

RCA Programme Advisory Committee (PAC)

Report on the Evaluation of RCA Project Concepts for the 2022/2023 TC Cycle

Background:

In accordance with the RCA Procedure for development of RCA Projects to be implemented under the Technical Cooperation Programme of the IAEA, the 46 Pre-Concepts submitted by the GPs were evaluated by RCA PAC in accordance with the TOR of PAC given in RCA GOR. The results of the evaluation were presented to the 48th RCA GCM which accepted the PAC's recommendation of the pre-concepts to be further developed as Concept Papers.

PAC received 15 Concept Papers in project areas approved by the 48th GCM, and they were evaluated by PAC. (The first round Concept Papers were revised based on the comments of PAC, and submitted as Second Round Concept Papers, which were evaluated by PAC).

Criteria for Evaluation

The following criteria were used for the evaluation.

- Alignment with the MTS
- Specific Gaps / Needs to be addressed
- Links to previous projects
- Duplication of current or previous projects
- Justification for the need of further projects in this area
- Justification as a regional project
- Role of Nuclear Technology
- Suitability of requirements for participation
- Potential for TCDC
- Potential for EB funds

Outcome of the evaluation:

Out of the 15 Concepts 5 were recommended for further development with a high priority, 4 Concepts were recommended for development with a medium priority, and 2 Concepts were recommended for further development with a low priority. 4 Concepts were not recommended for further development.

A summary of the results of the evaluation of the 15 Concepts is given as Annex 1 and the details of the evaluation are given as Annex 2.

Proposed Action

It is recommended that the NRs hold consultations with relevant stakeholders of their countries prior to the NRM, and indicate their priorities in the fourth column of Annex 1. (The completed Annex 1 should be submitted to the RCA Chair at tmrtennakoon@aeb.gov.lk on or before the 20th of March.) The RCA Chair will present the overall assignment of priorities to the NRM so that a decision can be made on the projects to be moved to the design stage, along with the assignment of LCs.

The Project Concepts can be downloaded from <http://rcaro.org/nrm/view/id/22663>. Copies of the Concept Papers can also be obtained by sending an email to RCARO at vivian@rcaro.org with a copy to Interim Chair of PAC at prinathd@yahoo.com

Action to be taken after the NRM

Provision of the contact details of the LCs by respective NRs to the RCA Chair (tmrtennakoon@aeb.gov.lk) with a copy to RCA Focal Person (V.Hoang@iaea.org) and Interim Chair of the PAC (prinathd@yahoo.com) before 20th of April 2020

It is further recommended that the NRs provide the details of a Contact Person for each project they expect to participate in, so that the LCCs can communicate with them during the design stage to obtain required information. The contact details should be sent to the RCA Chair (tmrtennakoon@aeb.gov.lk) with a copy to RCA Focal Person (V.Hoang@iaea.org) and Interim Chair of the PAC (prinathd@yahoo.com) on or before 30th of April 2020.

Summary of the PAC Recommendations and Indication of GP Priority

The Government Party :

Project no.	Title	Recommendation	Comments	GP Priority (Please rank the projects in order of priority. 1 for highest and 15 for the lowest priority)
Agricultural Sector				
A2	Assessing and Mitigating Agro-Contaminants to Improve Water Quality and Soil Productivity in Catchments Using Integrated Isotopic Approaches	Recommended for further development, with a high priority	The project should be under the environmental sector. Title should be Assessing and Mitigating Agro-Contaminants to Improve Water Quality and Soil Productivity in Catchments Using Integrated Isotopic approaches. A more detailed analysis of the outcomes of previous projects should be carried out at the design stage to identify the specific gaps and needs the project should address.	
A3	Strengthening the capability in the Asia-Pacific region to undertake scientific best practice application of nuclear technologies for fruit fly area-wide management	The project is recommended for further development with a low priority.	The project may not meet IAEA TC requirements, since there are no project activities related to nuclear technology. The number of GPs that could benefit from the project should be identified before deciding whether it should proceed to the design stage. The sustainability measures of the regional centre to be established should be identified.	

A7	Enhancing food safety and international trade by implementing nuclear techniques for detection of food fraud and adulteration	Not recommended for further development.	The project is on developing new technologies and is more appropriate as a CRP rather than a TC project. It may not meet IAEA TC criteria. No collaboration with BGD is indicated as recommended. BGD had not responded.	
A12	Increase of Crop Productivity under Drought Conditions by Using Isotope Techniques to Optimize Water Usage	Recommended for further development with a medium priority.	A better review of the past regional projects on water resources management should be done at design stage, and the existing capabilities of the GPs should be identified. Opportunities for TCDC should be identified and incorporated into project design. The requirements for participation should be more detailed.	
Environmental Sector				
EN1	Evaluating Combined Impacts of Radioactive Releases and Climate Change on Economic Seafood and Consumers in the Asia-Pacific Region	Not recommended for further development.	The need for assessment of health effects cannot be justified in view of the regulatory controls on radioactivity levels in food (including seafood). The need for further capacity building in measurement of radioactivity in marine samples cannot be justified in view of the number of previous RCA projects implemented in this project area. The assessment of Ocean Acidification due to climate change is more appropriate as a research project.	
EN5	Assessing the impacts of carbonaceous aerosol on climate radiative forcing and human health	Recommended for implementation with a low priority	The project contains a large component of research. Counter-part institutes should have the mandate to assess health effects.	

EN6	Enhancing the Regional Collaboration in Water and Environmental Isotope Analysis for Improvement of Water Management Practices, an Effort to Alleviate Climate Change Impacts in Asia Pacific Region	Recommended for further development with a medium priority	Comparative analysis with A2 (AUL) should be done, although they are in the different thematic areas, they are principally in Environment sector. Comparison and justification of the two separate projects should be considered by the NRs. Duplication with previous RCA projects on water resources should be avoided.	
Human Health Sector				
HH8	Improving the Safety and Quality of Radiotherapy in Asia Pacific Region through Auditing and Medical Physicist Training	Recommended for further development with a high priority	The project addresses a real need for the region by introducing quality audits of radiotherapy centres that use advanced technologies such as IMRT. The training of Medical Physicists is also to be addressed through this project, and action should be taken to incorporate this component on training of medical physicists into the quality audits and quality improvement of advanced radiotherapy centres. Duplication with the several previous projects on Medical Physics Education and Training should be avoided.	
HH13	Strengthening Clinical Application of Hypofractionated Radiotherapy in the RCA Region	Recommended for further development with a high priority.	The project would help many GPs to improve the utilization of their radiotherapy facilities. However, it requires advanced technology and if not properly applied, could compromise safety. Opportunities for TCDC should be investigated. A firm commitment for EB funds should be obtained once	

			the concept is approved for further development.	
HH14	Standardization of radiotherapy in palliative care in the RCA Region.	Recommended for further development with a high priority.'	Potential overlap with HH13 on Hypofractionated radiotherapy should be avoided.	
Industrial Sector				
IN2	Augmenting regional capabilities in advanced non-destructive testing (NDT) techniques and applications for improved safety and inspection performance in industries for societal benefit	Recommended for further development with a medium priority.	The Concept had not been revised as suggested by PAC. There had not been consultation with MAL for merging with Concept IN4, but it is stated that elements of IN4 had been incorporated in the Second Round Concept paper. It is not possible to ascertain it since the changes are not in track mode. The project should be merged with IN4 at the design stage, if selected by GPs for further development.	
IN4	Enhancing regional capabilities in advanced non-destructive testing (NDT) techniques and applications for improved safety and inspection performance in industries.	Recommended for further development with a medium priority.	The project should be designed to ensure the specific targets given in the concept paper are achieved. The project had not been merged with IN2 as recommended. It should be done at the design stage, if selected by GPs for further development.	
IN7	Improving the quality management practices in radiation processing facilities for better performances and applications	Recommended for further development with a high priority.	The standard mentioned ISO 13485 is for sterilization of medical products. The ISO standards for food irradiation and for crosslinking of wires and cables also should be applied. Having an operational radiation processing facility should be a mandatory requirement for participation.	
Radiation Protection Sector				

RS2	Enhancing Capability for Sustainable Radiation Protection Training	The project is not recommended for further development.	The project is not recommended for further development in view of the very significant efforts that are being made by the IAEA over a long period of time to address the needs of developing RCA GPs including new GPs, for developing their radiation protection infrastructures. This project would duplicate these efforts. Projects on Radiation Protection had not been implemented under RCA since 2007 (RAS9042) due to these efforts of the IAEA.	
RS3	Strengthening Regional Cooperation on Treatment Method and Radiation Protection of Tritiated Waste from Nuclear Facilities in Asia Pacific Region	Not recommended for further development.	The project addresses a narrow area of Radiation and Nuclear Safety and could be relevant to only to a few RCA GPs with nuclear facilities. It is not clear whether this is a high priority need even for those GPs.	

Summary

Recommendation	Number	Project Numbers
Number of projects recommended for further development with a high priority	5	A2*, HH8, HH13, HH14, IN7
Number of projects recommended for further development with a medium priority	4	A12, EN6, IN2, IN4
Number of projects recommended for further development with a low priority	2	A3, EN5
Number of projects not recommended for further development	4	A7, EN1, RS2 and RS3
Total	15	

*A2 should be considered as a project in the environmental sector.

Assessment of Second Round RCA Concept Papers

Concept Paper No.: A2

Lead Country: Australia

Title: Assessing and Mitigating Agro-Contaminants to Improve Water Quality and Soil Productivity in Catchments Using Integrated Isotopic Approaches

Objective:

To enhance the capacity of countries in the Asia-Pacific region to use integrated isotopic techniques to assess and mitigate the release and transport of agricultural contaminants that impact water quality and soil productivity in catchments.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Contributes directly to Priority C 2.4 (Environment);	High
Specific Gaps / Needs to be addressed	The project addresses a need in at least in some of the GPs. But it may be an overstatement to say that the project will mitigate water pollution.	Medium
Links to previous projects	Analysis of the outcomes of previous projects (RAS5039, RAS5043, RAS5055 and RAS5084) to identify the specific needs that had not been previously addressed, is not sufficient.	Low
Duplication of current or previous projects	This project has a holistic approach not covered in previous projects	High
Justification for the need of further projects in this area	New techniques developed through in CRP-D15018 will be introduced.	High
Justification as a regional project	Addresses a problem common to many of the RCA GPs, as indicated by previous projects in this area. Could lead to addressing transboundary issues of some of the GPs.	High
Role of Nuclear Technology	Will involve analysis of fallout radionuclides and stable isotopes of H,C,O, N and S. Will utilize a new tool kit developed under CRP-D15018.	High
Suitability of requirements for participation	Detailed requirements had been provided.	High
Potential for TCDC	A general description of TCDC measures had	High

	been given without specifics. But there is a high potential for TCDC	
Potential for EB funds	ADB had been identified as a potential partner, but a commitment had not been made by the ADB.	Medium

Overall Assessment: The project should be under the environmental sector. Title should be ~~Assessing and Mitigating Agro-Contaminants to Improve Water Quality and Soil Productivity in Catchments Using Integrated Isotopic approaches.~~ Assessing and Mitigating Agro-Contaminants to Improve Water Quality and Soil Productivity in Catchments Using Integrated Isotopic approaches. A more detailed analysis of the outcomes of previous projects should be carried out at the design stage to identify the specific gaps and needs the project should address.

Recommendation of the PAC*: Recommended for further development, with a high priority.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision.

Assessment of Second Round RCA Concept Papers

Concept Paper No.: A3

Lead Country: Australia

Title: Strengthening the capability in the Asia-Pacific region to undertake scientific best practice application of nuclear technologies for fruit fly area-wide management

Objective:

The objective of the project is to enhance the capability of all the participant countries to more efficiently manage and reduce pest fruit fly impact on agricultural products in the Asia Pacific region, resulting in substantial enhancement to the region's biosecurity, food security and market access.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	MTS has identified radiation-based technology to control major pest insects as a nuclear technology to be applied. It would directly contribute to C2.1 (i) - Increase agricultural production, productivity and quality of plant and animal commodities through sustainable use of available resources. It will indirectly contribute to C2.1 (iii) and C 2.1 (iv).	High

Specific Gaps / Needs to be addressed	Some expertise had been developed among RCA GPs through national projects. Specific gaps to be addressed through this project had not been identified. The project envisages establishing a regional training centre for fruit fly area-wide management techniques for the Asia Pacific region. The method of sustaining such a centre should be given due consideration. There is no mention of who will take the responsibility of producing and providing irradiation flies to the GPs.	Medium
Links to previous projects	There had not been RCA projects on SIT in the recent past. Some national projects and one inter-regional project had been implemented.	Not relevant
Duplication of current or previous projects	Does not arise	Not relevant
Justification for the need of further projects in this area	Does not arise	Not relevant
Justification as a regional project	Fruit fly infestation is stated as a common problem for most of the RCA GPs. It is however not clear how many GPs would consider SIT as a viable and a feasible technique for elimination of fruit flies.	Low
Role of Nuclear Technology	The role of nuclear technology is irradiation of fruit flies. However, the human resources activities to be undertaken are in several other areas.	Low
Suitability of requirements for participation	A current need for fruit fly control with a commitment from the local authorities, and basic infrastructure had been identified as requirements for participation. Viability of using SIT as a means of controlling fruit flies is also a critical requirement.	Medium
Potential for TCDC	Unknown. Specific strategies are to be developed during project design.	Low
Potential for EB funds	Potential sources had been identified.	High

Overall Assessment: The project may not meet IAEA TC requirements, since there are no project activities related to nuclear technology. The number of GPs that could benefit from the project should be identified before deciding whether it should proceed to the design stage. The sustainability measures of the regional centre to be established should be identified.

Recommendation of PAC* : The project is recommended for further development with a low priority.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: A7

Lead Country: India

Title: Enhancing food safety and international trade by implementing nuclear techniques for detection of food fraud and adulteration

Objective:

To establish a robust and independent framework for identifying food adulteration and food fraud thereby improving food safety, enhancing consumer confidence and increasing international trade.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The project is linked to MTS Priority C2.1 (iii) -Facilitation of global trade in food through the applications of NS&T that may contribute to regionally harmonized regulatory systems and enhance food safety and security;	High
Specific Gaps / Needs to be addressed	The project is in an area different to the previous project. However, the methodology required to address this need/gap is yet to be developed.	Low
Links to previous projects	There are no links to previous projects	Medium
Duplication of current or previous projects	Previous project RAS/5/081 is mentioned. Measures to prevent duplication are not mentioned.	Medium
Justification for the need of further projects in this area	The need to be addressed through this project had not been fully addressed by the previous project on food safety.	High
Justification as a regional project	Food adulteration is a common problem for most GPs.	High
Role of Nuclear Technology	Nuclear related technologies, gas chromatography-Ion mobility spectrometry (GC-IMS) and Isotopic ratio mass spectrometer (IRMS) are to be used. However, the project envisages “developing newer robust rapid screening methods” making it more appropriate as a CRP	Low

	rather than a TC project.	
Suitability of requirements for participation	Having an ongoing program on food safety and security should also be a requirement.	Medium
Potential for TCDC	Unable to ascertain	Low
Potential for EB funds	Unspecified probable sponsors are indicated.	Low

Overall assessment: The project is on developing new technologies and is more appropriate as a CRP rather than a TC project. It may not meet IAEA TC criteria. No collaboration with BGD is indicated as recommended. BGD had not responded.

Recommendation of PAC* : Not recommended for further development.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: A12

Lead Country: Sri Lanka

Title: Increase of Crop Productivity under Drought Conditions by Using Isotope Techniques to Optimize Water Usage

Objective:

To increase agricultural productivity under drought conditions by assessing water intake of crops using nuclear and isotopic techniques for optimizing irrigational practices

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Food and Agriculture had been identified as the priority area, but the specific sub-area had not been identified.	Low
Specific Gaps / Needs to be addressed	The need to assess water usage by agricultural crops had been identified as the specific gap to be addressed.	High
Links to previous projects	The linkage to previous regional projects on water resources management is poor.	Low
Duplication of current or previous projects	There had not been any RCA projects in the past, however, there had been non-RCA projects in this project area.	Medium

Justification for the need of further projects in this area	The project is in a new area for the RCA.	High
Justification as a regional project	Management of water resources is a problem common at most GPs.	High
Role of Nuclear Technology	Stable isotope techniques are to be used.	High
Suitability of requirements for participation	A more detailed description of the requirements for participation should be provided.	Medium
Potential for TCDC	Not possible to assess	Low
Potential for EB funds	Potential sponsors not identified.	Low

Overall assessment: A better review of the past regional projects on water resources management should be done at design stage, and the existing capabilities of the GPs should be identified. Opportunities for TCDC should be identified and incorporated into project design. The requirements for participation should be more detailed.

Recommendation of PAC* : Recommended for further development with a medium priority.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: EN1

Lead Country: Thailand

Title: Evaluating Combined Impacts of Radioactive Releases and Climate Change on Economic Seafood and Consumers in the Asia-Pacific Region

Objective: To further enhance technical capabilities of RCA GPs in protecting economic marine species and seafood consumers from potential health impacts caused by radioactive releases, radioactively contaminated seafood, and climate change (such as ocean acidification and increasing seawater temperature) leading to the establishment of an integrated policy/strategy/plan which increases their ability in risk reduction

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The project will contribute to priority area C 2.4 (i,ii and iii)	High
Specific Gaps / Needs to be addressed	The need to assess radiological impacts on economic marine species and human health from consumption of radioactively contaminated seafood, taking into consideration the effects of climate change had been identified as the gap to be addressed. However, since established regulatory controls with regard to radioactivity in food and the environment are in place in RCA GPs, the need for a separate study on the health effects is questionable.	Low
Links to previous projects	Previous projects had developed the capacity to measure levels of radioactive contamination of the marine environment and a data base had been prepared. This project is expected to these capabilities and data to assess the health effects and effects on the economy.	High
Duplication of current or previous projects	Capacity building component in the area of radiological measurements are similar from the previous projects. The need to “further enhance the radioanalytical techniques of the RCA GPs” is questionable.	Low
Justification for the need of further projects in this area	The need to assess health effects in view of the regulatory controls in the GPs cannot be justified.	Low
Justification as a regional project	The project addresses a problem common to most GPs.	High
Role of Nuclear Technology	Gamma spectrometry, alpha/beta spectrometry, accelerator mass spectrometry (AMS), liquid scintillation counting (LSC), ND mass-spectrometry (MS) will be used	High
Suitability of requirements for participation	Requirements for participation had been properly identified.	High
Potential for TCDC	Potential is high. Specific modalities should be identified.	High
Potential for EB funds	EC had been identified as a potential partner.	High

Overall Assessment : The need for assessment of health effects cannot be justified in view of the regulatory controls on radioactivity levels in food (including seafood). The need for further capacity building in measurement of radioactivity in marine samples cannot be justified in view of the number of previous RCA projects implemented in this project area. The assessment of Ocean Acidification due to climate change is more appropriate as a research project.

Recommendation of PAC* : Not recommended for further development.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: EN5

Lead Country: Indonesia

Title: Assessing the impacts of carbonaceous aerosol on climate radiative forcing and human health

Objective:

To assess the impact of carbonaceous aerosol on climate radiative forcing and human health in the Asia Pacific.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Contributes to C2.4 – Air Pollution (i, ii and iii)	High
Specific Gaps / Needs to be addressed	In terms of objective and title, this concept seems to focus on the research.	Medium
Links to previous projects	The data generated through previous projects will be utilized.	High
Duplication of current or previous projects	Capacity building for monitoring is duplication of previous projects.	Medium
Justification for the need of further projects in this area	Health effects had not been covered by previous projects.	High
Justification as a regional project	The project addresses a problem common to most GPs.	High
Role of Nuclear Technology	Data generated through the use of nuclear analytical techniques will be used. But the assessment of health effects will not involve nuclear techniques.	Medium
Suitability of requirements for participation	Specific requirements for participation had not been identified. Capacity of “modelling” is not mentioned in the document.	Low
Potential for TCDC	Could be expected to be high considering the existing capabilities.	High
Potential for EB funds	Potential sources had not been identified	Low

Overall assessment: The project contains a large component of research. Counter-part institutes should have the mandate to assess health effects.

Recommendation of PAC*: Recommended for implementation with a low priority.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: EN6

Lead Country: Vietnam

Title: Enhancing the Regional Collaboration in Water and Environmental Isotope Analysis for Improvement of Water Management Practices, an Effort to Alleviate Climate Change Impacts in Asia Pacific Region

Objective:

To enhance the regional capability in water quality and water resource monitoring for effective development and management of water (surface and ground water)

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The project will contribute to MTS priority 2.4 in Environment – Water Resources (i, ii and iii)	High
Specific Gaps / Needs to be addressed	The project addresses contamination of surface water	High
Links to previous projects	Multiple RCA projects on water resources have been implemented previously.	Low
Duplication of current or previous projects	Duplication with A2 (AUL) should be avoided. Multiple RCA projects on water resources have been implemented previously.	Low
Justification for the need of further projects in this area	Multiple RCA projects on water resources have been implemented previously.	Low
Justification as a regional project	The project addresses a problem common to most GPs	High
Role of Nuclear Technology	Radioactive and stable isotope analysis will be used.	High
Suitability of requirements for participation	The requirements are clearly stated.	High
Potential for TCDC	There is a high potential to use the expertise available in	High

	developing GPs.	
Potential for EB funds	Potential sources had been identified.	High

Overall assessment : Comparative analysis with A2 (AUL) should be done, although they are in the different thematic areas, they are principally in Environment sector. Comparison and justification of the two separate projects should be considered by the NRs. Duplication with previous RCA projects on water resources should be avoided.

Recommendation of PAC* : Recommended for further development with a medium priority.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision.

Assessment of Second Round RCA Concept Papers

Concept Paper No.: HH8

Lead Country: China

Title: Improving the Safety and Quality of Radiotherapy in Asia Pacific Region through Auditing and Medical Physicist Training

Objective: To improve the safety and quality of radiotherapy in Asia Pacific Region through auditing and medical physicist training.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The project will contribute to MTS priority C2.2 (i) - Strengthen cancer management programmes in GPs, including training of radiation oncologists, medical physicists and technologists	High
Specific Gaps / Needs to be addressed	The project addresses the need to conduct radiotherapy audits similar to QUATRO for advanced radiotherapy techniques such as IMRT, VMAT and SBRT, introduced to GPs through past RCA projects.	High
Links to previous projects	The project is linked to previous RCA projects on IMRT, VMAT and SBRT. Previous projects on medical physicists training are mentioned but the analysis is insufficient.	Medium
Duplication of current or	On-going medical physics project is about supporting	Medium

previous projects	on-line education from developing GPs. It is unclear how the component on medical physics training of the current concept is different from the on-going project. .	
Justification for the need of further projects in this area	There had not been any projects on auditing advanced radiotherapy facilities in the past. However there had been a number of projects on training of medical physicists.	Medium
Justification as a regional project	The project addresses a problem common to most GPs that can be addressed through regional cooperation.	High
Role of Nuclear Technology	Related to radiotherapy, nuclear medicine and radiology.	High
Suitability of requirements for participation	Stated requirements are satisfactory.	High
Potential for TCDC	There is a reasonable potential for TCDC	Medium
Potential for EB funds	Possible sources of EB funds had been identified.	High

Overall Assessment: The project addresses a real need for the region by introducing quality audits of radiotherapy centres using advanced technologies such as IMRT. The training of Medical Physicists is also to be addressed through this project, and action should be taken to incorporate this component on training of medical physicists into the quality audits and quality improvement of advanced radiotherapy centres. Duplication with the several previous projects on Medical Physics Education and Training should be avoided.

Recommendation of PAC*: Recommended for further development with high priority.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: HH13

Lead Country: ROK

Title: Strengthening Clinical Application of Hypofractionated Radiotherapy in the RCA Region

Objective:

To enhance cancer treatment in the RCA region by strengthening comprehensive adaptation of hypofractionated radiotherapy from physics to clinic in the RCA Region.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	This project contributes to MTS priority C.2.2 (i) - Strengthen cancer management programmes in GPs, including training of radiation oncologists, medical physicists and technologists, and (ii) -Simplify and harmonize protocols on diagnostic imaging and for treatment/palliation	High
Specific Gaps / Needs to be addressed	The project addresses the need to improve the utilization of radiotherapy facilities to overcome the constraints faced due to shortage of radiotherapy machines in developing GPs. However, some of the GPs may not be able to apply this technique because of the technological requirements.	High
Links to previous projects	The project can be expected to utilize expertise created through previous RCA projects on radiotherapy.	High
Duplication of current or previous projects	There is no duplication. Even though SBRT is also a hypofractionated therapy, it is a high-tech stereotactic radiotherapy. This project will focus on evidence-based hypofractionated treatments, to be able to provide treatment to a broader range of applications .	High
Justification for the need of further projects in this area	This Concept introduces Hypofractionated therapy beyond SBRT which was introduced through previous projects.	High
Justification as a regional project	A number of developing GPs can benefit from the project.	High
Role of Nuclear Technology	The project is on radiotherapy.	High
Suitability of requirements for participation	Stated requirements for participation are satisfactory	High
Potential for TCDC	Since the project is in a new area for most GPs the potential for TCDC may be low.	Low
Potential for EB funds	Potential sources of EB funds had been identified.	High

Overall Assessment: The project would help many GPs to improve the utilization of their radiotherapy facilities. However, it requires advanced technology and if not properly applied, could compromise safety. Opportunities for TCDC should be investigated. A firm commitment for EB funds should be obtained once the concept is approved for further development.

Recommendation of PAC*: Recommended for further development with a high priority.

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Assessment of Second Round RCA Concept Papers

Concept Paper No.: HH14

Lead Country: Japan

Title: Standardization of radiotherapy in palliative care in the RCA Region.

Objective:

To provide education and training on clinical aspects of palliative radiotherapy to foster qualified radiation oncology professionals and improve the clinical management of palliative radiotherapy in the RCA region.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	This project contributes to MTS priority C.2.2 (i) - Strengthen cancer management programmes in GPs, including training of radiation oncologists, medical physicists and technologists, and (ii) - Simplify and harmonize protocols on diagnostic imaging and for treatment/palliation planning and radiotherapy treatment.	High
Specific Gaps / Needs to be addressed	The project addresses the need to introduce palliative radiotherapy to RCA GPs.	High
Links to previous projects	Can be expected to utilize the expertise developed through previous RCA projects on radiotherapy.	High
Duplication of current or previous projects	The project area is new to RCA	High
Justification for the need of further projects in this area	The concept explains that the previous RCA projects mainly focused on curative radiotherapy, and this is the first approach for palliative radiotherapy.	High
Justification as a regional project	Most developing GPs can benefit from the project.	High
Role of Nuclear Technology	The role of radiotherapy should be highlighted with the context of comprehensive palliative care.	High
Suitability of requirements for participation	Requirements for participation are clearly stated.	High
Potential for TCDC	Some opportunities for TCDC had been identified	Medium
Potential for EB funds	Collaboration with FNCA, SEAROG, FARO are	Medium

	mentioned, but no mention about funding.	
Overall assessment		

Overall Assessment: Potential overlap with HH13 on Hypofractionated radiotherapy should be avoided.

Recommendation of PAC*: Recommended for further development with a high priority.'

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision.

Assessment of Second Round RCA Concept Papers

Concept Paper No.: IN2

Lead Country: India

Title: Augmenting regional capabilities in advanced non-destructive testing (NDT) techniques and applications for improved safety and inspection performance in industries for societal benefit

Objective:

To bring tangible changes in the overall scenario specifically in terms of (a) increased and augmented regional infrastructure (b) increase in trained and certified human resources in the applications of advanced NDT/E and CT and (c) to bring forward all participating MSs especially the newly joined and small RCA MSs to the same level at least to some extent during the project implementation phase.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Contributes to MTS priority C2.3 (ii) - Improve safety and efficiency; reduce pollution and energy consumption of industrial processes through radiotracer techniques, NDT/NDE, and advanced CT.	High
Specific Gaps / Needs to be addressed	The gap to be addressed had been identified as the need to introduce a system for handling, sharing, storing and transmitting information known as Digital Imaging and Communication in Non-destructive Evaluation (DICONDE) and for introducing NDT technologies based on non-ionising radiation. It is not clear how many GPs are in need of this technology.	Medium
Links to previous	Can be expected to build on previous projects on	High

projects	digital industrial radiography.	
Duplication of current or previous projects	The project is expected to introduce a standard for handling, sharing, storing and transmitting information among different NDT/E systems and the use of non-ionizing radiation.	High
Justification for the need of further projects in this area	The project is expected to assist GPs to comply with new international standards in digital radiography.	Medium
Justification as a regional project	Depends on whether this Concept is in an area of a common need of the RCA GPs.	Medium
Role of Nuclear Technology	Related to radiography. Need to check whether use of non-ionizing radiation is considered by IAEA as a nuclear related technology	Medium
Suitability of requirements for participation	Participating GPs also should have expertise in digital radiography in addition to conventional radiography.	Medium
Potential for TCDC	Potential for TCDC had not been clearly identified	Medium
Potential for EB funds	Potential sources not identified.	Low

Overall Assessment: The Concept had not been revised as suggested by PAC. There had not been consultation with MAL for merging with Concept IN4, but it is stated that elements of IN4 had been incorporated in the Second Round Concept paper. It is not possible to ascertain it since the changes are not in track mode. The project should be merged with IN4 at the design stage, if selected by GPs for further development.

Recommendation of PAC*: Recommended for further development with a medium priority.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision

Assessment of Second Round RCA Concept Papers

Concept Paper No.: IN4

Lead Country: Malaysia

Title: Enhancing regional capabilities in advanced non-destructive testing (NDT) techniques and applications for improved safety and inspection performance in industries.

Objective:

To establish regional advancement in NDT to fulfil the requirements set by global standards and industries for self-reliance and sustainable NDT system of GPs.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Contributes to MTS priority C2.3 (ii) - Improve safety and efficiency; reduce pollution and energy consumption of industrial processes through radiotracer techniques, NDT/NDE, and advanced CT.	High
Specific Gaps / Needs to be addressed	The project aims at producing qualified and certified personnel capable of carrying out NDT inspections using digital radiography introduced through previous projects and to establish a pool of Level 2 and Level 3 personnel to function as trainers and examiners. It also addresses NDT of buildings according to a new ISO standard and NDT inspections of composite materials.	High
Links to previous projects	The project will build on previous projects on digital radiography.	High
Duplication of current or previous projects	There are some overlaps, but the need to have larger numbers trained in digital radiography had been highlighted.	Medium
Justification for the need of further projects in this area	There is a need to increase the number of trained personnel to ensure sustainability.	Medium
Justification as a regional project	Addresses a problem common to most GPs.	High
Role of Nuclear Technology	The project is on use of industrial radiography.	High
Suitability of requirements for participation	Requirements for participation are clearly stated	High
Potential for TCDC	The potential for TCDC is moderate.	Medium
Potential for EB funds	A potential source (Malaysia) had been identified.	High

Overall assessment: The project should be designed to ensure the specific targets given in the concept paper are achieved. The project had not been merged with IN2 as recommended. It should be done at the design stage, if selected by GPs for further development.

Recommendation of PAC* : Recommended for further development with a medium priority.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision

Assessment of Second Round RCA Concept Papers

Concept Paper No.: IN7

Lead Country: Malaysia

Title: Improving the quality management practices in radiation processing facilities for better performances and applications

Objective:

To establish quality management practices in radiation processing facilities of the RCA GPs to ensure process consistency in sterilization of medical products, decontamination of food, and wire and cable crosslinking.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	Specific MTS priorities are not stated (relevant SDGs are mentioned). The project can be expected to contribute to MTS Priority 2.3 (i) - Increase sustainable use of natural resources to produce viable products through radiation technologies	Medium
Specific Gaps / Needs to be addressed	The project addresses the need to establish quality management practices in radiation protection facilities according to ISO standards.	High
Links to previous projects	The project can be expected to build on previous RCA projects on radiation processing.	High
Duplication of current or previous projects	There is no duplication with current or previous RCA projects.	High
Justification for the need of further projects in this area	This is not an area addressed in the past.	High
Justification as a regional project	The project is relevant to all GPs with radiation processing facilities	High
Role of Nuclear Technology	Project is related to use of radiation technology	High
Suitability of requirements for participation	Having an operational radiation processing facility should be a mandatory requirement.	Medium
Potential for TCDC	There is a good potential for TCDC	High
Potential for EB funds	Malaysia is expected to provide EB funds	High
Overall assessment		

Overall Assessment: The standard mentioned ISO 13485 is for sterilization of medical products. The ISO standards for food irradiation and for crosslinking of wires and cables also should be applied. Having an operational radiation processing facility should be a mandatory requirement for participation.

Recommendation of PAC*: Recommended for further development with a high priority.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision

Assessment of Second Round RCA Concept Papers

Concept Paper No.: RS2

Lead Country: Australia

Title: Enhancing Capability for Sustainable Radiation Protection Training

Objective:

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 through a sustainable process of education that will enable subject matter experts to continue providing education and technical expertise in radiation safety.

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The project contributes to MTS priority 2.5 (i) - Mentor new RCA GPs as well as those GPs without adequate radiation safety infrastructure to achieve the safety levels required by IAEA Thematic Safety Areas (TSA) 1,2 &3, and to plan for the next TSAs in accordance with their specific requirements and resources.	High
Specific Gaps / Needs to be addressed	The assessment of the needs is not yet completed and is expected to be carried out during the design stage.	Low
Links to previous projects	There had not been any RCA projects in Radiation Protection since 2007. But there had been a large of non-RCA regional projects on developing radiation protection infrastructure including projects on training and education. Even though	Low

	some of these projects are mentioned, the current project has no links to these projects.	
Duplication of current or previous projects	There is no duplication with current or previous RCA projects on radiation protection, but there is duplication with non-RCA projects on radiation protection.	Low
Justification for the need of further projects in this area	The RCA GPs including new GPs had been receiving significant support from the IAEA for development of Radiation Protection Infrastructures through non RCA regional projects and national projects over the past several years. This project would duplicate these efforts.	Low
Justification as a regional project	Addresses a need common to all GPs.(However, this need is being met through non-RCA IAEA TC projects)	Medium
Role of Nuclear Technology	The project is related to radiation safety.	High
Suitability of requirements for participation	The requirements specified are for those who are to be nominated for training events rather than the requirements for GPs to participate.	Low
Potential for TCDC	Since a number of developing GPs have gained proficiency in radiation protection, opportunities for TCDC could be high if the focus of the project is on new GPs	High
Potential for EB funds	No possible sources of EB funds had been identified.	Low.

Overall assessment: The project is not recommended for further development in view of the very significant efforts that are being made by the IAEA over a long period of time to address the needs of developing RCA GPs including new GPs, in developing their radiation protection infrastructures. This project would duplicate these efforts. Projects on Radiation Protection had not been implemented under RCA since 2007 (RAS9042) due to these efforts of the IAEA.

Recommendation of PAC * : The project is not recommended for further development.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision

Assessment of Second Round RCA Concept Papers

Concept Paper No.: RS3

Lead Country: China

Title: Strengthening Regional Cooperation on Treatment Method and Radiation Protection of Tritiated Waste from Nuclear Facilities in Asia Pacific Region

Objective: To improve the tritium radiation protection and tritiated waste management level in RCA Member States

Assessment of PAC

Criterion	Comments	Level of compliance
Alignment with MTS	The management of tritiated wastes from nuclear facilities is mostly likely considered beyond the TSA1, 2, 3 and is beyond the scope of the priorities C.2.5.	Low
Specific Gaps / Needs to be addressed	The need to manage tritiated waste generated in nuclear power plants and other nuclear facilities had been identified as the gap to be addressed. It is not clear whether this is a real need for RCA GPs.	Low
Links to previous projects	There had not been any projects in this project area in the past.	No applicable
Duplication of current or previous projects	There is no duplication (no projects in the past)	Not applicable
Justification for the need of further projects in this area	There had not been projects in this area in the past.	Not applicable
Justification as a regional project	The project is relevant only to GPs with nuclear facilities that generate tritiated waste.	Low
Role of Nuclear Technology	Deals with management of a radioactive isotope	High
Suitability of requirements for participation	Stated requirements are appropriate	High
Potential for TCDC	Specific TCDC measures had not been identified. Potential for TCDC is low.	
Potential for EB funds	Potential sources of EB funds had not been identified.	
Overall assessment		

Overall Assessment: The project addresses a narrow area of Radiation and Nuclear Safety and could be relevant to only to a few RCA GPs with nuclear facilities. It is not clear whether this is a high priority need even for those GPs.

Recommendation of PAC*: Not recommended for further development.

*The recommendation of the PAC is for the purpose of assisting the NRs to select and prioritize the projects in consultation with their national stakeholders. It should not be considered as the final decision