

Project Concept Template

Project Proposals for the RCA Programme 2024/2025

Part 1: Information Sheet

Project proposals for the RCA Programme 2024/2025 are to be prepared using the attached template and submitted **BEFORE 31ST OF DECEMBER 2021**. Completed templates will be reviewed by the RCA PAC in January 2022.

Resource documents required for developing Project Concepts can be found in the RCA web-site – ([RCA Regional Office \(rcaro.org\)](http://rcaro.org)), under Projects/Resource Documents. (see below for the list of resource documents).

The Project Concept should be prepared in consultation with the stakeholders of the other participating GPs. Information on RCA stakeholders can be found in the RCA web-site ([RCA Regional Office \(rcaro.org\)](http://rcaro.org)), under Projects/Project Information.

Please request access to the RCA Members Only web-site from RCARO (email: rcaro@rcaro.org) through your National RCA Representative if you do not already have access.

A proposal will be evaluated against the following criteria:

- Alignment of the objectives with priorities set out the RCA Regional Programme Framework (RPF) for 2024/25.
- Whether the project addresses a regional need.
- Whether nuclear technology is an essential component of the project.
- Whether outcomes and achievements of previous projects in this area of technology are considered.
- Does the proposal overlap or duplicate current or previous RCA projects?
- Is a convincing case made to justify further projects in this area?
- Is there a strong TCDC component?
- If the proposal is essentially an extension of previous projects in this area that have been implemented for more than 2 TC Cycles, does the proposal include arrangements for the transfer of project leadership to another GP?

List of Resource Documents on RCA web-site (www.rcaro.org)

1. Timeframe for preparation, review and approval of Project Concepts
2. Brochure on Logical Framework Matrix (Quick Reference Guide on Designing IAEA TC Projects)
3. RCA Regional Programme Framework for 2024-29
4. Details of RCA TC Projects implemented in 2007-2019
5. List of TC Projects being implemented in 2020/21 and projects approved for 2022/24
6. Recommendations on Technical Cooperation among Developing Countries (TCDC)

Please note that your National Representative will be reviewing the concept document to ensure that it has been prepared in compliance with the RCA and IAEA Criteria for TC Projects

Please contact the Chair of the RCA Programme Advisory Committee, Dr. Prinath Dias at prinathd@yahoo.com if you need assistance.

Part 2: Concept Template¹

Title:

The title should be as concise as possible and should summarize the objective of the project.

Enhancing Capability for Sustainable Radiation Protection Training

Analysis of gaps / problems / needs as applied to the RCA region:

Outline the major gaps / problems / specific needs to be addressed by the project (~ max 300 words):

The use of ionizing radiation sources and radioactive material in socio-economic development activities has been increasing in the Asia-Pacific region. Having personnel or users who are competent in the field of radiation protection and safety is essential to the safe use and application of nuclear technology in order to protect people and the environment from the harmful effects of ionizing radiation without limiting its use.

A national infrastructure for radiation safety is essential to protect people from the harmful effects of radiation. It is noted that not all aspects of an essential radiation safety infrastructure are in place in all RCA countries, with several countries in the region possibly not complying with some or all of the TSA derived from the safety standards including:

- Regulatory Infrastructure (TSA 1)
- Radiological Protection in Occupational Exposure (TSA 2)
- Radiological Protection in Medical Exposure (TSA 3)
- Public and Environmental Radiological Protection (TSA 4)
- Emergency Preparedness and Response (TSA 5)
- Education and Training in Radiation, Transport and Waste Safety (TSA 6)
- Transport Safety (TSA 7)

This lack of compliance or lack of training opportunities in adherence with the TSA has consequences for planning, programming and implementation of technical cooperation projects and the utilisation of nuclear technology in key development areas such as health, agriculture and industry. It also limits the capacity of non-compliant countries to fully utilise the broader IAEA TC program. This project aims to provide sustainable education and training in radiation protection to improve on the requirements of TSA 2, 3, 4 and 6.

The initial phase of the project will identify the level of training within each participating GP and identify key staff from key counterpart organisations (regulators, major users, and other relevant national bodies)

¹ If you have not been involved in drafting a concept before and if you are not fully acquainted with the RCA and its Programme you are encouraged to support advice and assistance from your RCA National Representative.

who will be able to further help assess the national and regional gaps in radiation safety. This will be achieved via Workshops (for GPs) and Expert Missions.

It is envisaged that GPs that are advanced in the area of radiation protection and safety will be able to, and encouraged to, help those GPs with greater needs to improve their radiation safety infrastructure through networks developed through project activities.

A sustainable train-the-trainer model will be utilised. Once the programme is completed, participating GPs will have domestic subject matter experts in radiation protection to continue with the education programme. Support and advice will be available from other participating GPs.

Review the resource documentation and list any past RCA projects that have addressed similar problems/needs in this area of technology. Consider outcomes and achievements of previous projects, and avoid any overlap or duplication.

RAS/9/075 – Strengthening Radiation Protection Infrastructure and Technical Capabilities for the Safety of Workers, Patients and the Public

RAS/9/081 – Providing Education and Training in Radiation Safety in the Asia Pacific Region

What are the major additional capabilities/skills in this area of technology that will be provided through this project (~ max 200 words).

The following capabilities and skills will be attained by participants through this project:

1. Enhance the capabilities of participating GPs to perform radiation monitoring, radiological risk assessment, dose reconstruction, and to deliver advice for a range of events including radioactive spills, personnel and area contamination, and routine and accident scenario exposures.
2. Contribute to the enhancement of GPs' capacity to sustainably deliver their own effective radiation protection training to users upon programme completion.
3. Enhance the capability of participating GPs to cooperate with each other and to provide advice and guidance in the future through networks established during the project.
4. Strengthen national systems to ensure compliance with the BSS and related safety guides and move towards compliance with TSA 2, 3, 4 and 6.
5. Develop practical skills in radiation monitoring techniques and methods and improve regulatory control of radioactive sources and apparatus, which will improve capabilities in occupational radiation protection, emergency response scenarios, and security of sources.

Overall Objective: (Required for the preparation of the IAEA Regional Programme Note)

To develop and enhance theoretical and technical knowledge in the area of Radiation Protection for new and existing RCA GPs and relevant in-country stakeholders. A sustainable process of education will be implemented so that, at the conclusion of the programme, in-country subject matter experts will be in a position to continue providing education and technical expertise in radiation safety.

Project Outcome: (Required for the preparation of the IAEA Regional Programme Note)

The outcome is the planned result of a project, achieved through the collective effort of stakeholders and partners. It represents the change or improvement that occurs as a result of the project. Should be worded in past tense. (eg. The capability fordeveloped)

Developed capability in practical radiation protection techniques and theoretical radiation protection principles.

Sustainable radiation safety training model developed with in country subject matter experts continuing training and guidance.

RCA Projects are to be designed to have a Socioeconomic Benefit:

What is the potential socioeconomic benefit that might be realised from the project concept over a 5 to 7-year horizon?

It is expected that the proposed training programme will enhance the radiation safety culture in the participating countries. Improved radiation safety culture increases awareness and understanding of hazards when working with ionising radiation. Providing a structured and sustainable radiation protection training programme will not only provide socioeconomic benefit over 5-7 years, but over a longer period as knowledge is imparted to subject matter experts in country. These experts can continue to deliver the training and message over a longer period. A reduced number of accidents involving ionising radiation with users, workers, medical patients, and the public could potentially result in measurable benefits.

It is also anticipated that increased radiation safety awareness and education will lead to other measurable benefits such as reduced health costs (medical early intervention) and increased exports of agricultural products, thus creating income for the country as it gains confidence in utilising nuclear technology to improve health, agriculture, and infrastructure.

It is noted that Pacific island countries are exploring nuclear technology to make improvements in health and agriculture but are constrained by several factors, with a lack of radiation safety infrastructure (both human and technological) required for safe use of nuclear technology identified as a key factor. An effective and sustainable radiation safety program will provide participating countries with the confidence to investigate the utilisation of utilising nuclear technology and they will, in turn, benefit socio-economically.

Examples of NST ventures that could be explored following the development of radiation safety capability from the proposed project include:

1. Irradiation of agricultural products – For food security and increased export opportunities.
2. Radiotherapy facility – Improved human health outcomes.
3. Industrial applications – Reduce unregulated use of density and industrial gauges in industry and mines and associated potential accidents.
4. General safety – Improvements in the safe and secure use of sealed and unsealed sources.

Proposed Participating Government Parties:

List the Government Parties expected to participate in the project:

We would anticipate broad interest and participation in the proposed project by RCA GPs. In this regard, we have already identified the following likely counterparts:

1. Australia

Mr. Prashant Deo Maharaj and Mr John Bus
Australian Nuclear Science and Technology Organisation
Locked Bag 2001
Kirrawee DC, NSW, 2232
Australia
P: +61297173882
E: pmj@ansto.gov.au

2. Bangladesh

Md. Shakilur Rahman, PhD
Chief Scientific Officer & Project Director
Secondary Standard Dosimetry Laboratory (SSDL)
“Radiotherapy, Diagnostic Radiology and Neutron Calibration and QC Facilities” Project
Bangladesh Atomic Energy Commission
Ganakbari, Savar, Dhaka. 1349, Bangladesh
Tel. +880-2-7789678
Mobile: +880-1827-121308

3. Fiji

Ms. Manjula W Lal
Ministry of Health & Medical Services
Acting Manager Missions, Referrals and Donations
Hospital Services
office : 3215766
mobile :8905025
email: manjula.lal@govnet.gov.fj

4. New Zealand

Dr Andreas Markwitz | Director for Radiation Safety
Quality Assurance and Safety
Health System Improvement and Innovation
Ministry of Health
133 Molesworth Street, Thorndon, Wellington
D +64 4 816 2121
M +64 21 564 019
E andreas.markwitz@health.govt.nz

5. Palau

Mr. Smau Erungel
Foreign Service Officer
Bureau of Foreign Affairs & Trade
Ministry of State
Koror, Republic of Palau 96940

6. Singapore

Chew Boon Kiat (Mr) Scientific Officer
Radiation Protection and Nuclear Science Department
National Environment Agency
DID : +65 67319550 Fax : +65 67319585
Email : CHEW_Boon_Kiat@nea.gov.sg

7. Vietnam

Mr. LE Ngoc Thiem (PhD)
Deputy Director
Radiation Protection Center
Institute for Nuclear Science and Technology
179 Hoang Quoc Viet - Hanoi - Vietnam
Mobile: +84(0)915119219

8. India

S.Chandrasekaran
Scientific Officer (F)
Head, Radiation Safety Section
Health and Industrial Safety Division
Health, Safety and Environment Group
Indira Gandhi Centre for Atomic Research
Kalpakkam - 603 102
Tamil Nadu, India
Email : schand@igcar.gov.in
Mobile : 91-9445687768 (after 07.30 PM)
Landline : 044-27480352
Fax : 044-27480235

9. Pakistan

Dr. Imtiaz Ahmed
Director General
International Affairs
Pakistan Atomic Energy Commission (PAEC)
IAEA-NLO
Islamabad - PAKISTAN
Phone No. +92-51-920-1862
Fax No. +92-51-920-4908

Communications have been sent to the National Representatives of all other RCA GPs seeking their interest in participating in this project.

Technical Cooperation among Developing Countries (TCDC) Project Component:

Review the resource documentation provided on-line – www.rcaro.org/ ???. Outline the TCDC strategies to be used in the project to enhance regional cooperation:

Will the project design feature partnering arrangements between those advanced and those less advanced in the technology?

If so, list those expected partnerships.

It is anticipated that the level of TCDC will be better understood once all the NPCs for the proposed project have been confirmed and information provided to the LCC on the current status in their country and their needs for this project.

The project will explore contributions such as technical expertise, cost minimisation and other TCDC contributions that may be possible. Identified and agreed host nations for Regional Workshops and Training Courses will be requested to provide an in-kind contribution towards venues, session equipment and general minor expenses for presenters and participants.

The programme will follow the promotion of TCDC in the RCA region and try to increase and enhance the GPs' self-sufficiency and capacity to meet their needs in radiation protection. By having a wide range of participating countries and having an effective screening programme of prospective participants, it is anticipated that we will achieve the full benefits of the designed project outputs and increase the effectiveness and sustainability of this project.

The proposed project has gained support from individuals who have the qualifications and experience to undertake expert missions and lecturing duties. These individuals are suitably qualified and accredited professionals in radiation protection and radiological emergency response, including some who have worked in previous IAEA regional programmes supporting source security and radiation protection.

Requirements for participation:

Indicate the minimum requirements that the counterpart institutions in Government Parties would need to meet in order to participate in this project.

GPs wishing to participate will be required to nominate participants who have at least completed a higher school education and have had experience (>2 years) working in the nuclear or radiation protection field and/or industries where radiopharmaceuticals, industrial sources, sealed and unsealed sources, X-ray machines or ionising radiation generating apparatus are used.

Stakeholder analysis and partnerships:

Briefly describe who are expected to be the end-users and principal beneficiaries of this project. Indicate whether the end-users contributed to development of the Concept.

Government and regulatory authorities, hospitals, industries using radioactive sources, nuclear research facilities, and education and training institutions (such as universities). Further identification of user requirements will depend on the country situation and will be undertaken in the initial planning stages.

Have any extrabudgetary funding possibilities been identified?

Not at the moment. Proposals and requests will be sent to host countries of workshops and training sessions possibly requesting in-kind contributions towards hosting and general expenses.

Role of nuclear technology:

Indicate the essential nuclear technique that would be used and outline why it is suitable for addressing the problems/needs in question.

This project proposal looks to increase awareness and understanding in radiation protection amongst member states. Delivery will be via face-to-face training for participants with future support and advice by Australia and other participating GPs.

Is this the only available technique that could be applied to address the problem/ need?

While there are online education programmes offered by IAEA on radiation protection, some countries in the Asia-Pacific region either do not have the required capacity to implement these programs, or access to information is difficult. For countries with limited knowledge in radiation safety, online education is not necessarily a viable way to increase awareness as it may be a new area and a face-to-face approach will have better outcomes.

Does it have a comparative advantage over non-nuclear techniques?

N/A

Duration of the project:

Indicate the number of years required to complete the project.

4 years

Part 3: National Representative Endorsement for Project Concept

As the RCA NR of Australia, I have reviewed the Project Concept thoroughly and confirm that it meets the following requirements:

1. The objective of the Project Concept is aligned with priorities set out the RCA Regional Programme Framework (RPF) for 2024/25.
2. The project addresses a regional need.
3. Nuclear technology is an essential component of the project.
4. Outcomes and achievements of previous projects in this area of technology have been taken into consideration
5. There is no overlap or duplication with current or previous RCA projects
6. Further projects in this area can be justified (if relevant)
7. The Project Concept has a strong TCDC component

Signature:

A handwritten signature in black ink that reads "Ckelleher". The signature is written in a cursive, slightly slanted style.

Name: Catherine Kelleher

Date: 23 December 2021