

# An Overview of the *RCA Programme Implementation 2019*

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## THINK BIG.

We are looking for individuals who are eager to develop and apply their skills to create buildings where people live, work and play. If you think big, we would like to hear from you.



# Active RCA Projects in 2019



<i>No.</i>	<i>Project Code</i>	<i>Project Title</i>	<i>Project Duration</i>
<i>1</i>	<i>RAS0082</i>	<i>Facilitating Activities Implemented under the RCA Framework</i>	<i>2018-2019</i>
<i>2</i>	<i>RAS1022</i>	<i>Strengthening Regional Capacity in Non-Destructive Testing and Examination Using Nuclear and Related Techniques for Safer, Reliable, More Efficient and Sustainable Industries Including Civil Engineering (RCA)</i>	<i>2019-2022</i>

# Active RCA Projects in 2019



3	<i>RAS5077</i>	<i>Promoting the Application of Mutation Techniques and Related Biotechnologies for the Development of Green Crop Varieties (RCA)</i>	<i>2017-2020</i>
4	<i>RAS5081</i>	<i>Enhancing Food Safety and Supporting Regional Authentication of Foodstuffs through Implementation of Nuclear Techniques</i>	<i>2018-2021</i>

# Active RCA Projects in 2019



5	<i>RAS5084</i>	<i>Assessing and Improving Soil and Water Quality to Minimize Land Degradation and Enhance Crop Productivity Using Nuclear Techniques</i>	<i>2018-2021</i>
6	<i>RAS6085</i>	<i>Enhancing Stereotactic Body Radiation Therapy for Frequent Cancers in the RCA Region (RCA)</i>	<i>2016-2019</i>

# Active RCA Projects in 2019



7	RAS6086	<i>Strengthening Cancer Management Programmes in Government Parties through Collaboration with National and Regional Radiation Oncology Societies</i>	<i>2018-2021</i>
8	RAS6087	<i>Enhancing Medical Physics Services to Develop Government Parties through Regional Leadership in Standards and Education and Training Support</i>	<i>2018-2021</i>
9	RAS6093	<i>Strengthening Capacity to Manage Non-Communicable Diseases Using Imaging Modalities in Radiology and Nuclear Medicine (RCA)</i>	<i>2019-2022</i>

# Active RCA Projects in 2019



10	RAS7028	<i>Enhancing Regional Capabilities for Marine Radioactivity Monitoring and Assessment of the Potential Impact of Radioactive Releases from Nuclear Facilities in Asia-Pacific Marine Ecosystems (RCA)</i>	2017-2020
11	RAS7029	<i>Assessing the Impact of Urban Air Particulate Matter on Air Quality (RCA)</i>	2016-2018



# Active RCA Projects in 2019



12	RAS7030	<i>Assessing Deep Groundwater Resources for Sustainable Management Through the Utilization of Isotopic Techniques (RCA)</i>	2016-2019
13	RAS7031	<i>Assessing the Vulnerability of Coastal Landscapes and Ecosystems to Sea-Level Rise and Climate Change (RCA)</i>	2019-2022



- *There were 13 active projects in 2019:*
- *4 projects in human health;*
- *3 projects in food and agriculture;*
- *3 projects in relation to environmental protection;*



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- *1 project in relation to groundwater management;*
- *1 project in the field of industrial application; and*
- *1 project in support of the RCA management.*



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➤ *14 regional training courses (RTCs):*

- *336 persons trained*

➤ *15 meetings/workshops:*

- *294 participants*



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- *15 expert missions; and*
- *5 home-based assignments.*



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➤ *TC Fund Allocated for 2019:*      *€1.657 million*

➤ *Delivered:*      *€1.557 million*

➤ *The Implementation Rate is 93.96% compared to 93% in 2018.*



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➤ *The EBT contributions received in 2019:*

- *China:* 93,445
- *Malaysia:* 10,000
- *Philippines:* 4,435

*Total:* €107,880

*(2015: €715,047; 2016: €188,017; 2017: €179,869; 2018: €595,158)*



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➤ *The EBT contributions received 2015-2018:*

*2015: €715,047*

*2016: €188,017*

*2017: €179,869*

*2018: €595,158*

- *(Average over 2015-2019: €357,194/year)*



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➤ *The total amount of “In-kind” contributions made by the RCA GPs in 2019:*

*@ € 615,200*



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## *Some Salient Achievements*

*RAS6085-“Enhancing Stereotactic Body Radiation  
Therapy (SBRT) for Frequent Cancers in the  
RCA Region”*



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## *Some Salient Achievements*

### *RAS6085*

- *Over 735 radiation oncologists, 275 medical physicists and 730 radiation therapists were trained for SBRT;*
- *More than 300 new radiotherapy centres using SBRT;*



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## *Some Salient Achievements*

### *RAS6085*

- *More than 150,000 cancer patients were treated using SBRT;*
- *Seven Regional Training Hubs were established, including:*



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## *Some Salient Achievements*

*RAS6085*

*1) Korea Institute of Radiological and Medical Sciences, Korea*

*2) Peter MacCallum Cancer Centre, Australia*



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## *Some Salient Achievements*

*RAS6085*

*3) Peking University Cancer Hospital, China*

*4) Tata Memorial Hospital, India*

*5) Tokyo Metropolitan Komagome Hospital,  
Japan*



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## *Some Salient Achievements*

*RAS6085*

*6) National Cancer Centre, Singapore; and*

*7) Ramathibodi Hospital, Siriraj Hospital,  
Chulalongkorn Hospital, Thailand*



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## *Some Salient Achievements*

*RAS6085*

- *SBRT protocols for lung and liver cancer were established; and*



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## *Some Salient Achievements*

*RAS6085*

- *Awareness of advantages of SBRT has been significantly enhanced in many GPs, hence SBRT has been introduced and promoted in many countries.*



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## *Some Salient Achievements*

*RAS7030-“Assessing Deep Groundwater  
Resources for Sustainable Management through  
the Utilization of Isotopic Techniques”*



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## *Some Salient Achievements*

### *RAS7030*

- *Over 5,000 samples were collected for analysis. The results of analyses were used to identify recharge sources, rate and mechanism, and groundwater dynamics for sustainable exploitation. Many countries have developed their national database, which can be used for further groundwater and climate change investigations.*



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## *Some Salient Achievements*

*RAS7030*

- *Isotope hydrology has been well recognized by the relevant water authorities in many countries as a powerful technique to provide information on groundwater flow dynamics and processes that is not obtainable by other means.*



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## *Some Salient Achievements*

### *RAS7030*

- *Some new techniques have been developed and applied for example the systematic stratified sampling using Packer system, measurement of  $^{81}\text{Kr}$  through the Atom Trap Trace Analysis technique, column chemistry methods for Li and Si isotopes analyses;*



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## *Some Salient Achievements*

### *RAS7030*

- *More than 150 project staffs were trained on the use of isotope and related techniques in the assessment of hydrogeological problems (groundwater dynamics, recharge source and flow rates, groundwater dating, surface water/groundwater interactions and groundwater evolution processes).*



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## *Some Salient Achievements*

### *RAS7030*

- *Over 250 reports and publications (national and international) were emanated from the project. Several technical presentations were made at national and international symposia and conferences.*



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## *Some Salient Achievements*

### *RAS7030*

- *The project has also provided opportunities for pooling technical inputs and knowledge on the utilization of isotopic techniques and enhanced regional collaboration through sharing information, experiences and expertise*



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*Highlights for Other Project in 2019*  
*(Presented in Section 2 – Details of the*  
*Technical Programme in Annual Report 2019)*



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➤ *100% PPARs submitted timely on*

*<https://tcreports.iaea.org>*



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## *In Conclusion:*

- *RCA Projects in 2019 were successfully implemented on schedule (details of project activities, salient results, extra-budgetary contributions and in-kind contributions are presented in RCA Annual Report 2019).*



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## *Recommendations:*

*In order to further enhance the effectiveness and efficiency of the RCA programme in 2020, NRs are requested to:*

- *Stick to the RCA GOR, especially to designate appropriate persons as NPCs, A/NPCs and National Project Teams right from the start of project implementation;*



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## *Recommendations:*

- *Consult with NPCs to nominate qualified/appropriate candidates to participate in regional events;*
- *Submit nominations on time and in full through the **InTouch+ platform**. Hard copy nominations should be submitted only in exceptional cases;*



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## *Recommendations:*

- *Coordinate and ensure that NPCs submit national reports to LCCs in time so that LCCs have sufficient inputs and time to consolidate and submit PPARs to the IAEA on schedule;*



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## *Recommendations:*

- *Share the RCA GOR with LCCs, NPCs and A/NPCs so that they know and undertake their roles and responsibilities properly.*



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## *Recommendations:*

- *Maintain close and timely contact with RCA Chairs, LCCs, NPCs, RCA PAC, WG on MTSC, RCARO and RCA FP to solve any issues that may arise.*



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“Individual talents get magnified many times over through the collective lens of an effective team.”

*Dalal Haldeman*



*Thank you for your attention!*



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