

# **Report of the RCA PAC on the Evaluation of Pre-Concepts for the 2022/2023 TC Cycle**

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# Summary of the Pre-Concepts received

Thematic Sector	Number	Government Parties
Agriculture	12	AUL(2), BGD(1), CPR(1), IND(2) , INS(1), KAM(1), MAL(1), PAK(1), SRL(1), VIE(1)
Energy Planning	1	CPR(1)
Environment	6	IND(1), INS(1), MON(1), PAK(1), THA(1), VIE(1)
Human Health	15	AUL(2), CPR(2), IND(2), JPN(2), KAM(1), MAL(2), ROK(1), THA(2), VIE(1)
Industry	9	IND(3), MAL(4), MON(1), PAK(1)
Radiation Safety	3	AUL(1), CPR(1), ROK(1)
<b>Total</b>	<b>46</b>	

# Evaluation Criteria

- Conformity to the priority areas of the RCA Medium Term Strategy for 2018-2023
- Whether the Pre-Concept addresses a regional need
- The role of nuclear technology
- Whether the Pre-Concept is focused on technology transfer or research

A number of Pre-Concepts are in project areas of previous and current RCA Projects and the outcomes and achievements of these projects should be taken into consideration in further development of these Pre-Concepts

# Summary of the Recommendations of PAC

Thematic Sector	Number of Pre-Concepts	Proceed to formulate as a Concept	Proceed after merging	No further development	No. of Concepts
Agriculture	12	2	4	6	4
Energy Planning	1	1	0	0	1
Environment	6	3	0	3	3
Human Health	15	2	3	10	3
Industry	9	1	4	4	3
Radiation Safety	3	3	0	0	3
<b>Total</b>	<b>46</b>	<b>12</b>	<b>11</b>	<b>23</b>	<b>17</b>

# **Details of the Recommendations**

# Agriculture Sector

## **Pre-Concepts to be developed further**

- Research and development into insect pest control using nuclear and area wide methodologies. (AUL)
- Isotope techniques to optimize irrigation water usage under water limiting conditions (SRL)

# Agriculture Sector

## Pre-Concepts to be merged

### Set 1

Assessing and mitigating agro-contaminants to improve soil and water quality in catchments using nuclear and isotopic techniques (AUL)

Supporting Integrated Isotopic Approaches to Adapt Drought, Floods and Land Degradation In agro-ecosystems Induced by Human Driven Climate Change in Asia Pacific Region (CPR)

# Agriculture Sector

## Pre-Concepts to be merged

### Set 2

Improving food safety control system by Strengthening multi-stakeholder supported monitoring programmes for chemical residues and contaminants in foodstuffs of plant and animal origin (BGD)

Development of suitable nuclear analytical techniques for food adulterants (IND)

# Energy Planning Sector

## Pre-Concepts to be developed further

- Enhancing Regional Capacity and Foundation of Nuclear Energy Development in Asia-Pacific Region (CPR)

# Environmental Sector

## Pre-Concepts to be developed further

- Radiological Impact Assessments from Emerging Nuclear and Climate Challenging on Coastal and Marine Environment and Seafood Consumers in the Asia-Pacific Region (THA)
- Source determination of black carbon to assess its impact on climate change and human health in the Asia-Pacific region (INS)
- Enhancing the Regional Collaboration in Water Isotope Monitoring for Climate Change Research and Projection in Asia Pacific Region(VIE)

# Human Health Sector

## **Pre-Concepts to be developed further**

- Strengthening Comprehensive Adaptation of Hypofractionated Radiotherapy from Physics to Clinic in the RCA Region (ROK)
- Improvement and standardization of radiotherapy in palliative care in the RCA Region (JPN)

# Human Health Sector

## Pre-Concepts to be merged

- Strengthening radiation medicine by enhancing the clinical training of medical physicists through regional cooperation (AUL)
- Improving the Safety and Quality of Radiotherapy in Asia-Pacific Region through Medical Physicist Training and Auditing (CPR)
- Quality audit and training on advanced radiotherapy treatment in Asia-Pacific (AUL)

# Industrial Sector

## **Pre-Concepts to be developed further**

- Quality Management Practices at Radiation Processing Facilities (MAL)

## **Pre-Concepts to be merged**

### **Set 1**

- Integrated capacity augmentation in regional infrastructure and expertise in composite non-destructive evaluation modalities for sustainable societal growth (IND)
- Enhancing regional capabilities in advanced non-destructive testing (NDT) techniques and applications for improved safety and inspection performance in industries (MAL)

# Industrial Sector

## Pre-Concepts to be merged

### Set 2

- Strengthening and consolidating the capabilities of RCA Government Parties in application of emerging radioisotope techniques for efficiency improvement in industrial systems (PAK)
- Development and applications of radioisotope techniques for investigation of flow dynamics and design validation of complex industrial and environmental systems (IND)

# Radiation Safety Sector

## Pre-Concepts to be developed further

- Strengthening Medical Preparedness and Response for a Nuclear/Radiological Emergency in the RCA Region (ROK)
- Developing theoretical and technical capabilities in Occupational Radiation Protection (AUL)
- Strengthening Regional Cooperation on Treatment Method and Radiation Protection of Tritiated Waste from Nuclear Facilities in Asia Pacific Region (CPR)

PAC has provided detailed comments on each of the Pre-Concepts in Annex B of the Background Paper

Annex C of the Background Paper contains the timeframe for the development of the program for 2022/23.