






## ANNEX 4 – RCARO Activities Related to Promotional and Other Non-technical Activities in 2020

Given the COVID-19 pandemic, as approved by the 42<sup>nd</sup> NRM, the planned activities in 2020 have been revised, adjusting the timeline of events and implementing alternative activities to remain on track depending on the nature of the activities. The report has been prepared based on the original work plan, thus includes the activities which have been postponed and cancelled due to the COVID-19 pandemic.

	Objectives	Activities	Timeline				Indicators	Status
			QT 1	QT 2	QT 3	QT 4		
1	Increasing the awareness of the RCA	1.1. Publication of success stories					1.1.1. Publication of the 7 <sup>th</sup> batch of RCA success stories	Done - Published two RCA Success Stories in leaflet forms
		1.2. Provision of RCA information service through the RCA website					1.2.1. Update data on the RCA and its projects	Done - Updated data on RCA meetings and projects
		1.3. Participation in regional/international events and support for the promotion of RCA activities					1.3.1. Exhibition on RCA activities to target audiences	In Progress - Participated in 10ICI in Feb. and will participate in WCNDT in Jan. 2021 virtually
							1.3.2. Supporting RCA experts for promotion of the RCA and its projects	Postponed - A selectee from MAL will be supported in 2021

2	Expanding support for the benefit of the GPs	2.1. Implementation of the follow-up project of RAS6083					2.1.1. Holding expert meeting(s)	Done - Held on 2-4 Feb.2020 in PHI
							2.1.2. Development of e-Learning modules	Done - Developed 20 modules on nuclear medicine
		2.2. Implementation of RAS9092					2.2.1. Implementing a project coordination meeting	Done - Held on 29-30 Oct. 2020 virtually
							2.2.2. Conducting a regional training course	Postponed -A webinar is planned in 2021
							2.2.3. Submission of progress report	In progress - Will be submitted by 15 Jan. 2021
		2.3. Implementation of the RCARO Managed Project: Research Project					2.3.1. Implementing preparatory activities for the 2 <sup>nd</sup> phase of the project	Done - 12 GPs confirmed participation in the 2 <sup>nd</sup> phase of the project

		2.4 Holding an introductory workshop for new NRs				2.3.2. Conducting a research coordination meeting	Substituted by review of progress reports
						2.4.1. Holding an introductory workshop for new NRs	Done - Held on 1 Dec. 2020 virtually
3	Enhancing and exploring partnerships with regional/ international organizations	3.1. Implementation of the RCA/UNOSSC project on electron beam(EB) applications				3.1.1. Implementing a Group Fellowship Programme	Done - On-line fellowship was conducted from Aug. to Nov. for three fellows (THA, INS, VIE)
						3.1.2. Implementing Expert Missions	Cancelled due to a budget cut
						3.1.3. Holding a final review meeting	Postponed to 2021 -Produced an achievement video
						3.1.4. Submission of progress/financial reports	Done - Reports were submitted in due course

		3.2. Implementation of the RCARO-ASEANTOM project				3.2.1. Implementing project coordination meetings	Postponed to 2021
						3.2.2. Conducting a regional training course	Done - Replaced with development of e-Learning modules
		3.3. RCA/ARCCNM workshop				3.3.1. Supporting experts for participation in a RCA/ARCCNM workshop	Done - Supported the workshop held on 29-30 Jan. 2020 in PHI
		3.4. Participation in the FNCA coordinators meeting				3.4.1. Participation in the 21 <sup>st</sup> FNCA coordinators meeting	Postponed to an unspecified date
4	Assisting the GPs in human resource development	4.1. RCARO/KAIST Nuclear Engineering Master's Degree Programme				4.1.1. Supporting the RCARO/KAIST Master's Degree Programme	Done - Supported 2 students from MAL and SRL
		4.2. RCA/KAERI training course				4.2.1. Holding a RCA/KAERI training course	Done - 14 selectees from 8 GPs participated in the online

		4.3. RCA/iTRS training course					4.3.1. Conducting a RCA/iTRS training course	course on 12-23 Oct. 2020  Done -28 selectees from 9 GPs participated in the online course on 2-13 Nov. 2020
		4.4. IAEA/RCARO training course					4.4.1. Holding an IAEA/RCARO training course	Done - Replaced with e-Learning modules in connection with the ASEANTOM project
5	Facilitating the better implementation of the RCA Programme	5.1. Supporting the IAEA for RCA administrative matters					5.1.1. Providing support for RCA policy meetings and WG activities	Done - Assisted the IAEA in preparing for the 42nd NRM and the 49th GCM
		5.2. Assisting the RCA Chair for coordination of activities					5.2.1. Providing support to the RCA Chair in performing his/her duties	Done - Assisted the RCA Chair in performing his duties
		5.3. Participation in the activities of the					5.3.1. Participation in the STF meeting	Done - Participated in the STF

		Special Task Force (STF)					meeting on 13 Aug. 2020 via video conferencing
		5.4. RCARO Fellowship Programme				5.4.1. Inviting fellows from GPs to the RCARO	Postponed - Selectees in 2020 will be invited in 2021
		5.5. Provision of Extra-Budgetary(EB) contribution to the IAEA				5.5.1. Providing extra budget for RCA projects in financial needs	Done - Contributed US\$ 72,200 to RAS9092

## **1. Increasing the awareness of the RCA**

### **1.1 Publication of Success Stories**

#### **1.1.1. Publication of the 7<sup>th</sup> batch of RCA Success Stories**

As approved at the 48<sup>th</sup> GCM, RCARO drafted the two Success Stories – one on RAS7029 in the field of air pollution matter and the other on RAS6083 and RAS6071 in the fields of nuclear medicine and radionuclide therapy. In consultation with the LCCs of respective projects, revisions were made the inputs given by the IAEA TOs, RCA-FP and relevant experts.

Reflecting on comments from the NRs, the drafts were finalized and published in two leaflet forms. Electronic versions have been distributed to the NRs and uploaded on the RCA website. They will be handed out to target audiences at regional/international events and other appropriate occasions for promotional purposes.

### **1.2 Provision of RCA information service through the RCA Website**

#### **1.2.1. Update data on the RCA and its projects on the RCA Website**

In response to the recommendation of the 41st NRM to upload the RCA project documents on the RCA website, RCARO re-established the project platform on the website to archive project data according to their areas and categories. In this regard, RCARO requested the LCCs of the completed and on-going RCA projects for materials generated under the projects for uploading on the platform. For the projects commencing in 2020, RCARO uploaded the details of the LCCs, (A)NPCs, RRU and other useful information with the Project Participation Forms received from the RCA FP.

In addition, the summary of the RCA projects implemented during 2007-2019, which was provided by the PAC Chair, was uploaded on the website as a reference for the future development of the RCA projects.

### **1.3 Participation in regional/international events and support for the promotion of RCA activities**

#### **1.3.1 Exhibition on RCA activities to target audiences**

The 48<sup>th</sup> GCM approved the two conferences below for the RCARO's participation in 2020;

- The 10<sup>th</sup> International Conference on Isotopes (10ICI), 3-7 February 2020, Malaysia
- The 15<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA15), 11-15 May 2020, Korea

RCARO participated in the 10<sup>th</sup> International Conference on Isotopes (10ICI) held on 3-7 February 2020 in Kuala Lumpur, Malaysia. RCARO set up a booth and displayed posters on the RCA's contribution to the development of the region, in alignment with the event's objective to promote nuclear technology to achieve the UN's Sustainable Development Goals (SDGs). RCARO also distributed RCA promotional materials, such as brochures and Success Stories, which attracted much interest from the participants.

The 15<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA15) was postponed to be held on 18 January-5 February 2021. An e-booth will be set up to display digital panels on the RCA.

Due to the uncertainty of the COVID-19 pandemic in 2021, an additional survey on regional/international events for participation in 2021 was not conducted.

### **1.3.2 Supporting RCA experts for promotion of the RCA and its projects**

Two (2) experts from INS and MAL were selected to be assisted for their participation in the 15<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA15) and the 20<sup>th</sup> World Conference on Non-Destructive Testing (WCNDT2020) respectively. However, as both events were postponed to 2021 due to the COVID-19 pandemic, RCARO's plan to assist the experts was rescheduled accordingly.

Selectee from MAL will be supported upon the changed schedule of the WCNDT2020 on 31 May-4 June 2021, while the selectee from INS will not be supported due to the withdrawal of the selectee.

Due to the uncertainty of the COVID-19 pandemic in 2021, no additional announcement for the Programme was made for 2021.

## **2. Expanding support for the benefit of the Government Parties**

### **2.1 Implementation of the follow-up project of RAS6083**



Demands and needs for continued education on nuclear medicine were identified from the project RAS6083, RCARO developed thirty (30) modules on essential knowledge in selected areas of nuclear medicine in 2019 and also established an online platform in 2020 called “RCA e-Learning Campus” on the RCA website ([www.rcaro.org/elearning](http://www.rcaro.org/elearning)) where the modules were uploaded.

### **2.1.1 Holding expert meeting(s)**

RCARO organised an expert meeting on 2-4 February in Manila, Philippines in conjunction with the 19<sup>th</sup> Annual Meeting of the ARCCNM\*, inviting 13 experts including members of the review panel and nuclear medicine experts from the region.

\* ARCCNM: Asian Regional Cooperative Council for Nuclear Medicine

The Meeting reviewed the modules developed in 2019 and set up a detailed work plan for 2020. It was decided to develop twenty (20) modules on the essential knowledge in five (5) areas, namely, Oncology, Cardiology, Endocrinology, General Nuclear Medicine (report writing) and Physics based on the needs of the region. Relevant experts were identified for development of the modules and related guideline was also refined reflecting comments of the experts.

In addition, the meeting noted the need for the development of case-based modules to complement and expand the learning experience from essential to practical applications of the technology. The case-based modules would focus on the training using individual patient examples which are managed by multidisciplinary approaches in clinics. The meeting decided to develop one (1) case-based module in 2020 as a pilot and identified fifty (50) region-specific topics for 2021. Relevant guideline and template for the case-based module were also developed at the meeting.

### **2.1.2 Development of e-Learning modules**

Based on the decision of the expert meeting, a total of twenty (20) modules in the five (5) areas have been developed (8 in Oncology, 3 in Cardiology, 2 in Endocrinology, 4 in General Nuclear Medicine and 3 in Physics). After review of the modules by relevant experts and the review panel, the finalized modules have been uploaded on the RCA e-Learning Campus.

In addition, RCARO continued to improve the RCA e-Learning Campus in a more user-friendly manner by installing additional security programme and administrative functions on the platform. A user guide of the RCA e-Learning Campus that contains information on the overview, terms of use and functions of the platform was also uploaded for easy access and use of the campus.

## **2.2 Implementation of RAS9092**

Aiming to transfer knowledge and technology in establishing adequate emergency preparedness and response procedures for category II and III facilities, using a graded approach, RCARO developed RAS9092 “strengthening the capacity to respond to radiological emergencies of category II and III facilities in the Asia Pacific region” under the IAEA TC Programme as the LCC. It will be funded by the Korean Government for implementation for five years (2020-2024), extending one more year, considering the difficulties in undertaking the planned activities due to the COVID-19 pandemic.

### **2.2.1 Implementing a project coordination meeting**

A project coordination meeting was held on 29-30 October 2020 via virtual conferencing. Lead Country Coordinator (LCC), National Project Coordinators (NPCs) from 14 Government Parties, Project Management Officer (PMO), and Technical Officer (TO) of the project attended the Meeting.

The meeting reviewed the status of participating countries on the emergency preparedness and response arrangements. Furthermore, the meeting discussed and set up the details of the project work plan. It was decided that considering the COVID-19 pandemic, the implementation period of the project to be extended one year and some activities to be undertaken online.

### **2.2.2 Conducting a regional training course**

It was decided during the project coordination meeting that the regional training course on Protection Strategy and regional training course on Operational Intervention Levels (OILs) for Radiological Emergencies be postponed to be carried out in Q2 and Q3 of 2022 respectively. This decision was made considering that on-site exercises and training take up a crucial part of the courses.

### **2.2.3 Submission of progress report**

Project Progress Assessment Report (PPAR) will be submitted to the IAEA in due time.

## **2.3 Implementation of the RCARO Managed Project: Research Project**

RCARO has been implementing the Research Project (RP) on “Air Quality and Environmental

Impact Assessment of Industrial Activities in the Region” under the framework of the RCARO Managed Project since 2018. The project aims to support the improvement of the quality of the environment through the provision of appropriate pollutant data to researchers and relevant stakeholders.

Eleven (11) GPs participate in the RP: AUL, NZE, ROK as Agreement Holders and BGD, CPR, INS, MAL, MON, MYA, NEP and SRL as Contract Holders.

### **2.3.1 Implementing preparatory activities for the 2<sup>nd</sup> phase of the project**

A proposal for the 2nd phase of the project was approved by the 48<sup>th</sup> GCM for another three years from 2021 to 2023.

RCARO invited the RCA GPs to submit research proposals for participation in the 2nd phase and received a total of thirteen (13) proposals from AUL, BGD, CPR, INS, MAL, MON, MYA, NEP, NZE, PAK, ROK, THA and VIE. According to the procedure, the proposals were reviewed by the Research Review Committee(RRC) on their technical merits, compatibility with the research theme and capacity to carry out the proposed research. Based on the review result by the RRC, twelve (12) countries are to participate in the 2nd phase of the project: AUL, NZE, ROK as Agreement Holders and CPR, INS, MAL, MON, MYA, NEP, PAK, THA and VIE as Contract Holders.

### **2.3.2 Conducting a research coordination meeting**

Instead of a research coordination meeting, annual reports were received for review of the progress. Accordingly, the RRC reviewed the reports on the planned activities and outputs of the project against the work plan and indicators set under the project. Based on the review result and recommendation by the RRC, updated reports are to be received by the CSIs in January 2021 to review the delayed activities which could not be fully undertaken due to the mobility restrictions in the participating countries.

From the completion of the first phase, an achievement report was drafted by the Technical Officer of the project, integrating the three-year progress reports received from the CSIs. Further, recommended by the RRC, guidelines for proposal templates were developed to assist CSIs in preparing their research proposals.

## **2.4 Holding an introductory workshop for new NRs**

In line with the recommendation of the 41<sup>st</sup> NRM on setting up an adequate support structure to support the NRs, RCARO conducted an introductory workshop for new national RCA

representatives on 1 December 2020 virtually in view of the COVID-19 pandemic. The workshop was attended by twenty-seven (27) participants, including the new RCA NRs and relevant stakeholders from eleven (11) GPs and the IAEA.

Experts from the IAEA and RCA, namely the RCA Chair, the Chairs of the PAC and the MTS 2024-2029 drafting WG and the RCA-FP participated in the workshop to provide essential information on the IAEA/RCA frameworks and relevant policies. It included overall information of the IAEA TC Programme, RCA Agreement and its Programme, roles and responsibilities of the NRs. The workshop also discussed possible means of how to adapt to the new norm of digitalization for the RCA.

### **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 is being implemented from 2013 to 2020. The project is divided into two phases (phase 1: 2013-2015, phase 2: 2017-2020) promote and disseminate the use of EB technology in the areas of agriculture, industry and environment treatment.

Given the COVID-19 pandemic, UNOSSC informed of the no-cost extension of six months considering the difficulties in undertaking the remaining activities of the project.

##### **3.1.1 Implementing a Group Fellowship Programme**

Three fellows from THA, INS, and VIE were selected through a review process by the Selection Committee consisting of relevant experts. Due to the travel restrictions, the six-month on-site programme was replaced with a two-month online course on electron beam accelerator and its applications which was held from 31 August to 7 November 2020. The online group fellowship programme provided a total of thirty-two (32) e-Learning lectures and four (4) real-time lectures developed by KAERI\* experts. All three fellows completed the course by satisfying the test scores and submission of assignments. A satisfaction survey scored 4.7 out of 5.0, showing an overall satisfaction of the fellows on the lectures, lecturers, and study environment.

\* KAERI: Korean Atomic Energy Research Institute

### **3.1.2 Implementing Expert Missions**

Expert missions planned under the project could not be conducted due to a reduction of the project budget.

### **3.1.3 Holding a final review meeting**

National progress reports were submitted by the participating countries to share the updates in 2020. A project review meeting will be carried out in early 2021, using an online platform.

Towards the completion of the project, a promotional video was produced showcasing the regional and national achievements under project phase 1 and 2. The video has been published on the RCA website and distributed to the relevant stakeholders including the UNOSSC.

### **3.1.4 Submission of progress/financial reports and publication of a final report**

Upon the rules and regulations of the UNOSSC, progress and financial reports have been submitted quarterly. As an extension of six months was approved, a final report consolidating the project achievements will be prepared and published in 2021 in due course.

## **3.2 Implementation of the RCARO-ASEANTOM project**

Aiming to expand the RCA-ASEAN partnership and considering that ASEAN's one of the focused areas is enhancing nuclear safety and security, RCARO initiated a project with the ASEANTOM on "enhancing emergency preparedness and response capabilities through building technical capacity in radiation monitoring and dose assessment following the nuclear and radiological emergencies".

Co-lead by the OAP, Thailand and the KIRAMS, Korea, the project is to be implemented for two years from 2020 to 2021.

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

\*ASEANTOM (ASEAN Network of Regulatory Bodies on Atomic Energy)

### **3.2.1 Implementing project coordination meetings**

A project team has been established with the LCC and National Project Coordinators(NPCs), nominated by the RCA NRs of ten (10) ASEAN member countries. The planned project coordination meeting has been postponed to early 2021, however, changes and progress have been shared with the project team using the online platform.

A survey is being conducted to identify details of the equipment, systems and personnel in preparation for the first coordination meeting and activities under the project.

### **3.2.2 Conducting a regional training course**

The training course was substituted with the development of e-Learning modules, aiming to meet the objectives of disseminating knowledge and enhancing the regional capacity of radiation monitoring and dose assessment. With the support from the experts from relevant institutes in Korea, Thailand and Japan, a total of eleven (11) e-Learning modules were developed on basic and essential knowledge on the subject area. The modules will be used as a prerequisite for the participants of the future training courses.

### **3.3 Supporting the RCA/ARCCNM workshop**

RCARO has been supporting the RCA/ARCCNM 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 2020, RCARO continued to support the workshop held on 29-30 January 2020 in Manila, Philippines.

### **3.4 Participation in the FNCA Coordinators meeting**

The Meeting was postponed to an unspecified date due to the outbreak of the COVID-19.

## **4. Assisting the Government Parties in human resource development**

### **4.1 Implementation of the RCARO/KAIST Nuclear Engineering Master's Degree Programme**

Two (2) students have been supported by the Programme, one each from MAL and SRL for their study at the KAIST through online and classroom lectures.

### **4.2 Implementation of the RCA/KAERI training course**

In cooperation with the Korea Atomic Energy Research Institute (KAERI), an e-Learning Course on Radiation Technology and its Application was held on 12-23 October 2020, providing

seventeen (17) e-Learning lectures. Fourteen (14) participants from eight (8) RCA GPs participated in the course.

#### **4.3 Implementation of the RCA/iTRS training course**

Considering the importance of the safety in the application of radiation technology, RCARO hosted an online Radiation Safety Training Course on 2-13 November 2020 in cooperation with the Innovative Technology Center for Radiation Safety (iTRS) of Hanyang University. The course provided fourteen (14) e-Learning lectures and twenty-eight (28) participants from nine (9) RCA GPs benefitted from the course. The participants with high grades in the test will be invited to a scientific visit in 2021, as appropriate.

#### **4.4 Implementation of the IAEA/RCARO training course**

The IAEA/RCARO training course was substituted with the development of e-Learning modules on radiation monitoring and dose assessment following the nuclear and radiological emergencies in connection with the RCARO/ASEANTOM project.

### **5. Facilitating the better implementation of the RCA Programme**

#### **5.1 Supporting the IAEA for RCA administrative matters**

RCARO assisted the IAEA in preparation for the 42<sup>nd</sup> NRM and the 49<sup>th</sup> GCM, including preparation of agendas, background documents and the 2019 RCA Annual Report.

In support of the activities of the WG on RCA MTS Coordination, RCARO participated in the 7<sup>th</sup> Meeting of the WG held on 17-20 February 2020 in Vienna, Austria and shared its views on the matters discussed.

#### **5.2 Assisting the RCA Chair for coordination of activities**

Upon the decision of the 46<sup>th</sup> GCM on the RCARO's support to the RCA Chair, RCARO assisted the RCA Chair in performing his duties required by the 42<sup>nd</sup> NRM and 49<sup>th</sup> GCM.

#### **5.3 Participation in the activities of the Special Task Force (STF)**

In preparation for the 50th Anniversary of the RCA in 2022, the 48<sup>th</sup> GCM established a Special

Task Force consists of the NRs of MAL, THA, VIE and representatives of CPR, JPN, ROK, IAEA and RCARO.

The STF meeting could not be held in February 2020 as planned, however, online communication tools were used in preparing a draft work plan for the 50<sup>th</sup> anniversary. Upon the request by the Chair, RCARO contributed to drafting the work plan for review by the 42<sup>nd</sup> NRM.

Following the recommendation of the 42<sup>nd</sup> NRM on detailing the work plan, a virtual meeting was held on 13 August 2020 where RCARO presented a detailed plan on the exhibition and other activities given the upcoming 50th anniversary of the RCA.

#### **5.4 RCARO Fellowship Programme**

Three (3) selectees from PAK, LAO and KAM could not participate in the Programme in 2020. Their participation was postponed to 2021 to work at the RCARO.

#### **5.5 Provision of Extra-Budgetary (EB) contribution to the IAEA**

RCARO made an extra-budgetary contribution of US\$ 72,200 to support RAS9092 in which the RCARO took the role of the LCC.

\*RAS9092: Strengthening the Capacity to Respond to Radiological Emergencies of Category II and III Facilities (RCA)