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)), 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)), 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 Template[1]

Title:

To implement Quality Management Systems and Quality Assurance programs in Nuclear Medicine Practices in developing countries by providing education, leadership and training support

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):

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.

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

A uniform and standardised approach to the formulation and maintenance of a Quality Management System (QMS) and Quality Assurance (QA) program is lacking in many Nuclear Medicine Services. (NMS), including in Asia Oceania. Regulatory bodies such as the International Atomic Energy Agency (IAEA) have taken initiatives to introduce QA programs in developing countries, but more work is required to ensure NMS are conforming to an acceptable standard with regards to QA.

The IAEA-developed audit program, QUANUM (Quality Management Audits in Nuclear Medicine Practices) will be utilised as a QA tool and adapted to implement and maintain an internationally accepted and standardised Quality Assurance Program for Nuclear Medicine Practices in the Asia Oceania Region.

The project would aim to tailor the QUANUM principles to suit the needs of an individual country or NMS after performing a critical assessment of existing quality measures that have already been implemented, identifying gaps and then implementing appropriate measures to address those gaps.

Past RCA projects such as “Building Capacity with Distance Assisted Training for Nuclear Medicine Professionals”, “Improving Patient Care and Enhancing Government Parties Capacity in Nuclear Medicine programmes in RCA Region (RCA) and “Strengthening Medical Physics through Education and Training (RCA)” have addressed the need for professional education of Nuclear Medicine Professionals and the enhancement of patient care in a clinical setting. However, these projects have not addressed the review

[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.

and implementation of QMS and QA measures, which are essential to ensuring the NMS are providing patient care at the best standards of practice in a safe manner, particularly in regard to radiation safety, best clinical practices and adherence to diagnostic reference levels (DRL) of both the patient and Nuclear Medicine professionals.

In particular, past RCA projects have not focussed on encouraging the practice of regular internal reviews and audits within NMS. Internal reviews and audits would be an important focus of this project.

A database that contains training tools with the ability to record key performance indicators of QMS in NMS is not readily available to the global Nuclear Medicine Community. This project would seek to address this gap.

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

State the overall long-term objective to which the project will contribute. This should reflect an impact related to the RCA Regional Programme Framework for 2024/29.
Problem and objective analysis using objective and problem trees is recommended. (See pages 9 and 10 of the Quick Reference Guide on Designing IAEA TC Projects in resource documents)

This project aims to provide education, training and advise for implementation of effective quality systems whilst integrating all aspects of quality management into nuclear medicine services in Asia Oceania. This project will align with a priority area of the RCA RPF for 2024/29, under the Human Health – Nuclear Medicine HH3 category.

The project is designed to target a culture of continuous improvement of quality management aspects of a nuclear medicine practice such as safe and quality delivery of clinical services (both diagnostic and therapy), quality assurance of imaging equipment and laboratory equipment, radiation protection of staff and patients and management of human resources development.

An important aspect would be to help implement a Quality Management System that would include a number of critical components. One of those components could be a Quality Manual which would clearly detail:

- the mission, vision, strategy, quality policies and objectives of the Department;
- standard operating procedures (SOPs) and protocols detailing the procedures and processes of the department;
- maintenance of records of non-conformances and preventive/corrective actions;
- a mechanism to obtain feedback from patients and referring physician;
- risk assessment and management;
- registration of incidents and adverse reactions via an incident reporting system; and
- an equipment inventory, including life cycle and maintenance records.

Implementation of regular internal reviews by the NMS and recommendation for external audits will also be a focus of the project.

The QUANUM tool will be utilised as a reference aid to guide the implementation of QA programs and internal reviews.

Education and training to implement these objectives can be achieved by online training material and tutorials and experts travelling to a specific Nuclear Medicine Practice to train on site or by participants travelling to host sites to train with experts. The training would be targeted towards Nuclear Medicine Physicians, Technologists and Radiopharmaceutical Scientists.

The project would focus on building an electronic database (based on the IAEA QUANUM 3.0 audit tool) that the NMS in the Region will have access to. This database will have the capacity to provide training tools and inbuilt checklists to review the QMS and QA programme of the NMS.

The expected impact of this project aligns with the expectations set out in Priority Area 3, Nuclear Medicine HH3.

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 for ……developed)

The capability for establishment and maintenance of the IAEA endorsed QMS and QA program in NMS within the Asia Oceania region will be developed at the conclusion of this project. The project will help to ensure that Nuclear Medicine professionals are empowered to provide excellent diagnostic and therapeutic Nuclear Medicine services within an established Quality framework in the Asia Oceania region. The project will ensure the development of a sound clinical governance framework to ensure that patients receive safe and high-quality care.

RCA Projects are to be designed to have a Socioeconomic Benefit:
What is the potential socioeconomic benefit that would be realised from the project concept over a 5 to 7-year horizon?

Quality, QA and QMS are integral aspects of a Nuclear Medicine Practice. In many health services, the management of Quality is performed by a dedicated Quality Manager or Quality Coordinator who may, or may not, have a team of staff working with them. An RCA project such as this would help provide opportunities for employment for multiple persons.

Additionally, the establishment of a QMS and QA programme in the NMS would ensure quality care is provided in a safe and equitable manner to patients, regardless of their socio-economic status.

The QA programme would also help ensure the efficient use of resources which would, in turn, create better access to Nuclear Medicine services for the wider community.

Proposed Participating Government Parties:

List the Government Parties expected to participate in the project. Indicate target and resource GPs:

Australia
Bangladesh
China
Fiji
India
Indonesia
Japan
ROK (Republic of Korea)
Malaysia
Mongolia
Myanmar
Nepal
New Zealand
Pakistan
Philippines
Singapore
Sri Lanka
Thailand
Vietnam

Technical Cooperation among Developing Countries (TCDC) Project Component:

Please refer to the resource documents (RPF and Recommendations on TCDC)
Will the project design feature partnering arrangements between those advanced and those less advanced in the technology to be transferred through this project?
If so, list those expected partnerships.

Countries such as Australia, Singapore, Japan and ROK that have more advanced and established NMS would provide leadership and guidance to less advanced countries.

Education and training to implement QA programs, internal reviews and documentation can be delivered either online or in person by experts in the Nuclear Medicine profession in developed countries. Onsite training in established NMS can also be offered and delivered to participants from developing countries.

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.

Counterpart institutions should have staff who are qualified to practice Nuclear Medicine and who also have a basic understating of radiation safety practices. This includes, for example, the ability to follow the

ALARA (As Low As Reasonably Achievable) principles for radiation safety. An acceptable level of knowledge of English language is essential.

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.

Nuclear Medicine Physicians, Technologists and Radiopharmaceutical Scientists.

Have any extrabudgetary funding possibilities been identified?

No.

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.

The use of radiopharmaceuticals for imaging diagnosis and therapy is essential for patient care and a necessary component of improving health outcomes in high-, middle- and low-income countries. This project will enhance the delivery and quality of nuclear medicine practice in countries and ensure workforce training is optimised for the safe and effective use of radiopharmaceuticals.

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

The applications for nuclear medicine diagnostic and therapeutic procedures fulfils a clear, unmet need for patient care that cannot be effectively addressed with alternative techniques.

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

The nuclear medicine procedures that will be covered in this project have clear advantages over other imaging and therapeutic approaches to human disease.

Duration of the project:

Indicate the number of years required to complete the project.

5 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: 

Name: Catherine Kelleher

Date: 23 December 2021