

Report of the Director of the RCARO

Background

The procedure for evaluation of the performance of DIR-RCARO and an annual work plan stipulated in RCA Guidelines and Operating Rules (GOR) annex 4 is as follows:

- (a) The DIR-RCARO should prepare a draft annual work plan based on the RCA GOR, addressing all aspects of his/her roles and responsibilities with targets, milestones and measurable performance indicators (PIs) for each aspect of activities, and submit it to the RCARO SAC by 1 January each year.
- (b) The draft work plan should be negotiated and agreed between the members of SAC and the DIR-RCARO.
- (c) An annual work plan should be agreed upon by 1 February with finalized PIs and targets/milestones for each aspect of activities therein.
- (d) The annual work plan is subject to a mid-term review by the SAC. The DIR-RCARO should inform the SAC if there are major items with the potential to affect the implementation of the agreed annual work plan. The SAC should provide its reviews and agree on any adjustment to the annual work plan. The mid-term review may be done in the month of July or otherwise scheduled between the DIR-RCARO and SAC.
- (e) The DIR-RCARO should prepare the report on his/her performance in fulfilling the agreed work plan, and submit it to the SAC by 1 January of the following year for evaluation.
- (f) The SAC will assess the annual report through electronic interactions with the DIR-RCARO, and submit its report to the Regional NRM for consideration.

Actions taken

In accordance with the Annex 4 of the GOR, the DIR-RCARO prepared the report on his performance in 2020 and a work plan for the year 2021 and submitted them to the SAC at the end of December 2020 for its evaluation.






Proposed Action

The Meeting may take note of the report on the RCARO's work performance in 2020 and a work plan for 2021.

2020 Work Performance

In view of the COVID-19 pandemic, as approved by the 42nd NRM, the planned activities in 2020 have been revised, adjusting timeline of the events or 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	<div></div>				1.1.1. Publication of the 7 th 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	<div></div>				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	<div></div>				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 nd phase of the project	Done - 12 GPs confirmed participation in the 2 nd 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 st 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 7th batch of RCA Success Stories

As approved at the 48th 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, and made revisions based on the inputs given by the IAEA TOs, RCA-FP and relevant experts.

Reflecting 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's 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 48th GCM approved the two conferences below for the RCARO's participation in 2020;

- The 10th International Conference on Isotopes (10ICI), 3-7 February 2020, Malaysia

- The 15th International Congress of the International Radiation Protection Association (IRPA15), 11-15 May 2020, Korea

RCARO participated in the 10th 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 as a means 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 of the participants.

The 15th 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, 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 15th International Congress of the International Radiation Protection Association (IRPA15) and the 20th 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

With the demands and needs for continued education on nuclear medicine 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) where the modules will be uploaded.

2.1.1 Holding expert meeting(s)

RCARO organised an expert meeting on 2-4 February in Manila, Philippines in conjunction with the 19th 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 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 as a means 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 has 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 current status of participating countries on the emergency preparedness and response arrangements. Further, 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 be one-year extended and some activities 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 taking into account 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. It aims to support the improvement of 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 2nd phase of the project

A proposal for the 2nd phase of the project was approved by the 48th 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 decided 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 work plan and indicators set under the project. Based on the review result and recommendation by the RRC, updated reports will 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.

As it ends its 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 41st NRM on setting up 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. It 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 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, divided into two phases (phase 1: 2013-2015, phase 2: 2017-2020), in order to promote and disseminate the use of EB technology in the areas of agriculture, industry and environment treatment.

In view of 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, six-month on-site programme was replaced with a two-month online course on electron beam accelerator and its applications 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 the 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 the 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 on a quarterly basis. 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, but 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 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, providing fourteen (14) e-Learning lectures. 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

It 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 42nd NRM and the 49th GCM, including preparation of agendas, background documents and 2019 RCA annual report.

In supporting the activities of the WG on RCA MTS Coordination, RCARO participated in the 7th 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 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 42nd NRM and 49th GCM.

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

In preparation of the 50th Anniversary of the RCA in 2022, the 48th 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 on plan, but online communication tools

were used in preparing a draft work plan for the 50th anniversary. Upon the request by the Chair, RCARO contributed to drafting the work plan for review by the 42nd NRM.

Following the recommendation of the 42nd NRM on detailing the work plan, a virtual meeting was held on 13 August 2020 and RCARO presented a detailed plan on the exhibition and other activities in view of the 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 has been 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 takes the role of the LCC.

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

2021 Work Plan

	Objectives	Activities	Timeline				Indicators
			QT 1	QT 2	QT 3	QT 4	
1	Increasing the awareness of the RCA	1.3. Provision of RCA information through the RCA website 1.4. Publication of Newsletters 1.5. Participation in int'l events for the RCA promotion					1.1.1. Establishment of an integrated information system 1.1.2. Update data on the RCA and its projects 1.2.1. Publication of Newsletters 1.5.1. Exhibition on RCA activities to target audiences 1.5.2. Supporting RCA experts for promotion of the RCA and its projects
2	Enhancing and exploring partnerships with regional/ international organizations	2.1. Implementation of the RCA/UNOSSC project on electron beam(EB) applications 2.2. Implementation of the RCARO-ASEANTOM project		  		  	2.1.1. Development of e-Learning modules 2.1.2. Holding a final review meeting 2.1.3. Publication of a final report and submission of progress/financial reports 2.2.1. Holding coordination/review meeting(s) 2.2.2. Conducting an online course 2.2.3. Development of a guideline

		2.3. RCA/ARCCNM workshop				■	2.3.1. Supporting experts for participation in a RCA/ARCCNM workshop
		2.4. Participation in the FNCA coordinators meeting	■				2.4.1. Participation in the 21 st FNCA coordinators meeting
3	Expanding support for the benefit of the GPs	3.1. Implementation of RAS9092		■		■	3.1.1. Conducting a webinar 3.1.2. Submission of progress report
		3.2. Implementation of the RCARO Managed Project: Research Project	■				3.2.1. Conducting a research coordination meeting 3.2.2 Development of a new research project
4	Assisting the GPs in human resource development	4.1. Provision of online education/ training through the RCA e-Learning Campus					4.1.1. Enhancement of the RCA e-Learning Campus
		4.2. Capacity building through Korean Institutes/Universities					4.2.1. Supporting the RCARO/KAIST Master's Degree Programme 4.2.2. Implementing capacity building activities on radiation technology
		4.3. IAEA/RCARO training course				■	4.3.1. Conducting an online course
		4.4. RCARO Fellowship Programme					4.4.1. Inviting fellows from GPs to the RCARO

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 the RCA Chair in performing his/her duties
		5.2. Assisting the RCA Chair for coordination of activities					5.2.1. Providing support to the RCA Chair in performing his/her duties
		5.3. Participation in the activities of the Special Task Force (STF)	■				5.3.1. Participation in the STF meeting
		5.4. Provision of Extra-Budgetary(EB) contribution to the IAEA				■	5.4.1. Providing extra budget for RCA projects in financial needs

1. Increasing the awareness of the RCA

1.1 Provision of RCA information through the RCA Website

1.1.1. Establishment of an integrated information system

There have been growing demands for enhancement of the website role to provide comprehensive information on the RCA Programme. Also, facing the global trend of digitalization, RCARO plans to improve the RCA website as a hub for providing integrated information service and assistance with online activities to support the RCA in adapting to the needs and new norm.

The website will continue its role as the center for information flow of the RCA Programme, providing overall information and necessary documents of the RCA, such as policy documents and meeting proceedings. It will also serve as the repository of information on human resources and facilities and technological status of the region by archiving the details and outputs of the RCA projects.

Moreover, in response to the expansion of online activities, RCARO will equip the website system with platforms that can assist the GPs in conducting online activities such as e-learning, virtual meetings, trainings and networking.

1.1.2. Update data on the RCA and its projects on the RCA Website

As recommended at the 41st NRM, RCARO has been uploading RCA project documents received from the LCCs on the project information platform of the RCA website. RCARO will request the LCCs of the on-going and recently completed projects for updates and materials generated under each project. Any changes and materials received from the LCCs will be reflected and uploaded on the RCA website for information of the RCA stakeholders.

1.2. Publication of Newsletters

As a way of promotion of the RCA and in the context of the digitalization, RCARO will publish newsletters on a periodical basis to promote and provide timely information of the RCA activities. The target readers are the stakeholders of the RCA, relevant institutes and other regional/international organizations as well as any stakeholders who are interested in the RCA. The contents will include news of the GPs, RCA activities and achievements, notable reports, and radiation technology information of the region. The newsletters are expected to increase the visibility of the RCA by maintaining the interest and engagement of the relevant stakeholders.

1.3. Participation in regional/international events for promotion of the RCA and its activities

1.3.1. Exhibition on RCA activities to target audiences

According to the change of the event due to the COVID-19 pandemic, RCARO will participate in the 15th International Congress of the International Radiation Protection Association (IRPA15) on 18 January - 5 February 2021 which will be held virtually for three weeks. RCARO will run an e-booth at the online exhibition and display RCA videos and electronic versions of promotional materials such as brochures and success stories.

1.3.2. Supporting the RCA expert for promotion of the RCA and its projects

Postponed from 2020, a selectee from MAL will be supported for his RCA promotional activities at the 20th World Conference on Non-Destructive Testing (WCNDT2020) on May 31- June 4 2021. RCARO will keep monitor the situation and make necessary arrangements for his participation in the event in due course, subject to change resulted from the COVID-19 pandemic.

2. Enhancing and exploring partnerships with regional/international organizations

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

RCA/UNOSSC project on Election 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 2021 (phase 1: 2013-2015, phase 2: 2017-2021), with the aim of promoting and disseminating the use of EB technology in the areas of agriculture, industry and environmental treatment.

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

2.1.1 Development of e-Learning modules

Towards contributing to the continued education of the participating countries after completion of the project, e-Learning modules on the EB applications will be developed in cooperation with Korea Atomic Energy Research Institute (KAERI). The modules will include lectures on the essential knowledge ranging from the EB accelerator to its applications according to the thematic area. Details on areas and contents will be decided in consultation with the LCC and relevant experts.

2.1.2 Holding a final review meeting

Final Review Meeting will be held virtually in order to share the project achievements.

2.1.3 Publication of a final report and submission of progress/financial reports

As the project is completed in 2021, a final report will be published that consolidates the outputs and outcomes of the project at national and regional level.

Upon the rules and regulations of the UNOSSC, progress and financial reports will be submitted in due course.

2.2 Implementation of the RCARO/ASEANTOM project

RCARO has been implementing a partnership project with the ASEANTOM (ASEAN Network of Regulatory Bodies on Atomic Energy), on “enhancing emergency preparedness and response capabilities through building technical capacity in radiation monitoring and dose assessment following the nuclear and radiological emergencies (2020-2021).”

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

2.2.1 Holding coordination/review meeting(s)

Project coordination/review meeting(s) will be held virtually, inviting the NPCs and relevant experts, to review the country status and discuss the details of the project activities.

2.2.2 Development of a guideline

According to the work plan, a guideline on radioactivity measurement and radiation dose assessment in the environment and the public containing recommended techniques for sample collection & preparation, measurement of radionuclides, and radiation dose assessment will be developed, involving appropriate experts from Korea Institute of Radiological and Medical Sciences (KIRAMS), Office of Atoms for Peace (OAP) of Thailand and Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

To make it fit for the ASEAN countries, a survey of the NPCs will be conducted to identify the details of the equipment, system and personnel to be used in framing the scope of the guideline.

2.2.3 Conducting an online course

An online course will be conducted inviting relevant stakeholders of ASEAN countries to provide technical lectures on the radioactivity measurement and dose assessment, making use of the guideline. The e-Learning modules developed in 2020 will be used for pre-learning for participation in the course.

2.3 Supporting the RCA/ARCCNM workshop

Since 2008, 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.

RCARO will continue its support for a workshop to be held in November 2021 in Jordan.

2.4 Participation in the FNCA Coordinators meeting

On behalf of the RCA, RCARO has been participating in the FNCA Coordinators Meeting held in Japan to present the achievements of the RCA and promote cooperation between the RCA and the FNCA. RCARO will present the achievement of the RCA and cooperative activities with the FNCA, as appropriate.

3. Expanding support for the benefit of the Government Parties

3.1 Implementation of RAS9092

RAS9092 on “strengthening the capacity to respond to radiological emergencies of category II and III facilities in the Asia Pacific region” has been developed by the RCARO, as the LCC, under the IAEA TC Programme. It aims to transfer knowledge and technology in establishing adequate emergency preparedness and response procedures for category II and III facilities, using a graded approach. Funded by the Korean Government, the project is to be implemented for five years from 2020 to 2024, extending one more year, as decided at the project coordination meeting in 2020 due to the difficulties in undertaking the planned activities resulted from the COVID-19 pandemic.

Fifteen (15) GPs, ROK as the lead country, participate in the project: AUL, BGD, CAM, IND, INS, MAL, MON, MYA, NEP, PAK, PHI, SIN, THA and VIE.

3.1.1 Conducting a webinar

According to the work plan decided at the project coordination meeting in 2020, a webinar will be undertaken in the second quarter of 2021, in order to provide introductory learning for the participating countries. This course will also serve as a prerequisite course for the physical Regional Training Courses in the following years.

3.1.2 Submission of progress report

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

integrating national reports received from the NPCs of the project.

3.2 Implementation of the RCARO Managed Project: Research Project

RCARO has been implementing the RCA Research Project on “Air Quality and Environmental Impact Assessment of Industrial Activities in the Region” as a component of the RCARO Managed Projects under the RCA Programme.

Decided by the 46th GCM on the research theme for improving the quality of environment through provision of appropriate pollutant data to researchers and relevant stakeholders, the 1st phase of the project (RCARP01) was implemented in 2018-2020.

Followed by the approval of the 48th GCM, the 2nd phase of the project (RCARP02) on the expanded research on other pollutant sources such as crops, water and soil will be implemented for another three years from 2021 to 2023.

Twelve (12) GPs will 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.

3.2.1 Conducting a research coordination meeting

Research coordination meeting will be held in the 1st quarter of 2021 virtually, inviting agreement/contract holders, technical officer and members of the Research Review Committee (RRC).

The meeting will review and discuss the outcomes/achievement of the phase 1, details of overall work plan and implementation strategy including performance indicators of the phase 2 to make tangible outcomes of the project.

3.2.2. Development of a new Research Project

Considering the strong needs of the GPs, RCARO plans to initiate a new Research Project on a topic that could contribute to addressing regional problems through research in nuclear science and technology.

According to the procedure for development of the Research Project, RCARO will conduct a survey of the GPs on the possible research area/topic and make necessary arrangements for launch of the project in 2021 in consultation with the NRs and RRC.

4. Assisting the Government Parties in human resource development

4.1. Provision of online education/training through the RCA e-Learning Campus

With the increased demand and emphasis on digitalization of learning contents for efficient training and its impact, RCARO has developed the online training platform for the RCA, the

“RCA e-Learning Campus” on the RCA website (www.rcaro.org/elearning). It is designed to provide sustainable learning opportunities and contribute enhancement of the capacity in nuclear science and technology for the RCA GPs to meet the growing needs for continued education and preservation of skills related to the technology.

4.1.1. Enhancement of the RCA e-Learning Campus

Currently, the RCA e-Learning Campus provides online training on essential knowledge in nuclear medicine and radiation safety for experts and stakeholders interested in the related fields. Subject to budget availability, RCARO will develop additional modules on various topics on nuclear science and technology and seek means to further improve the education services of the platform in a more effective manner for the GPs. RCARO will continue to enhance the usage of the Campus by providing more learning contents and improving functions of the platform.

4.2. Capacity building through the Korean Institutes/Universities

4.2.1. Supporting the RCARO/KAIST Nuclear Engineering Master’s Degree Programme

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). As carried out in the past years, RCARO will continue to recruit students from the Government Parties in 2021.

4.2.2. Implementing capacity building activities on radiation technology

RCARO has been implementing regional training courses in cooperation with the Korean institutes in various fields of radiation technology. Combining those courses, RCARO will develop an integrated course covering the radiation application in thematic areas and the safety of its use, engaging the Korean institutes such as KAERI, KIRAMS, KINS and other relevant institutes in the 4th quarter of 2021.

Further, RCARO will seek possible areas in response to the needs and demands of the Government Parties to assist in human resource development and better use of the technology through capacity building activities engaging experts from Korean institutes. The Government Parties will be requested to recommend appropriate candidates for those events.

4.3. IAEA/RCARO training course

In order to raise the efficiency and effectiveness of the training opportunities, RCARO has been

implementing joint training courses in cooperation with the IAEA.

In 2021, an online course will be conducted on radiation monitoring and dose assessment in connection to the RCARO/ASEANTOM project.

Further, RCARO will develop e-Learning modules on the subject area in consultation with the IAEA and the stakeholders of the RCARO/ASEANTOM project.

4.4. RCARO Fellowship Programme

RCARO will invite the three (3) selectees in 2020(PAK, LAO and KAM) who could not participate in the programme due to the COVID-19 pandemic. RCARO will provide necessary arrangements for their participation in due course, subject to the progress of the situation.

5. Facilitating the better implementation of the RCA Programme

5.1 Supporting the IAEA for RCA administrative matters

RCARO will support the IAEA in its RCA secretariat functions in terms of preparation and coordination of the policy meetings including the NRM and the GCM.

In close consultation with the IAEA, RCA Chair and GPs, RCARO will carry out relevant duties for effective and efficient operation of the meetings.

In supporting the activities of the WGs on MTS, RCARO will continue to provide assistance to the WGs as the coordinator for the WGs.

5.2. Assisting the RCA Chair for coordination of activities

Decided by the 46th GCM on the RCARO's support to the RCA Chair, RCARO will provide assistance to the RCA Chair in performing his/her duties.

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

In preparation of the 50th Anniversary of the RCA in 2022, the 48th GCM established a Special Task Force consists of the NRs of MAL, THA, VIE and representatives of CPR, JPN, ROK, IAEA and RCARO.

As a member, RCARO will participate in the virtual STF meeting scheduled in January 2021 and share opinions/views on the issues to be discussed.

5.4. Provision of Extra-Budgetary (EB) contribution to the IAEA

The contribution will continue in 2021 to support RCA projects in need of financial support, subject to the budget availability of the RCARO.