RCA NEEDS YOU

YOU NEED RCA

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RCA

RCA Related Websites

IAEA/TC– RCA Homepage
www–tc.iaea.org/tcweb
Vienna–based

RCA Regional Homepage
www.rca.iaea.org
Malaysia–based

RCA Regional Office Homepage
www.rcaro.org
Korea–based

What is RCA?

The RCA is an intergovernmental agreement involving IAEA Member States of South Asia, South East Asia and the Pacific, and the Far East that entered into force in 1972 under the aegis of the International Atomic Energy Agency (IAEA). There have been two Agreements; each is in force for an initial period of five years. The 1972 Agreement was renewed in 1977 and in 1982. In 1987 the second Agreement came into effect and this was renewed in 1992, 1997 and 2002.

The full name of the RCA is *Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific.*

This arrangement provides a framework for Asian and the Pacific Member States to co-operate with each other and the IAEA to promote and coordinate cooperative research, development and training projects in nuclear science and technology through their appropriate nuclear institutions.

RCA Member States

Currently 17 IAEA Member States in Asia and the Pacific region are signatories to the Agreement.

Australia (AUL), Bangladesh (BGD), China (CPR), India (IND), Indonesia (INS), Japan (JPN), Republic of Korea (ROK), Malaysia (MAL), Mongolia (MON), Myanmar (MYA), New Zealand (NZE), Pakistan (PAK), The Philippines (PHI), Singapore (SIN), Sri Lanka (SRL), Thailand (THA), Viet Nam (VIE) - In alphabetical order -

FIRST Milestones in RCA

- 1972: First regional co-operative agreement under the aegis of IAEA
- 1973: First RCA Representatives Meeting at IAEA Headquarters in Vienna, Austria
- 1973: First RCA project launched (Regional preservation of fish and fishery products)
- 1979: First Meeting of National RCA Representatives held in an RCA Member State (Japan)
- 1982: First UNDP/IAEA/RCA Industrial Project implemented
- 2002: First regional co-operative agreement to establish its own regional office. The RCA Regional Office (RCARO) opened in Korea.

RCA Vision

The RCA shall strive to become a respected Regional Resources Community in nuclear science and technology, competent and competitive in providing high impact solutions to the development problems of the region and the Member States.

RCA is the Future!

What RCA has?

- A positive history of accomplishment
- A unique record of regional nuclear science and technology co-operation
- A good potentiality to use its regional technical and scientific resources to contribute to the solution of some of the significant problems the region faces. Many nuclear technologies have distinctive advantages over the conventional technologies in the study of major problems being confronted by the region and in the development of technological and scientific solutions.

RCA stimulates TCDC

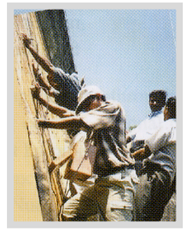
The Regional Agreement is a vehicle for stimulating TCDC (Technical Co-operation among Developing Countries) by enhanced networking and partnership among developing Member States. It also has flow on effects to other organizations and regional partners.

What are the IAEA / RCA Projects?

Over its lifetime the RCA has received funding for its projects from many of its Member States as well as the IAEA, a major donor, and other international organizations such as the UNDP. No matter the source of funding, the RCA projects are mostly implemented through the IAEA's Technical Co-operation Programme. Where required or requested, the IAEA provides a range of support in areas such as technical and project advice, including planning, formulation, implementation and evaluation. Therefore, RCA projects are often also called IAEA/RCA projects. Those that receive direct IAEA funding are also aligned with the strategic goal of IAEA's Technical Co-operation (TC), which is to increasingly promote tangible socio-economic impact of the Member States and the Region.

The key elements of IAEA TC Strategy are:

- Model Project concept
- Thematic planning
- Partnership building (financial, strategic, technical)
- Stressing TCDC, sustainability and self-reliance of national nuclear institutes
- Reflecting safety and security implication




Thematic Sectors

RCA projects are being carried out under several Thematic Sectors.

- Agriculture (Agricultural application of nuclear technologies)
- Health (Medical and healthcare application of nuclear technologies)
- Industry (Industrial application of nuclear technologies)
- Environment (Environmental application of nuclear technologies)
- Energy (Assessment of the role of nuclear power and other energy options in competitive electricity market)
- Research Reactor (Improvement of research reactor operation and utilization)
- Radiation Protection
- *ENO (Electronic Networking and Outreach)*

Lead Country

Each project has a Lead Country (LC) that takes the lead in the upstream work for project formulation and plays an initiative role for implementation. To assist the Lead Country, there are Assisting Lead Countries (ALCs), as necessary.

In addition, each thematic sector has a Lead Country to coordinate and support the wider programme and there may be Assisting Lead Countries (ALCs).

The present Lead Countries for RCA Thematic Sectors

- Agriculture: China
- Health: Japan
- Industry: India
- Environment: New Zealand
- Energy: Korea
- Research Reactor: Korea
- Radiation Protection: Australia
- *ENO: Malaysia*


How Nuclear Technologies Contribute to Solving Problems and RCA Achievements

There are numerous ways in which nuclear technologies are being applied to solve everyday problems, from hunger and poverty to treatment of complex forms of cancer. Below are some examples of how nuclear technologies contribute and what are the major RCA achievements during the past years. (Source: IAEA at a glance. Editor)

Meeting Basic Human Needs

Many developing countries in the region face enormous obstacles in meeting people's demand for food. Efforts have been made to improve food security and living standards by enhancing the capacity to use nuclear technology for improving crop and livestock productivity, food safety and overall quality.

(For more fertile fields) Among the key obstacles limiting food output in many developing countries are poor soils and inappropriate agricultural practices - including water management. One way to improve soil fertility is to stimulate biological nitrogen fixation - by treating seeds with special bacteria that allow a plant to produce its own fertilizer in its roots.

For example, in the RCA region, through extensive research and field-testing in Bangladesh, a method for measuring the nitrogen fixed to plants from the atmosphere has been perfected with IAEA and FAO know-how. Using this technique, more efficient nitrogen fixing legumes (such as soybeans and peanuts) with a higher yield and protein content have been selected and provided to farmers. Bio-fertilizers are not only helping farmers to produce more food, they are also allowing cash-poor countries to save on the high cost of imported mineral fertilizers.

Water is another important factor limiting crop production. Efforts have been made to cope with seasonal and annual water variations by introducing the use of neutron probes. These special instruments are able to be used to measure and monitor water content in the soil in a quick, reliable and, non-destructive way. This technology saves time and, effort and ultimately money. The IAEA is supporting field research in developing countries on applying these techniques to optimize the use of scarce water resources for higher crop yields.

RCA Achievements

RCA Member States have now the capabilities to:

- Utilize nuclear technologies to study the problem of increasing the efficiency of nitrogen fertilizer use, soil fertility, and the sustenance of productivity in rice-based cropping systems thus improved soil quality.
- Provide enhanced analytical services for using Cs-137 techniques in soil erosion and sedimentation studies that contributed to understand the soil characteristics.
- Contributed to the adaptation of lesser known and lesser utilized plant resources (e.g. sorghum, Indian millet) for poor soil to enhance biodiversity, food availability and soil fertility

(For more abundant food crops) Most agricultural crops grown today have been improved by man to increase output and hardiness. Mutation breeding and, more recently, in vitro and molecular techniques, are often used to enhance plant productivity in adverse conditions. Such crop enhancing techniques are used to improve disease resistance, drought tolerance, yield potential and other desirable characteristics. Worldwide, more than 1,800 mutant cultivars of crop and ornamental plants have been released to farmers over the past 35 years. Roughly 12% of all agricultural land in China is cultivated with new strains of rice, wheat, corn, and cotton that were developed through radiation mutation techniques.

RCA Achievements

RCA Member States have now the capabilities to:

- Assist in improvement of national capacities for sustainable food security with high economic impact using radiation-induced mutation techniques. Member States exchanged promising mutant genetic diversity in rice, pulses, and oil crops for commercial cultivation.
- RCA has established a Mutant Germplasm Network (MGN) for the promising genotypes of selected crops among the Member States.

(For improving animal productivity and health) Livestock plays a vital role in the livelihoods of rural people in most developing countries. But due to diseases and under-nutrition, their productivity is often much lower than in industrial countries. Nuclear technology contributes to the solution of this problem. For example, isotopes have been used to examine the utilization of feeds by ruminants and to develop more cost-effective feeding strategies. Measurements of animal hormones by radioimmunoassay (RIA) have given a better understanding of the reproductive physiology of livestock. Already, the IAEA and FAO have established RIA laboratories to evaluate animal steroid hormones in 60 countries. By applying these techniques, for example, an increased milk production has been achieved in many Member States.

RCA Achievements

- Increasing regional use of the medicated UMMB (Urea Molasses Multi-nutrient Blocks) by farmers, especially in CPR, for controlling internal parasites and simultaneously supplementing low quality animal feeds.
- Development and regional use of the AIDA (Artificial Insemination Database Application), a software program, for keep recording important data on each breeding animal. It also facilitates recording the AI (Artificial Insemination) progress.
- Regional production of FMD (Foot-and-Mouth Disease) antigen and antibody ELISA (Enzyme-Linked Immunosorbent Assay) reagent kits is progressing well in THA.

(For eradicating insect pests) Insect pests can have a devastating effect on crop production. They can also transmit diseases that destroy crops and kill livestock and people. But, heavy reliance on pesticides raises environmental concerns and problems of pest adaptation and resistance. Hence, in many countries, minimizing insecticide use through the application of environmentally friendly nuclear techniques has been given a priority.

One proven method of pest control is the 'Sterile Insect Technique' (SIT), in which male insects are exposed to precise doses of gamma radiation. The radiation induces sterility but does not affect the insect's ability to fly, compete in the food chain or mate. The treated insects are released across wide areas, but are unable to reproduce, thus can cause a fall in population and eventually their eradication. One of the successful cases is the eradication of the tsetse fly on Zanzibar Island, off the coast of Tanzania.

RCA Achievements

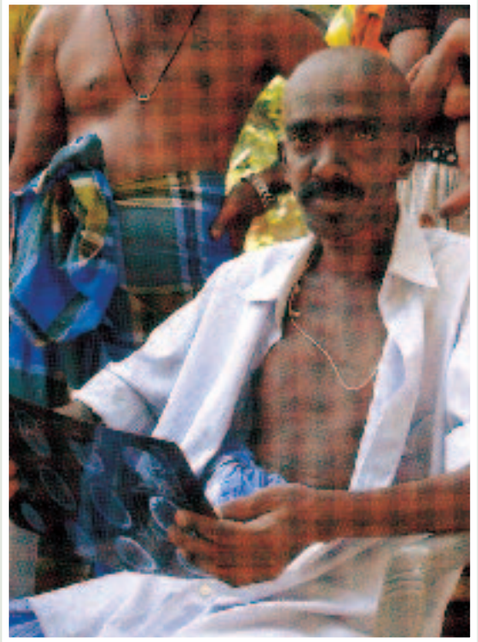
RCA Member States have now the capabilities to apply the SIT technology:

- Several Member States are involved in use of SIT to eradicate harmful insect pests, such as fruit flies. Japan was successful in controlling the melon fly in Okinawa using SIT.

(For preserving the harvest) Up to 40% of all food produced in some developing countries is lost to insects, rodents, bacteria and mold. One effective and safe method for preserving food is irradiation by controlled exposure to ionizing energy. Irradiation is being routinely used to ensure the hygienic quality of spices and dried vegetable seasonings. The IAEA is collaborating with FAO and WHO in worldwide efforts to harmonize regulation of irradiated foods and to identify irradiated products for consumers.

RCA Achievements

- In many Member States, food irradiation has been increasingly commercialized (AUL, BGD, CPR, IND, INS, JPN, ROK, PAK, PHI, THA, VIE). Over 300,000 tons of irradiated food has been produced during 1995-2000.
- Member States have agreed on a harmonized set of regulations for food irradiation and have fixed a timetable to adopt these regulations. Also, a set of protocols for the use of irradiation for quarantine treatment has been developed.
- The criteria of the Export Certification System and Draft Guidelines for Phytosanitary (quarantine) Certificates of the International Plant Protection Convention (IPPC) have been prepared and recommended to the national authorities in RCA Member States.
- from Member States have established their own 'Irradiation Network For the Media' (INFORM) to promote better understanding about irradiated food.



Advancing Life Sciences

(Contributing to medicine) Nuclear technologies are employed in numerous ways in the medical field. Simple X-rays are frequently used as a diagnostic tool, but many other nuclear techniques are available. In developing countries, emphasis is placed on preventive medicine; early detection of hepatitis and neonatal hypothyroidism; accurate evaluation of nutritional deficiencies; and timely diagnosis of common genetic (hereditary) diseases. Chemical compounds labeled with short-lived radioactive isotopes are useful for diagnostic purposes, especially to study how well an organ is functioning.

RCA is the Future!

RCA Achievements

- Member States are now routinely using sentinel lymph node imaging for better management of breast cancer. Almost all Member States are conducting scintimammography for detection of breast cancer.
- Lipiodol labeled with the radioisotope Re-188, a new radiopharmaceutical developed by ROK, is effectively used for treatment of liver cancer. As a first step, this method has been introduced to AUL, CPR, IND, MON, PHI, SIN, THA, VIE.
- Myocardial Perfusion Scintigraphy (MPS) has been introduced to BGD, INS, MAL, SRL, VIE.
- Intravascular radionuclide therapy to prevent restenosis following transluminal coronary angioplastry has already been introduced to several Member States.
- I-131 treatment of differentiated thyroid cancer has been introduced to BGD, INS, MON, VIE.
- Distance learning materials have been prepared to train nuclear medicine technologists at their work place (trained about 300 technologists at the pilot stage).

(For safer medical supplies) Disinfections of medical supplies, such as hypodermic syringes, are essential for better health standards worldwide. Gamma irradiators are widely used to decontaminate pre-packed medical supplies. Improving quality of radiation sterilization of tissue grafts (bones, skins, etc) is another important application of nuclear techniques with the potential to benefit a wide spectrum of the region's population.

RCA Achievements

- Many Member States have established commercial irradiators for radiation sterilization of disposable medical supplies.
- Quality of radiation sterilized tissue grafts have been improved. Harmonized and standardized procedures for radiation sterilization of tissue grafts have been developed. Hundreds of tissue bank operators have been trained through RCA distance learning package.

(For an effective cancer treatment) Radiation techniques are being adapted to treat cancer in the developing world, where hospital resources are often limited. One of the treatments is for advanced cervical cancer, which is the most common female cancer.

RCA Achievements

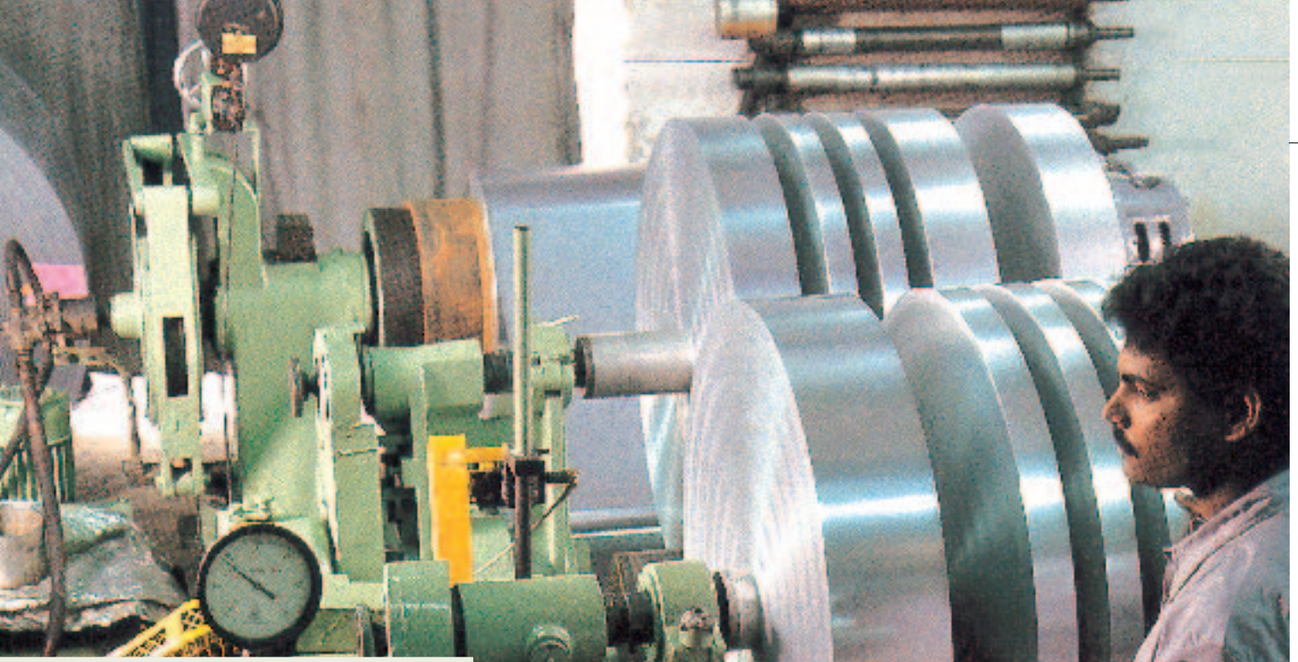
- To ensure continued supply of replacement of radiation sources for brachytherapy equipment in the region, such as Co-60, necessary technology has been successfully transferred among Member States for the production and quality assurance of these sources. Several Member States are now in a position to produce and supply these sources to the region.
- Through a synergistic co-operation with FNCA (Forum for Nuclear Co-operation in Asia) a standard protocol for LDR (Low-Dose-Rate) and HDR (High-Dose-Rate) brachytherapy treatment has been developed and is available for regional use.
- An extended training programme for medical physicists has been designed to assist them in the design and implementation of quality assurance programme for radiotherapy in their countries.

(For improved nutrition and well-being) Isotope techniques are used to assess human body composition, nutrient intake and vitamin and mineral absorption. Such methods are ideal useful in determining the success of food supplementation programmes aimed at combating mal-nutrition.

Isotopic tools are also being used to monitor infant growth, measure the effectiveness of breast-feeding and develop nutritious complementary foods. Nuclear techniques can also be used to assess human exposure to air pollution and other environmental contaminants that affect health.

RCA Achievements

- Isotope techniques are being applied to neonatal issues by several Member States to assist in the solution of these problems and such experience is valuable to the Member States as concern about neonatal uses.



Benefiting from the Physical Sciences

(For effective groundwater management) Water is rapidly becoming one of the earth's most precious resources. If water resources are not prudently managed, they could become a burden on economic growth and a grave danger to human health and the environment. Isotope techniques can greatly assist in the development and management of water resources. They can help in exploiting new wells and assessing salinity and contamination of groundwater resources, thus reducing the water supply deficit.

RCA Achievements

RCA Member States have now the capabilities to apply the isotope technologies to water resources:

- This ability is contributing to an understanding and solution of the salient problems of sustainability of fresh water supply, salinity, nitrate and/or arsenic contamination and overall water resource assessment (BGD, etc).
- The skills have enabled the development of site-specific groundwater-flow and transport mechanisms using the visual MODFLOW program for application.

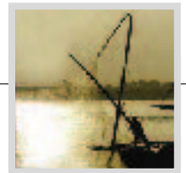
(For upgrading industry) Radioisotopes and radiation applications are tremendously important in the modern industry. Radiation processing for manufacturing new materials, non-destructive testing and nucleonic control systems for quality control and mineral analysis and tracer and sealed source technology for problem analysis and optimization of industrial processes are some prominent examples.

RCA Achievements

RCA Member States have now the capabilities to apply these technologies in the region:

- Radiotracers, sealed sources and nucleonic gauges are widely used in Member States and benefits the industrial end-users. This assists to promote economic development in priority sectors such as petroleum, chemical and petrochemical industries. 5 Member States have been awarded contracts to solve industrial problems in petrochemical industries as a result of the capabilities developed.
- Techniques such as Tracer Residence Time Distribution (RTD) for troubleshooting diagnosis, process analysis and optimization; flow rate measurement, calibration and leak detection; gamma and neutron scanning techniques for inspection of columns and tanks in oil refineries are already established and used in the region (INS, MAL, THA).
- The use of tracer techniques in oil fields has increased of oil recovery to 10-15% in VIE and other countries. Thin Layer Activation (TLA) technique for monitoring wear and corrosion has also been established in many Member States for practical application.
- NDT techniques for concrete structure were introduced in many Member States. Certification of NDT personnel based on ISO has been introduced to AUL, BGD, IND, MAL, NZE, PHI, SRL.
- Radiation processed hydrogels for use as burn wound dressings and for use in leprosy patients are now commercially available in many Member States.
- Growth promoters have been developed from radiation processed natural polymers resulted in increase of yield of cucumber by 15-20%.

RCA is the Future!



(For solving environmental problems) Many large cities are facing serious economic and health problems due to environmental factors like water and air pollution and depletion of the ozone layer in the upper atmosphere. These involve a variety of applications from the use of isotopes as tracers for selected pollutants, to the use of electron accelerators for cleaning flue gases from fossil-fueled plants. Isotopic techniques can identify relationship between the environment and geothermal energy production and assist in the understanding of factors to mitigate marine pollution.

Numerous analytical techniques are used for investigations such as radionuclide contamination, measurement of concentrations of various chemicals and the dispersion characteristics of water bodies. Many large cities also face the problem of sewage sludge disposal. It has demonstrated that Gamma irradiators can be used to decontaminate sludge and in cases where this sludge has not been contaminated by toxic chemicals it has the potential to be utilized as a fertilizer for crop production.

RCA Achievements

- **(Air pollution)** 15 Member States have effective sample analysis capability using Neutron Activation Analysis (NAA) techniques. Member States can assess air pollution sources, for example, fine and coarse particles, using isotopic techniques. Data collected through the techniques not only helped national air pollution policy makers in their work in many Member States but also assisted international organizations to lead collaborative projects. The ASEAN launched a project to solve haze problem in the region. The ADB and the WB together with other Asian countries started the 'Clean Air Initiative '(CAI-Asia) to address air quality in the region.
- **(Marine coastal environmental pollution)** The first comprehensive IAEA/RCA database on marine radioactivity for the region has been completed and compiled for the Asia-Pacific Marine Radioactivity Database (ASPAMARD) by using a format that can be easily incorporated into the Global Marine Radioactivity Database (GLOMARD). This database is useful for assessing the short-term and long-term impact of man-made sources on marine radioactivity for the region.
- Member States are increasingly applying nuclear techniques (Receptor Binding Assays) to assist in the response to Harmful Algal Bloom (HAB) outbreaks (PAK, MAL, THA, PHI). Several Member States have capability for rapid detection of the red tide toxins through radiometric receptor binding assay.
- **(Radioactive waste management)** Various concepts for disposal of low and intermediate level radioactive waste from non-power sources are identified. These concepts will provide Member States with good references for practical use.

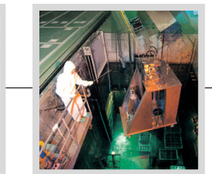
▲ HANARO Research Reactor

Other RCA Endeavors

(Energy) Sustainable development has increasingly become a long-term objective for both the developed and developing countries. Energy development is an essential part of social development and economic growth. However, production and use of energy causes environmental problems. Thus the provision of adequate energy services at an affordable cost, in a secure and environmentally benign manner, and in conformity with social and economic developmental needs, is very important for sustainable development. In many countries in the region the establishment of a long-term energy policy has to include an assessment of the option of the role of nuclear energy for power production.

RCA Achievements

- The results of the RCA project on comparative energy assessment, 'Electric System Expansion Planning' (ESEP) has impacted on the long-term national planning of several Member States (ROK, CPR, PAK).
- The results of this project also supported several other Member States in formulating their ESEP with positive consideration on the role of nuclear power (INS, MAL, PHI, SRL, VIE).



(Research Reactor) Member States operating research reactors wish to increase RI production as well as neutron beam applications. The use of both radioisotopes and neutron beams is significantly increasing, as are new applications. For mutual benefit Member States have been sharing state-of-the-art technology and information on these topics as well as on matters of the safety and effectiveness of research reactors.

RCA Achievements

- Member States are sharing information on research reactor resources to improve current utilization and also to prepare for the future needs.
- Member States have initiated a RI back-up supply system. This idea is particularly valuable for a country that has temporarily shutdown its research reactor(s) and cannot produce radioisotopes.

(Radiation Protection) The protection of people, the environment and facilities from the impact of radiation is very important. The need to support the establishment and maintenance of an effective, reliable and sound radiation protection infrastructure in Member States has been well recognized. There is also a need to harmonize the RCA project with other regional projects on radiation protection to not only avoid duplication and overlaps in activities but to also provide a more effective and efficient regional outcome through developing the synergies between them.

RCA Achievements

- As a result of the harmonization, all activities under the radiation protection projects address specific milestones of the Basic Safety Standards (BSS). Several workshops and training events have been organized to support their different milestones.
- Increased awareness of development of codes of practice for industrial sources of radiation, especially in licensing and inspection.
- Member States were more knowledgeable about the need to develop sufficient infrastructure for meeting possible radiation incidents. RCA peer review missions have supported many Member States in assessing the effectiveness of their radiation protection infrastructures in many Member States.
- Member States have contributed to the understanding of the important radiation-related parameters of a reference Asian man.
- Experts in the region developed training material on 'Radiation Protection Applied to Radioisotope Production'.

(Electronic Networking and Outreach) Use of Information and Communication Technology (ICT) is an important need for the modern society. RCA is trying to introduce the ICT in the RCA programme for better project management. More specifically, this project aims to improve and shorten the duration and process of the project proposal preparation and reduce the number of physical meetings. It also aims to enhance 'Technical Co-operation among Developing Countries' (TCDC) and achieve a greater outreach to people of the region by sharing experiences in nuclear technologies.

RCA Near-term Plans

- To improve and shorten process time for preparation of the RCA project proposals
- To reduce the number of physical meetings
- To improve the quality of training activities
- To support improvement of networking facilities of developing countries
- To establish an on-line e-learning platform for various thematic sectors




IAEA / RCA Projects for 2005-06

I. Agriculture

1. Development of Sustainable Land Use and Management Strategies for Controlling Soil Erosion and Improving Soil and Water Quality
2. Integrated Approach for Improving Livestock Production Utilizing Indigenous Resources and Conserving Environment
3. Enhancement of Genetic Diversity in Food, Pulses, and Oil Crops and Establishment of Mutant Germplasm Network

II. Human Health

1. Strengthening Medical Physics through Education and Training
2. Improvement of QA for Brachytherapy of Frequent Cancers in the Region
3. Prevention of Osteoporosis and Promotion of Bone Mass in Asian Populations using a Food-based Approach
4. Tumor Imaging using Radioisotopes
5. Distance Assisted Training for Nuclear Medicine Technicians
6. Distance Education in Radiation Oncology

III. Industry

1. Radiation Technology for Development of Advanced Materials
2. Radioisotope Technology for Natural Resource Exploration and Exploitation
3. Advanced Industrial Radiography

IV. Environment

1. Nuclear Techniques for Improved Management of Transboundary Air Pollution in the RCA Region
2. Application of Isotope Techniques in Groundwater Contamination Studies in Urbanized and Industrialized Areas
3. Improving Regional Capacity for Assessment, Planning and Response to Aquatic Environmental Emergencies

V. Radiation Safety

1. Harmonization of Radiation Safety
2. Assessment of Radiological Risks
3. Radiological Emergency Response

VI. Energy

1. Tracing Future Sustainability Paths through Nuclear and Other Energy Options

VII. Research Reactor

1. RI Production and Neutron Beam Application with Assured Safety

VIII. Management of TCDC (Technical Co-operation among Developing Countries)

- ENO (Electronic Networking and Outreach)


RCA Regional Office

Missions

RCA Regional Office has been established to contribute further to the development of the overall RCA programme; increasing ownership by the Member States, in particular increasing RCA visibility in the region; and, increasing the possibilities for new co-operative partnerships.

- To increase RCA Awareness: Visibility
- To promote Partnerships for RCA Program: Viability

The roles and functions of the Director of RCA Regional Office are:

- To pro-actively seek out opportunities for the RCA to participate in projects being formulated and designed by major regional and international donors, including international agencies
- To negotiate and secure funding for RCA projects,
- To promote the peaceful uses of appropriate nuclear technology to assist in addressing regional and national needs, and
- To provide enhanced visibility for the RCA at regional and national fora.

Milestones of RCARO

- In 1978, the need to have an RCA Office in the region was first mentioned at an RCA Representatives Meeting in Vienna. However, it was stated that the level of RCA program was too small to warrant such an office in the region.
- In 2000, at the 22nd Meeting of National RCA Representatives in India, Korea offered to host the RCA Regional Office if established in Korea. RCA Member States supported this proposal.
- In September 2001, at the 30th RCA General Conference Meeting in Vienna, RCA Member States agreed on the establishment of the RCA Regional Office in Korea.
- On 27 March 2002, the RCA Regional Office was officially opened at Daejeon, Korea on the occasion of the 30th Anniversary of the RCA Agreement and the 24th Meeting of National RCA Representatives in Korea.
- In September 2003, the 32nd RCA General Conference Meeting adopted an RCA General Conference Resolution on the Establishment and Management of the RCA Regional Office (RCARO) in Korea.

RCARO Advisory Committee

The present RCARO Advisory Committee was constituted in March 2002 to give advice to the RCA Regional Office. Present members are the National RCA Representatives of Australia, the Philippines, China, India, Korea and the IAEA/RCA Coordinator. The Advisory Committee provides advice mainly on the legal provisions and new programmes that the RCARO initiates.

Organization of the RCA Regional Office

The Director is responsible to the RCA Member States through the National RCA Representatives for the general operation and management of the Office.

RCA is the Future!

New Programmes of the RCA Regional Office

The RCA Regional Office is implementing several new programs in order to support RCA Member States in their nuclear capability building as well as their nuclear knowledge preservation endeavors.

Post-doctoral Fellowship Training Programme

Objectives

- To preserve necessary nuclear knowledge through on-the-project participation in Korea's key nuclear R&D projects by competent nuclear scientists from the RCA Member States
- To contribute to the socio-economic development of the RCA Member States through the ample use of nuclear technology
- To support national endeavours to develop human resources of the RCA Member States in nuclear fields

Fields

- Advanced reactor technology
- Nuclear fuel technology
- Radioactive waste management technology
- Nuclear safety and regulatory technology
- Radiation protection
- Radioisotope production & radiation application technology
- Nuclear medicine and radiotherapy
- Basic nuclear sciences such as accelerator technology

Host Organizations

Major nuclear related institutes in Korea responsible for national long-term R&D projects and regulatory functions such as,

- Korea Atomic Energy Research Institute (KAERI) (www.kaeri.re.kr)
- Korea Institute of Nuclear Safety (KINS) (www.kins.re.kr)
- Korea Electric Power Research Institute (KEPRI) (www. kepri.re.kr)
- Korea Institute of Radiological & Medical Sciences (KIRAMS) (www.kirams.re.kr)

KAIST Master's Degree Course

Objectives

- To develop leading scientists and engineers in nuclear energy and quantum engineering fields

Course

- Nuclear Energy and Quantum Engineering Course

Host Institution

Korea Advanced Institute of Science and Technology (KAIST) (www.kaist.edu)

KAIST waives the application fees and tuition. KAIST will also cover the participant a round air-ticket, room and board, medical insurance and incidentals.

KOICA Nuclear Medicine Internship Training Programme

- Medical Applications and Usage of Cyclotron and RI -

Objectives

- To train medical professionals in nuclear medicine with particular emphasis on the recent practices of nuclear medicine
- To train medical professionals in medical applications of radioisotopes produced from medical cyclotron
- To inform medical professionals on the usage of PET (Positron Emission Tomography) and SPECT (Single Photon Emission Computed Tomography)
- To train medical professionals in radiation therapy

Host Institution

Korea Institute of Radiological & Medical Sciences (KIRAMS) in cooperation with the Korea International Cooperation Agency (KOICA) (www.koica.go.kr)

Work Plan of the RCA Regional Office

I. RCA Awareness Increasing Programme

(1) Better RCA Information Flow through the Operation of RCARO Website including RCARO Emailing Service
(2) Production of Information Materials (Brochures, RCA Success Stories)
(3) Presentations, Briefing Meetings, Lectures
(4) Meetings with RCA Stakeholders of the Member States
(5) RCA Profile Increasing Programme through the Media
(6) Survey on Radiation Applications by the End-users in the Region
(7)Workshop for National RCA Support Staff of the Member States

II. RCA Partnership Increasing Programme

(1) Database on Regional/International Development Organizations
(2) Co-operation with UN Systems Organizations (UNESCAP, etc)
(3) Co-operation with Regional Nuclear Co-operative Organizations
(4) Co-operation with National/Regional/International Funding Agencies

III. Nuclear Knowledge Preservation and Enhancement Programme

(1) RCA Post-doctoral Fellowship Programme
(2) RCA/KAIST Nuclear Engineering Master's Degree Course
(3) RCA/KOICA Nuclear Medicine Internship Training Programme
(4) Provision of Expert Missions and Equipment to the RCA Member States

IV. Building Operational Basis of RCARO

(1) Adoption of the 'Working Paper on the Establishment of RCARO' by the 25th RCA NRM (May. 02) – Revised by the 32nd RCA GCM (Sep. 03)
(2) Adoption of the 'RCA Resolution on the Establishment of RCARO' by the 32nd RCA GCM (Sep. 03) – Revised by the 33rd RCA GCM (Sep. 04)
(3) Inclusion of Roles and Responsibilities of the Director of RCARO in the 'RCA Guidelines and Operating Rules' (Sep. 04)
(4) Selection and Appointment of the Director of RCARO (Vacancy Notice in Sep. 04)
(5) Ministerial Decree by the Minister of Science and Technology (MOST) of the Republic of Korea on the Establishment and Operation of RCARO (Mar. 02)
(6) Administration Support Agreement between MOST and KAERI on RCARO (Mar. 02)
(7) Agreement between the Originating Country of the Director and the Host Government of RCARO (plan)
(8) MOU between the Ministry of Foreign Affairs and Trade (MOFAT) and RCARO on the Functioning as an International-level Organization in Korea (plan)
(9) Staff Assignment from Member States to RCARO (from Jun. 04)
(10) Amendment of RCA Agreement to Reflect Operation of RCARO (plan)

V. Committees

(1) RCARO Advisory Committee (AC) (since Mar. 02)
(2) RCARO Steering Committee – Local (since Mar. 02)
(3) RCARO Technical Advisory Committee – Local (since Mar. 03)
(4) RCARO International Consultants (since Mar. 03)
(5) Operation of a Task Force to Develop Strategy for Fund Creation (plan)
(6) RCARO Director Selection Committee (Apr. 04)

The Future is Ours!