



RCANRM(45)/6

Report of the Director of the RCARO

Work Performance in 2022 and Work Plan for 2023

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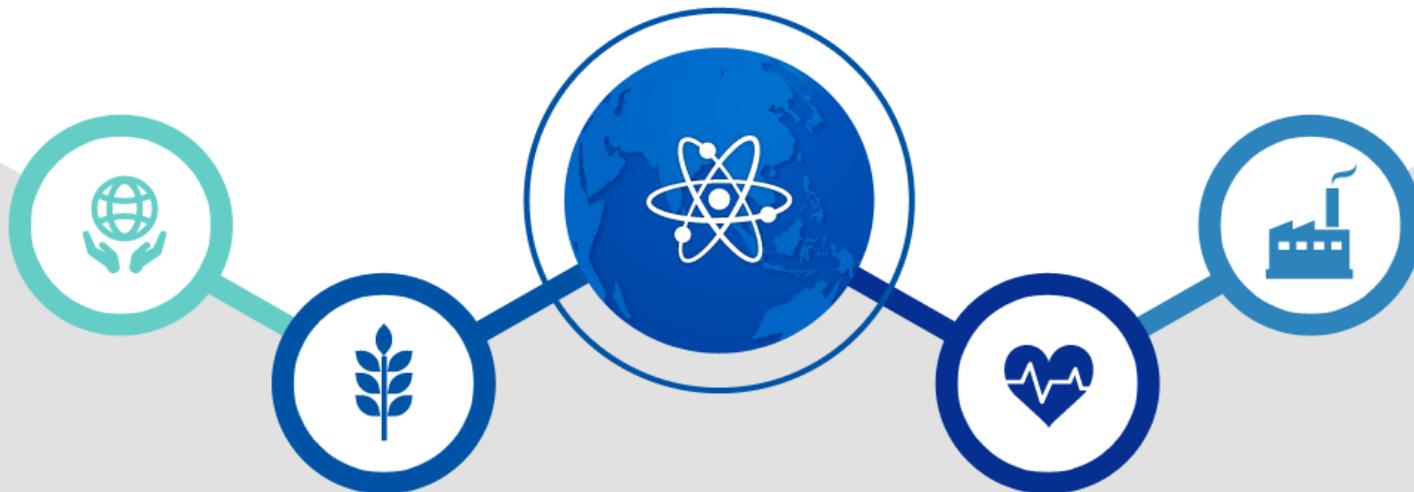
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Highlights of the 2022 Work Performance

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1. Supporting the Celebration of the 50th Anniversary of the RCA



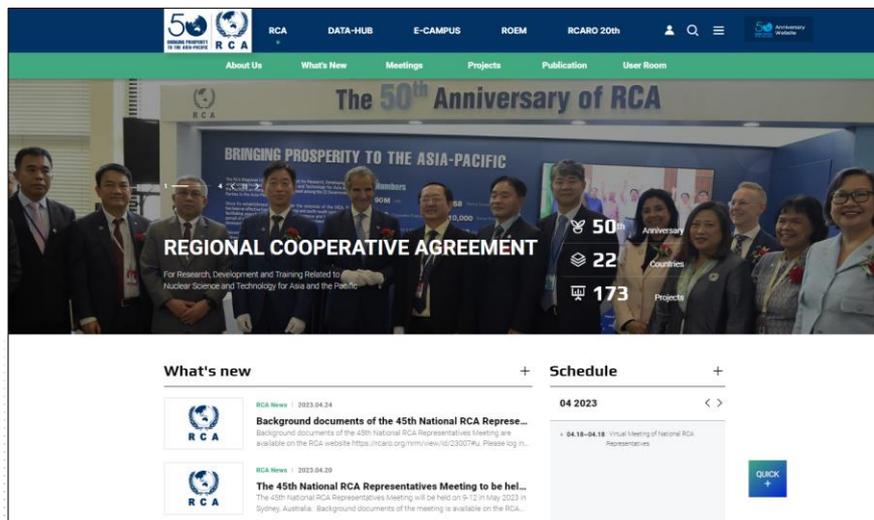
- As a member of STF, RCARO was engaged in **preparing diverse events to celebrate the 50th Anniversary of the RCA** including exhibition, awards, videos and publications, etc.
 - Owing to the generous financial contribution by the Korean Government, these ceremonial activities were greatly successful in showcasing the remarkable achievements of the RCA.
- During the Awards Ceremony in the RCA Ministerial-level Meeting, **RCARO received a Special Award**, acknowledging the RCARO's dedicated contributions made over the past 20 years in advancing and expanding the RCA and its programs.

2. Celebrating the 20th Anniversary of the RCA Regional Office



- **Hosting the International Symposium celebrating the RCA 20th Anniversary** held in Dec. 2022 in Korea, sponsored by the Ministry of Science and ICT (MSIT) and other nuclear institutes in Korea.
 - More than 250 delegates from the RCA communities and the Korean nuclear society attended, including Mr Rafael M. Grossi, DG of the IAEA, Mr Oh Tae-seok, Vice Minister of MSIT of Korea, Mr Tran Chi Thanh, the RCA Chair, and other renowned experts as speakers.
- Under the theme **“Cooperative Leadership in NS&T and Sustainable Development in Asia and the Pacific Region”**, the Symposium highlighted RCARO’s past achievements as well as discussed its vision and strategic directions for the future sustainable development.
 - Many presenters and panelists emphasized a need to **expand RCARO’s functions and roles** in facilitating R&D activities in the RCA Program by taking the leading role as a nuclear think-tank of the region and vitalizing the information and data sharing and analysis.

3. Vitalizing the Information and Data Sharing within the RCA



- In July last year, RCARO launched the **RCA Integrated Information System** aiming to provide comprehensive information and data on the RCA as well as overall NS&T status and trends.
 - Composing the following four sub-systems such as: the RCA website, NS&T Data-Hub, the RCA e-CAMPUS, the RCARO e-Management and NS&T Data-Hub.
- Aiming to provide timely information to the GPs and the other stakeholders on a quarterly basis, RCARO published **three issues of the RCA Newsletters** in Jun., Sept., and Nov. last year.
 - Distributing Newsletters to around 700 subscribers from the RCA GPs, regional/international organizations and other stakeholders via email.

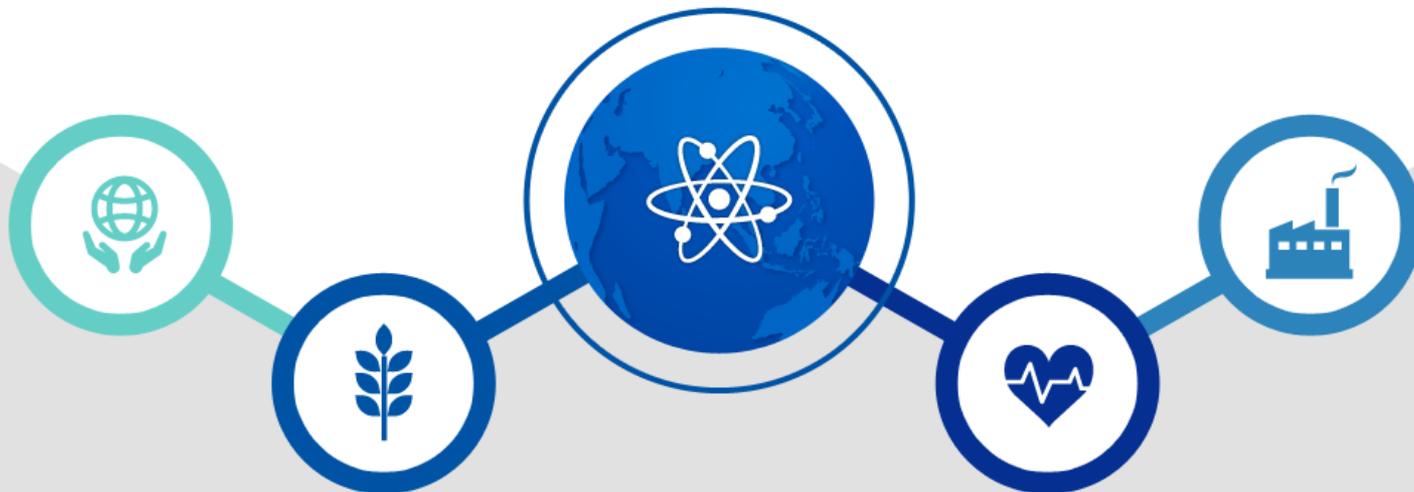
4. Bridging the RCA to the International/Regional/National Partners



- RCARO initiated the second phase of the **RCARO/ASEANTOM partnership project** with the project duration of three years from 2022-2024.
 - Project's purpose: Strengthen overall EPR capabilities of the GPs specifically focusing on radiation monitoring and dose assessment for ensuring the radiation safety of the environment, the workers and the public during nuclear or radiological emergencies.
- In 2022, RCARO successfully co-organized the Workshop on e-Beam/X-ray technologies with the **Office of Radiological Security (ORS/NNSA) of the US DOE**, as a new partner beyond the region.
 - The Workshop was held in November for one week and provided actionable information in adopting e-Beam/X-ray technologies to 130 participants from 22 countries.



Highlights of the 2023 Work Plan



1. Establishing the Asia-Pacific Nuclear Think-tank for the RCA

- In transitioning to the next 20 years, in Dec. last year, RCARO drew up its future vision and strategies to leapfrog toward a competitive “**Asia-Pacific Nuclear Cooperation Organization**” leading sustainable, innovative, but inclusive growth in the region.
 - Five strategic pillars: i) enlarge the horizon of RCA stakeholders in the region and beyond; ii) be an Asia-Pacific nuclear think-tank; iii) build up the RCA integrated information platform; iv) support the strengthening of R&D cooperation in the RCA; and v) lead nuclear capacity building in the region.
- According to the above vision/strategy, in Feb. 2023, RCARO reformed its organizational structure and created the “**Policy & Information Centre**” as the **Asia-Pacific nuclear think-tank** for the RCA.
 - Set up and is being operated as part of a national R&D program within the RCARO framework with the full financial support from the Korean government.

Mission and functions of the Policy Information Centre

- **Prime mission:** Provide better and more effective support for assisting the IAEA Secretariat, RCA Committees and WGs in performing their duties.
- **Main functions:** i) policy planning on NS&T cooperation strategies including R&D in the region; ii) overall NS&T trend analysis to identify regional challenges and needs including study on the RCA policy issues, publication of issue papers and monthly trend analysis reports; and promoting networks of research communities and cooperation with other relevant NS&T networks in the region.

2. Enlarging the Horizon of RCA Stakeholders through Strategic Partnerships

- RCARO continues to develop partnership projects and further explore a strategic and innovative approaches to identify potential partners to effectively mobilize the resources and expand RCA's collaborative activities with other stakeholders. To this end,
 - Considering to **undertake a policy study on strategic expansion of partnerships and develop innovative ways** to double effectiveness of our visibility and advocacy.
 - Planning to **develop the detailed profiles of potential partners** including international, regional and national organizations, based on the results of the policy study.
- RCARO is now proceeding close consultation with ORS/NNSA of DOE in the U.S. to launch a **new partnership project on e-Beam technology** adoption and its applications (2024-2028).

3. Conducting Activities for the Effective Promotion of the RCA

- RCARO is now considering to **restructure the existing promotional activities** in order to maximize its effectiveness and impact on the enhancement of the RCA visibility. To this end,
 - Conducting interviews and surveys of NRs/IAEA/relevant stakeholders in Q2 to identify views/needs/issues related to the RCA promotional activities.
 - Planning to organize a strategic workshop in Q3/4 to discuss strategic directions and develop an appropriate mechanism for the effective promotion of the RCA.

4. Nurturing the New Generation through RCARO Scholarship Programs

- Further to the existing KAIST and KINGS master's programs, RCARO is planning to initiate a **new Master's/Doctoral scholarship program** in cooperation with UST, targeting to launch this year.
 - RCARO is considering to support around ten students annually recommended by the RCA GPs for studying their Master's and PhD courses with the Korean government scholarship.

*KAIST: Korea Advanced Institute of Science and Technology, KINGS: KEPCO International Nuclear Graduate School

Features of University of Science and Technology (UST)

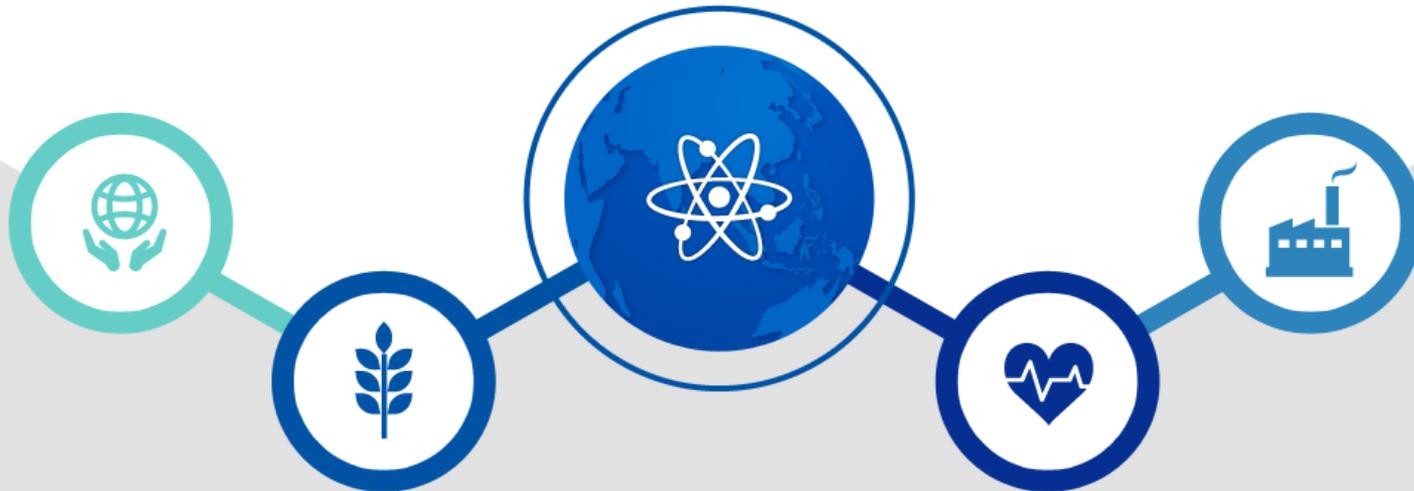
- A world-class S&T graduate school jointly established by 35 GRIs in 2004 to cultivate future core S&T talents; successful model of HRD centre **leveraging industry-academia-research institute cooperation**
 - **Participating in national R&D projects**, thus building up their research competence through the entire R&D project cycle from planning/management, implementation, IPR creation to tech. transfer, etc.
 - **Six majors in NS&T**: accelerators & quantum beams, radiation life science, radiochemistry, quantum energy & chemical engineering, nuclear system engineering, and nuclear and radiation safety
- Currently, RCARO is also drawing up a **new initiative to implement a post-doctoral program** in cooperation with Korean relevant research institutes in the area of NS&T.
 - RCARO will continue to strongly support for nurturing the new generation of scientists and researchers in the field of NS&T through implementing the **HRD package program combining Master and PhD courses and post-doc program**.

5. Facilitating the R&D Component within the RCA

- As the RP02 (Air Pollution, the 2nd phase of 2021-2023) will be completed this year, RCARO in cooperation with the TO and CSIs will **publish a final project report** compiling major research findings and achievements made during the project duration.
 - As a follow-up to the completion of the research project on Air Pollution, RCARO is planning to launch a new research project managed by RCARO, by conducting a survey on the needs and priorities of the GPs in the second half of this year and selecting a research theme.
- To promote the joint research among NNRI of the RCA, RCARO is also planning to launch **new R&D projects as a part of the national R&D program**, supported by the Korean government.
 - Expecting to meet the regional needs and tackle interconnected and complex issues through implementing diverse and more integrated forms of joint research activities.
 - In 2023, two national R&D projects will be launched according to the relevant laws, regulations and procedures of the Korean government on the National R&D Program.



Details of the 2022 Work Performance and 2023 Work Plan



1.1 Establishing and managing the RCA Integrated Information System

- The RCA integrated information system, comprising the RCA website, RCA e-Campus, Data-Hub and RCARO e-Management systems, was developed and launched in 2022, as a comprehensive service platform for RCA information, knowledge and NS&T data.
- RCARO will continue to expand its contents by uploading all documents and information materials related to RCA projects as well as linking other NS&T information systems.

1.2 Publication of the RCA Newsletter

- In 2022, three issues had been published in April, September, and November respectively.
 - The 2nd/3rd issues were published as special issues for the 50th Anniversary of the RCA.
- In 2023, the RCA Newsletter will be published on a quarterly basis; its first issue of 2023 was published early May and was sent out to 800 readers.

1.3 Promotional activities for enhancing the visibility of the RCA

- In consultation with the SAC, RCARO will select and participate in potential international events for the promotion of the RCA in 2023, subject to budget availability.
- RCARO is now considering to restructure the existing promotional activities to maximize its effectiveness and impact on the enhancement of the RCA visibility. To this end,
 - Conducting interviews and surveys of NRs/IAEA/relevant stakeholders in Q2 to identify views/needs/issues; and planning to organize a workshop in Q3/4 to develop strategies and an appropriate mechanism for effective promotion of the RCA.

2.1 Development of a follow-up project on e-Beam technology

- As a follow-up of the RCA/UNOSSC project, a workshop was co-organized in collaboration with ORS/DOE* to provide actionable information on adopting e-Beam/X-ray technologies.

*ORS/DOE: Office of Radiological Security under the US Department of Energy/National Nuclear Security Administration

- **Title:** Workshop on Advancing the Adoption of e-Beam and X-ray Technologies in Asia and the Pacific
- **Date & Venue:** 14-18 Nov. 2022 / Daejeon, Korea
- **Participants:** 130 participants from 22 countries
- **Activities:** lectures, case studies, panel discussion, and technical visit, etc.

- In partnership with the ORS, to expand the partnership and continue to meet the needs of the region on the adoption and applications of the e-Beam technology, RCARO submitted a new project proposal to the SAC for approval of the fast-track mechanism.

2.2 RCARO/ASEANTOM Project (Radiation Monitoring & Dose Assessment, Phase 2: 2022-2024)

- The 2nd phase of the RCARO/ASEANTOM project was initiated and its work plan was confirmed at the project coordination meeting in Mar. 2022.
 - The virtual training course on dosimetry and radiation monitoring was held In Feb. 2023 (48 participants from 6 GPs) and an on-site training course will be held in August.
- In cooperation with KRISS*, video tutorials and handbooks on operating procedures for radioactivity measurement and dose assessment are being developed, targeting to be finalized and distributed to the participating countries in Q2 2023.

*KRISS: Korea Research Institute of Standards and Science

2.3 Implementation of a joint workshop with the ARCCNM

- In collaboration with the ARCCNM, RCARO hosted the workshop from 31 October to 5 November 2022 and supported a total of 25 participants in their training.
- In 2023, RCARO will continue its support for a workshop to be held in Q3, 2023.

*ARCCNM: Asian Regional Cooperative Council for Nuclear Medicine

2.4 Participation in the FNCA Coordinators meeting

- Representing the RCA, RCARO participated in the 22nd FNCA Coordinators Meeting on 28 June 2022 and presented the RCA activities and shared views on collaboration with the FNCA.
 - The meeting noted that cooperation on mutation breeding, radiation oncology, radiation processing & polymer modification and food provenance should be encouraged.
- Upon invitation by the FNCA, RCARO will participate in the next FNCA Coordinators Meeting for 2023.



3.1 RAS9092 (EPR Capacity of Cat. II and III Facilities, 2020-2024)

- Two regional training courses were held physically in Q4 2022.
 - RTC on development and application of operational intervention levels for reactor emergencies (3-7 Oct., Thailand)
 - RTC on developing a protection strategy for a nuclear or radiological emergency (31 Oct. – 4 Nov., Viet Nam)
- In 2023, mid-term review meeting was held in Malaysia in Feb. 2023 to review the project progress and discuss and agree on the future activities.

3.2 RCARO Managed Projects: RCARP02 (Air Pollution, 2021-2023)

- The mid-term review meeting was held virtually on 29 June 2022 to discuss challenges and remedial actions in undertaking research activities, attended by 13 participants from 9 GPs.
- In 2023, research coordination meeting will be held in Indonesia in May, inviting the CSIs, technical officer, members of the Research Review Committee (RRC) and other relevant experts.

3.3 RCARO Managed Projects: RCARP03 (Radiotherapy, 2022-2024)

- The research coordination meeting was held virtually on 12-13 March 2022 to review the current R&D status and finalize national research proposals and work plans for 2022-2024.
 - Also, two workshops were held virtually in May 2022 to provide the CSIs with basic knowledge and expertise needed in implementing the activities of each phase.
- In 2023, research coordination meeting will be held in Indonesia in May, inviting the CSIs, technical officer, RRC members and other relevant experts.

4.1 Capacity building through Korean institutes/universities

- **(Degree programs)** In 2022, RCARO supported three students for KAIST Master's program and five students for KINGS Master's program.
 - In 2023, under the RCARO's Master's degree programs, one student (SRL) to KAIST and five students (MON, THA, INS(2), PHI) to KINGS will be supported.
 - RCARO is planning to initiate a new Master's/Doctoral scholarship program in collaboration with University of Science & Technology (UST), targeting to launch this year.
 - Currently, RCARO is also drawing up an initiative to implement a post-doctoral program in cooperation with relevant research institutes of Korea in the area of NS&T.
- **(Capacity building activities)** In 2022, an online training course on radiation technology and applications was held from 22 Aug. to 2 Sep. inviting 27 participants from 6 GPs.
 - Conducting the on-site hands-on training course through scientific visits to Korean nuclear facilities in Dec. 2022, attended by 18 participants from 8 GPs.
 - Conducting the online training course on the radiation equipment and its applications on 22-26 Aug., attended by 31 participants from 7 RCA GPs.
 - Organizing a workshop on enhancing capacity for developing, using and maintaining radiation equipment in Mar. 2023, inviting 12 participants from 6 countries.

4.2 Re-starting the implementation of the RCARO fellowship program

- As the COVID-19 situation is resolved, two fellows from Cambodia and Pakistan were invited to RCARO for two months from Nov. 2022 to Mar. 2023; and a fellow from Laos will be invited to work for RCARO from May to Jul. this year.

5.1 Supporting the IAEA for the RCA Secretariat functions

- In 2022, as usual, RCARO assisted the IAEA in preparation for the 44th NRM, the 51st GCM and the Ministerial Level Meeting in terms of preparation of agendas, background documents and the 2021 RCA Annual Report.
 - Regarding the activities of the WG on the RCA MTS 2018-2023 Coordination (MTSC), RCARO supported the MTSC WG by hosting virtual meetings in Mar. and Aug. 2022 and sharing its views on the issues raised at the meetings.
- In 2023, RCARO will continue its support in performing RCA secretariat functions as well as make its efforts to provide better and more effective support for assisting the IAEA, RCA Committees and WGs in performing their duties.

5.2 Assisting the RCA Chair for Coordination of Activities

- RCARO provided assistance to the RCA Chair in performing his/her duties for the effective and efficient implementation of policy meetings and events including the ceremonial events for the 50th anniversary of the RCA.
- In 2023, RCARO will continue to provide assistance to the RCA Chair in performing the duties as appropriate.

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THANK YOU

