM, subject to budget availability and schedule of RCARO in 2019.

1.2.2 Supporting RCA experts for increasing awareness of the RCA

RCARO continued to provide its assistance to selected RCA experts for their participation in regional/international events and their RCA promotional activities.

With regard to the cycle of 2018, RCARO selected 2 selectees from MAL and INS out of 24 nominations received from 8 Government Parties (BGD, INS, MAL, NEP, PHI, SRL, THA,

VIE) in consultation with the SAC. The two will be supported by RCARO for their participation in the events and RCA promotional activities in due course.

For the next cycle in 2019, RCARO invited the Government Parties to nominate appropriate RCA experts and has received 10 nominations from 4 Government Parties.

According to the guidelines of the programme and in consultation with SAC, RCARO will select appropriate candidates for 2019.

2. Expanding support for the benefit of the Government Parties and development of the RCA

2.1 Implementation of RAS6083

Upon the approval of the 43rd GCM, RCARO has been carrying out RAS6083 on “Improving patient care and enhancing Government Parties capacity in nuclear medicine programmes in RCA region” as the LCC of the project. Funded by the Korean Government, the project is being implemented for 3 years from 2016.

2.1.1 Implementing Expert Missions

According to the work plan, three expert missions to THA, PHI and VIE were implemented on neurology, oncology and cardiology in May, July and August respectively. The materials of expert missions received from NPCs were shared with other project stakeholders through the project platform on the RCARO website.

Six expert missions to INS, MON, KAM, PAK and THA will be carried out in the requested thematic focus areas in the 3rd and 4th quarter of 2018.

2.1.2 Conducting a regional workshop/progress review meeting

With the support of the Government of Australia, a project review meeting was held on 16-20 April 2018 in Melbourne, Australia, in conjunction with the 12th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB) held on 20-24 April 2018. The meeting was attended by 22 participants including LCC, NPCs, PMO, TO and a representative from ANSTO, on behalf of the NR of Australia and reviewed the progress made in 2017 and confirmed detailed activities to be implemented in 2018.

As the project is being completed in 2018, the meeting discussed means to address sustainability of the project and it was suggested that the educational materials created under the project be transformed into e-learning modules for sustained educational support for the participating GPs.

In this regard, a proposal for an expert meeting was drafted for consideration of the IAEA.

A Final Review Meeting and Workshop will be held on 17-21 December in Singapore, inviting NPCs of the project.

2.1.3 Submission of progress report

Progress report will be submitted to the IAEA in due time, integrating national reports received from the NPCs of the project.

2.2 RCARO Managed Project: Implementation of a Research Project

Aiming to supplement the RCA Programme and accommodate needs of the GPs, RCARO initiated a Research Project (RP) on “Air Quality and Environmental Impact Assessment of Industrial Activities in the Region” under the framework of the RCARO Managed Project.

The project is for 3 years from 2018 and to support the improvement of quality of the environment through the provision of appropriate pollutant data to researchers and relevant stakeholders.

10 GPs participate in the RP: AUL, NZE, ROK as Agreement Holders and BGD, INS, MAL, MON, NEP, PHI and SRL as Contract Holders.

2.2.1 Conducting a research coordination meeting

As its first activity, a research coordination meeting was held on 9-11 May 2018 in Jeju, Korea, inviting 17 participants including Agreement and Contract Holders from 10 GPs, Technical Officer and members of the Research Review Committee (RRC). The meeting reviewed the current status of research activities on air pollution monitoring and defined overall parameters of the project such as baseline data, performance indicators and expected results. After identification of modalities of human resource development and analytical services from external providers, the meeting finalized detailed research activities and work plan of each country.

The participating countries will carry out the research activities according to the finalized national work plans and submit Annual Progress Reports to the RCARO for review by the RRC. The RRC review will constitute the condition for continued participation of the GPs in the project and support from the RCARO.

The second Research Coordination Meeting will be held in June 2019.

2.3 Supporting the IAEA for RCA administrative matters

Upon the decision of the 45th GCM on the RCARO's assist to the IAEA in its secretariat functions such as preparation of the RCA policy meetings and coordination of WG activities, RCARO assisted the IAEA in preparation for the 40th NRM and the 47th GCM, including preparation of agendas, background documents and 2017 annual report.

2.4 Assisting the RCA Chair for coordination of activities

Decided by the 46th GCM on the RCARO's support to the RCA Chair, RCARO provided assistance to the RCA Chair in performing his duties required by the NRM.

3. Enhancing and exploring partnerships with regional/international organizations

3.1 Implementation of the RCA/UNOSSC project on Electron Beam (EB) applications

RCA/UNOSSC project on Electron Beam Applications for Value Addition to Food and Industrial Products and Degradation of Environmental Pollutants in the Asia Pacific region (Phase 1) was implemented from 2013 to 2015 in order to promote and disseminate the use of electron beam applications in the areas of agriculture, industry and environment treatment. Considering the continuous needs and demands of the participating countries for a follow-up project, a proposal for RCA/UNOSSC project (Phase 2) was submitted to the UNOSSC and approved for implementation of three years, 2017-2019, with a total budget of USD500,000.

15 RCA GPs, ROK as the lead country, are participating in the project. (BGD, KAM, IND, INS, MAL, MON, MYA, NEP, NZE, PAK, PHI, SRL, THA, and VIE)

3.1.1 Conducting a regional training course

According to the work plan, a Regional Training Course was conducted on the subject of electron beam applications for shelf-life extension and phytosanitary measures on foods on 5-13 March 2018 in ARTI, Korea, inviting 18 trainees from 11 participating countries. The course provided advanced knowledge and experimental experience on electron beam applications for shelf-life extension and phytosanitary measures on foods through lectures and hands-on training. According to the decision of the project coordination meeting, it focused more on hands-on experiments.

3.1.2 Holding a review meeting of the RCA/UNOSSC project on electron beam applications

A mid-term review meeting will be held on 16-18 Oct. 2018 in Bali, Indonesia to evaluate outcomes of the project and discuss and finalize the details of the activities in 2019.

3.1.3 Implementing Expert Missions

Expert Missions to MYA, MAL, MON were conducted on 15-18 August and 6-8 November 2017 and 8-11 May 2018 respectively, based on the requests submitted by the target countries.

In Myanmar, where the EB technology development is at its beginning stage, the Mission focused on 1) the promotion of the EB technology and its applications and 2) technical consultation on the establishment of EB facilities and manpower. During the Mission, a ministerial level awareness seminar was held involving 118 participants from representatives from the parliament, ministries, universities and institutes and was broadcasted by national TV channels. In addition, technical meetings on the establishment of EB infrastructure was conducted with local experts and technicians that included on-site consultations on the installation of the facilities, addressing the budget issues, and building human and institutional capacities.

In Malaysia, where active R&D and commercialization activities are on-going, the Mission consisted of technical workshops, separated into two groups of expertise, environment treatment and agriculture. Involving 77 participants from research institutes and universities, the workshops provided lectures and on-site consultations, providing technical advice and recommendations on specified topics for currently running R&D activities as well as potential new research areas.

In Mongolia, the Mission focused on issues on air pollution and sewage sludge treatment on which Mongolia put the most emphasis for Ulaanbaatar. Supported by the Nuclear Energy Commission of Mongolia, a national seminar was held involving 28 participants from water service regulatory commission, sewage authority, university and nuclear research center. The dispatched experts provided lectures and on-site consultations, providing practices, technical merits of EB technology as well as conventional technology in reducing sewage sludge and air pollution.

3.1.4 Submission of progress/financial reports

Upon the rules and regulations of the UNOSSC, progress and financial reports will be submitted to the latter accordingly.

3.2 Exploring partnerships with the ASEAN

In cooperation with the ASEAN and KIRAMS, RCARO implemented a project on capacity building on radiation therapy, targeting RCA/ASEAN countries in 2016. In early January 2018, RCARO, in consultation with KIRAMS, submitted a proposal on radiation therapy as a continuing project for the one implemented 2016.

*ASEAN: Association of Southeast Asian Nations, 10 member countries such as INS, KAM, LAO, MAL, MYA, PHI, SIN, THA, VIE, Brunei

3.2.1 Development of a project on radiation therapy

Upon the approval by the ASEAN, RCARO will proceed to implement the project according to the work plan.

3.3 RCARO/ARCCNM training workshop

Since 2008, RCARO has been supporting the RCARO/ARCCNM training workshop to educate nuclear medicine physicians and scientists in developing and less developed Asian countries and further to foster regional cooperation to promote nuclear medicine in those countries.

In 2018, the workshop was held in conjunction with the 12th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB) on 20-24 April 2018 in Melbourne, Australia.

3.4 Participation in the 19th FNCA Coordinators meeting

On behalf of RCA, RCARO participated in the 19th FNCA Coordinators Meeting held on 22 March 2018 in Japan. Representing the RCA, Director of RCARO presented the achievements of RCA and cooperative activities with the FNCA in 2017.

4. Assisting the Government Parties in addressing regional and national needs

4.1 RCARO/KAIST Nuclear Engineering Master's Degree Course

With the aim of assisting the Government Parties in capacity building related to nuclear science and technology, RCARO has been implementing the Nuclear Engineering Master's Degree Course in cooperation with the Korea Advanced Institute of Science and Technology (KAIST). Since 2003, 34 students from the GPs had been supported by the Programme. In 2018, RCARO supports two students from BGD, one each from INS and KAM for their study in the KAIST.

4.2 RCARO/KAERI regional training course

RCARO will host a regional training course on radiation applications technology on 15-26 October 2018 in cooperation with the Korea Atomic Energy Research Institute (KAERI). The

objective of the workshop is to introduce the technical and practical knowledge on radiation technology and its applications to participants from the RCA GPs.

4.3 IAEA/RCARO/KIRAMS joint training course on occupational radiation protection

As the countries at the beginning stage in applying radiation technologies have become new members of the RCA, there have been demands for safety training for better usage of the radiation technologies in the region. Since 2016, initiated by the IAEA, RCARO has been implementing a joint training course on radiation safety in cooperation with the IAEA and relevant institutes in Korea such as KINS, KAERI.

In 2018, RCARO, in consultation with the IAEA, is planning to host a joint training course on Internal Dose Assessment and Bioassay Methods in Assessing Occupational Intakes of Radionuclides, supported by the Korea Institute of Radiological & Medical Sciences (KIRAMS). It will be held for two weeks on 5-16 November 2018 in Seoul, Korea.

This training course is expected to provide the competence needed to apply the methodologies and techniques used for direct and indirect measurements of internal exposure to radioactive material and cover topics on pre-analytical, analytical and post analytical protocols inside a Quality Assurance programme.

By the end of this training course, participants are expected to be able to apply the methodologies and techniques in their laboratories and review and update their respective protocols.

4.4 RCARO/iTRS training course on radiation safety

Considering the importance of the safety in the application of radiation technology, RCARO hosted a training course on radiation safety on 20-24 August 2018 in Seoul, Korea in cooperation with the Innovative Technology Center for Radiation Safety (iTRS) of Hanyang University, inviting a total 14 participants from 11 RCA GPs. The course covered various subjects related to the radiation safety, such as radiation safety regulation, medical/industrial radiation safety and control, transportation of radioactive materials and emergency preparedness.

5. Other activities

5.1 Participation in the RCA policy related meetings

RCARO participated in the RCA policy related meetings including the 40th NRM in Busan,

Korea and the 47th GCM in Vienna, Austria and made presentations on the RCARO activities. RCARO also provided assistance to the operation of the RCARO SAC meetings as the secretariat.

5.2 RCARO Fellowship Programme

In 2018, three fellows from MYA, VIE and INS were invited to work in the RCARO. Fellows from MYA and VIE had successfully completed the Programme in April and June respectively. Their duties included collecting information on regional and international event; and assisting in the implementation of the research project and the RCA/UNOSSC project carried out by RCARO. A fellow from INS was expected to join the RCARO in July but she withdrew her application due to a position change in the institute.

5.3 Provision of Extra-Budgetary (EB) contribution

An EB contribution by the RCARO will continue in 2018 to support RCA projects in need of financial support and is subject to the budget availability of the RCARO.