

Active IAEA Collaborating Centres sorted by topic

Environment	Country	Topic
National Food Chain Safety Office FFSD RRL	HUNGARY	Production and characterization of reference materials
Kuwait Institute for Scientific Research (KISR)	KUWAIT	Use of Nuclear and Isotopic Techniques to Advance Coastal and Marine Science
Philippine Nuclear Research Institute (PNRI)	PHILIPPINES	Harmful algal bloom studies in the context of environmental and global changes
Korea Institute of Nuclear Safety (KINS)	REPUBLIC OF KOREA	Enhancing reliability and comparability of environmental radioactivity measurement results
Centro Nacional de Aceleradores (CNA)	SPAIN	Accelerator-based analytical techniques for the study of radionuclides in marine samples
Spiez Laboratory	SWITZERLAND	Sampling and analytical techniques for the study of radionuclides in environmental samples applying ISO/EN/17025 accreditation standards, with a focus on capacity building within the ALMERA network
VINATOM	VIETNAM	Water and environment
Food & Agriculture	Country	Topic
Animal Biotechnology Laboratory, Sao Paulo University (LBBMA)	BRAZIL	Animal genomics and bioinformatics
Moscamed Brasil	BRAZIL	Operational programmes against Aedes mosquitoes with a Sterile Insect Technique component
Centre International de Recherche et Développement sur l'Élevage en Zone Subhumide (CIRDES)	BURKINA FASO	Use of the Sterile Insect Technique for area-wide integrated management of Tsetse fly populations
Centro de Investigación en Contaminación Ambiental (CICA)	COSTA RICA	E-learning and accelerated capacity building for food and environmental protection (EACB)
Chinese Academy of Agriculture Sciences (CAAS)	CHINA	Nuclear Techniques in Food and Agriculture
Aerial	FRANCE	Multidisciplinary applications of electron beam and x-ray technologies and related dosimetry, especially for food irradiation

Active IAEA Collaborating Centres sorted by topic

National Nuclear Energy Agency of Indonesia (BATAN)	INDONESIA	Plant mutation breeding for climate smart agriculture (PMBCSA)
Centro Agricoltura e Ambiente “Giorgio Nicoli (CAA)”	ITALY	Development and implementation of a SIT package for Aedes mosquitoes suppression
Programa Moscas de la Fruta DGSV-SENASICA-SAGARPA	MEXICO	Development and application of the SIT for fruit fly area-wide control
Advanced Radiation Technology Institute (ARTI); Korean Atomic Energy Research Institute (KAERI)	REPUBLIC OF KOREA	Radiation application research for environmental remediation, advanced materials, foods and biotechnology
Human Health	Country	Topic
National Cancer Institution Cairo NCI	EGYPT	Cancer control and radiation research
St. John' s Research Institute, St. John's National Academy of Health Sciences	INDIA	Nuclear techniques in nutrition
Hiroshima International Council for Health Care of the Radiation-exposed (HICARE)	JAPAN	Health care of the radiation-exposed for cooperation in the medical field
National Institutes for Quantum and Radiological Science and Technology (QST) formerly: National Institute of Radiological sciences (NIRS)	JAPAN	Biology of risk reduction of radiotherapy; nuclear medicine and diagnostics imaging; charged particle
King Faisal Specialist Hospital & Research Centre	SAUDI ARABIA	Quality assurance in radiation medicine
Water Resources	Country	Topic
Companhia de Pesquisa de Recursos Minerais (CPRM), Geological Survey of Brazil	BRAZIL	Water resources assessment and management
National Centre for Nuclear Energy, Science and Techniques ‘CNESTEN’	MOROCCO	Water resources assessment and management
Thailand Institute of Nuclear Technology (TINT)	THAILAND	Water resources assessment and management
Radioisotope Production and Radiation Technology	Country	Topic
National Institute for Nuclear Science and Technology (INSTN)	FRANCE	Education and training in nuclear technologies industrial and radiopharmaceutical applications

Active IAEA Collaborating Centres sorted by topic

National Nuclear Energy Agency of Indonesia (BATAN)	INDONESIA	Research and development and capacity building in non-destructive diagnostics, testing and inspection technologies
National Institute of Nuclear Research (ININ)	MEXICO	Safe operation, maintenance and upgradation of gamma irradiation facilities
Institute of Nuclear Chemistry and Technology (INCT)	POLAND	Radiation dosimetry and industrial radiation processing
National Center for Electron Beam Research (NCEBR) at Texas A&M AgriLife Research	USA	Electron beam technology for food, health and environmental applications
Institute of Nuclear Sciences Applied to Health (ICNAS) Research Unit of the University of Coimbra	PORTUGAL	Production and R&D of Radioisotopes and Radiopharmaceuticals
Nuclear Science	Country	Topic
Australian Nuclear Science and Technology Organisation (ANSTO)	AUSTRALIA	Multi-analytical techniques for materials research, environmental studies and industrial applications
Malaysian Nuclear Agency	MALAYSIA	Research, development and training in nuclear sciences and applications
Reactor Institute Delft (RID)	NETHERLANDS	Neutron-activation based methodologies of research reactors
Pakistan Institute of Engineering and Applied Sciences (PIEAS)	PAKISTAN	Research, development and accelerated capacity building for multidisciplinary applications of advanced and innovative nuclear technologies
Elettra-Sincrotrone Trieste S.C.p.A.	ITALY	Advanced Light Sources: Hardware and Development of Multi-Disciplinary Methodologies
Nuclear Security	Country	Topic
China Atomic Energy Authority (CAEA)	CHINA	Research, development, testing and training on nuclear security detection and physical protection technologies
Hungarian Academy of Sciences; Centre for Energy Research (MTA EK)	HUNGARY	Nuclear forensics
Centro Adiestramiento en Desactivacion de Explosivos y Defensa NRBQ (Cadex-NRBQ)	SPAIN	Selected nuclear security activities

Active IAEA Collaborating Centres sorted by topic

Nuclear Energy	Country	Topic
Societa' Gestione Impianti Nucleari (SOGIN)	ITALY	Knowledge transfer and training in nuclear decommissioning
Institute of Energy Technology (IFE)	NORWAY	Digitalization of knowledge management for nuclear decommissioning
Swiss Federal Institute for Technology (EPFL)	SWITZERLAND	Advanced reactor experiments and high-fidelity Multiphysics nuclear simulation techniques for open-source code development and validation
Khalifa University of Science and Technology (KU)	UNITED ARAB EMIRATES	Nuclear energy infrastructure and human resources
National Nuclear Laboratory (NNL)	UNITED KINGDOM	Advanced Fuel Cycle
Nuclear Energy/Nuclear Science	Country	Topic
Comisión Nacional de Energía Atómica (CNEA)	ARGENTINA	Human resources development in the area of nuclear science, technology and their applications
Nuclear Energy/Nuclear Security	Country	Topic
ROSATOM (Rosatom Tech)	RUSSIAN FEDERATION	Knowledge management and human resources development for nuclear energy and nuclear security

IAEA Collaborating Centre



Comisión Nacional de Energía Atómica (CNEA)



Collaboration on

Human Resources Development in the Area of Nuclear Science, Technology, and their Applications

Objectives

- To implement specific services and develop specific courses in its field of activity in collaboration with IAEA, aiming at capacity building of human resources development in the area of nuclear science, technology and their applications

Main Activities of the Collaboration

- Education and training activities mainly carried out by CNEA's academic institutes: Balseiro Institute in Bariloche, Sabato and Dan Beninson Institutes near Buenos Aires
- Capacity building at national and regional (Latin American) level through training courses on nuclear energy applications and physics, nuclear management, life management of NPPs, nuclear safety, nuclear data processing and validation, medical physics, nuclear materials, non-destructive testing, radiation and radioisotope production, among others.
- Use of innovative tools and equipment, such as the interactive graphic simulator for NRRs, particle accelerators and XRF
- Academic and clinical training, and R&D in medical physics, including new radiation therapy facilities and programs.

Related IAEA Projects

Agency Projects under Major Programmes:

1. Nuclear Power, Fuel Cycle and Nuclear Science; and
2. Nuclear Techniques for Development and Environmental Protection

Designation period

2019-2022

CONTACT

CNEA
Av. Del Libertador 8250
Buenos Aires
ARGENTINA

www.cnea.gob.ar



IAEA Collaborating Centre



Australian Nuclear Science & Technology Organisation (ANSTO)



Collaboration on

Multi-analytical techniques for materials research, environmental studies and industrial applications

Objectives

- Providing transnational accesses to the state-of-the art neutron, ion beam and synchrotron light facilities with associated instrumentation and ancillary capabilities to regional and international users.
- Assistance to the IAEA's training programme by hosting scientists and researchers from participating countries in the region who will carry out peer-review and accepted research activities involving access to ANSTO facilities.
- Strengthened knowledge transfer and outreach programme, promotion of applications and collaborative arrangements with partners and stakeholders from different scientific, national and cultural backgrounds.

Main Activities of the Collaboration

- Research and development experiments, reference or qualification measurements, trial or test experiments using multi-analytical techniques.
- Human capacity building through mentoring and training programmes in the identified technical areas.
- Promotion of applications and implementation of collaborative projects/agreements with regional partners in the identified technical areas.

Related IAEA Projects

- Project 100067 (1.4.2.1): "Enhancement Of Utilization And Applications Of Research Reactors"
- Project 100162 (1.4.3.1): "Fostering Accelerator Applications In Multiple Disciplines"

Designation periods

2010-2013 / 2016-2020

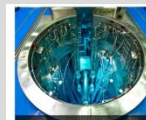


ANSTO



New Illawarra Road
Locked Bag 2001
2232 Kirrawee
NEW SOUTH WALES,
AUSTRALIA

www.ansto.gov.au



OPAL Research Reactor



Australian Synchrotron



Camperdown Cyclotron



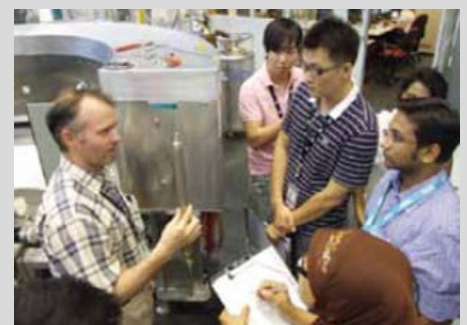
Bragg Institute



Centre for Accelerator Science



Other Science Facilities



IAEA Collaborating Centre



Companhia de Pesquisa de Recursos Minerarias (CPRM) Geological Survey of Brazil



Collaboration on

Water resources assessment and management

Objectives

- To facilitate a closer interaction between existing research centres with expertise in the use of advanced hydrological-geochemical methods and national institutes with a clear mandate in water resources management, such as the CPRM. In many developing countries, most water resources assessment projects are carried out using exclusively conventional hydrological methods (mainly measuring amount of precipitation, river discharge rates and groundwater levels), not benefitting of the use and application of more advanced methods, such as isotope hydrology.
- To contribute and promote the integration of isotope hydrology tools and methods into on-going and future hydrological assessments among water resources professionals through various activities. CPRM activities will help other Member States to conduct similar groundwater assessment and enhance the management of their water resources.

Main Activities of the Collaboration

- Capacity building in hydrological and geochemical field methods; in geochemical and isotope data interpretation; in analytical methods relevant to isotope hydrology studies; in the design, operation and optimization of hydrological monitoring networks.
- Creation and operation of a national isotope monitoring in precipitation in Brazil.
- Establish terms of collaboration with other Member States in Latin America in the field of water resources assessment.

Related IAEA Projects

- Project 2000059: 'Comprehensive Assessment of Resources' and PUI projects on groundwater assessment and management. Specific PUI project currently in progress: 'Development Of National Hydrology Networks For Water Resources Assessment'.

Designation period

2015-2019

CPRM

Av. Pasteur, 404 Urca
22.2290-255 Rio de Janeiro
BRAZIL



www.cprm.gov.br

IAEA Collaborating Centre



Animal Biochemistry and Molecular Biology Laboratory (LBBMA) São Paulo State University – UNESP



Collaboration on

Animal genomics and bioinformatics

Objectives

- To improve livestock productivity using gene based and related technologies.

Main Activities of the Collaboration

- Information collection and dissemination in the use of livestock genomic resources for the implementation of sustainable breeding programmes, including the development of laboratory protocols, standard operating procedures (SOPs).
- Development, application and validation of new technologies utilizing advanced genetic tools and molecular techniques.
- Supports training professionals from IAEA Member States on animal genetics and breeding.

Related IAEA Projects

- Project 2000011: 'Improving Animal Production And Breeding' aimed at enhancing Member States capabilities in 'developing peri-urban livestock and mixed crop-livestock systems by using nuclear and nuclear related methods and technologies for identifying the most appropriate feedstuffs livestock genotypes and breeding strategies and for reducing nutritional, reproductive and disease risks and constraints'.

Designation periods

2009-2014 / 2015-2019



LBBMA

Rua Clóvis Pestana 793
16050-680 Aracatuba
São Paulo
BRAZIL



www.unesp.br



IAEA Collaborating Centre



Moscamed Brasil



Av. C1, 992 - Quadra D 13, Lote 15,
Distrito Industrial do São Francisco.
CEP 48.909-733.
Juazeiro (BA)
Brazil



<http://www.moscamed.org.br>

Collaboration on

Operational programmes against *Aedes* mosquitoes with a Sterile Insect Technique component

Objectives

- Implementation at the operational level of the developed SIT package for the control of disease transmitting mosquitoes.

Main Activities of the Collaboration

- Standardizing the sterilization of *Aedes* mosquito males at the pupal and adult stage by exposure to gamma and X rays.
- Comparing releases of sterile male mosquitoes by ground and by air using remotely piloted aircraft systems.
- Validating sex sorting systems and quality control test on a mass rearing scale.
- Hosting fellows, scientific visits, regional training courses and research coordination meetings related to Mosquito SIT CRP and TC projects.



Related IAEA Projects

2000023 Development of the Sit for the Control of Disease Transmitting Mosquitoes aimed at Enhancing Member States Capabilities in Controlling Mosquito-borne Diseases.

Designation period

2018-2022

IAEA Collaborating Centre



The Centre International de Recherche-Développement sur l'Élevage en zone Sub-humide (CIRDES)



Collaboration on

Use of the Sterile Insect Technique for area-wide integrated management of Tsetse fly populations

Objectives

- To support and improve the sterile insect technique (SIT) programmes and to enhance capacity building of African countries

Main Activities of the Collaboration

- Validating of developed SIT methods and techniques.
- Providing tsetse seed materials.
- Conducting mating compatibility and competitiveness studies.
- Studying the ecology and population dynamics of riverine species in West Africa.
- Validating or developing diagnostic tools for the diagnostic and control of Animal and Human African Trypanosomoses.
- Adapting new tsetse species (*Glossina medicorum* and *Glossina palpalis palpalis*) to artificial rearing.
- Conducting individual and/or group fellowships and organizing regional training courses and workshops.
- Assisting the provision of technical and financial support to make the new X-rays source functional.

Related IAEA Projects

- Project 2000022: "Management Of Transboundary Livestock Insect Pests For Sustainable Agriculture And Rural Development" aimed at enhancing Member States capabilities "to improve and transfer the sterile insect technique (SIT) to Member States and in close collaboration with other partners establish capacity and assist in the management of transboundary livestock insect pests for sustainable agriculture and rural development."

Designation periods

2009-2014 / 2016-2020



CIRDES

559 Rue 5-31 angle avenue du
Gouverneur Louveau
01 BP
454 BOBO-DIOULASSO
Hauts Bassins
BURKINA FASO

www.cirdes.org



IAEA Collaborating Centre



Chinese Academy of Agricultural Science (CAAS)



中国农业科学院
CHINESE ACADEMY OF AGRICULTURAL SCIENCES

Collaboration on Nuclear Techniques in Food and Agriculture

Objectives

- To facilitate the R&D activities in the areas of nuclear application in food and agriculture in Asia and the Pacific region.
- To contribute technology transfer and capacity building for developing countries in the region.
- To demonstrate the unique and comparative advantages of nuclear techniques in food and agriculture

Main Activities of the Collaboration

Five institutes of the CAAS, namely, the Lanzhou Veterinary Research Institute (LVRI), the Institute of Agricultural Resources and Regional Planning (IARRP), the Institute of Crop Sciences (ICS), the Institute of Quality Standards and Testing Technology for Agro-Products (IQSTAP) and the Institute of Environment and Sustainable Development in Agriculture (IEDA), desire to participate in the IAEA Collaborating Centre Scheme as IAEA Collaborating Centres under the overall coordination of the CAAS:

- Capacity building for developing countries through training courses and fellowship training.
- Joint R&D activities through the research project or CRPs.
- Technical service and assistance through expert missions and lab service.
- Joint activities in technical workshops, seminars, symposiums and protocols and manual development.

Related IAEA Projects

- Project 2000003 and 2000031 on plant mutation breeding;
- Project 2.1.2.002 on transboundary animal and zoonotic disease;
- Project 2000005 and 2000006 on water and soil management;
- Project 2000017 on traceability to improve food Safety and quality

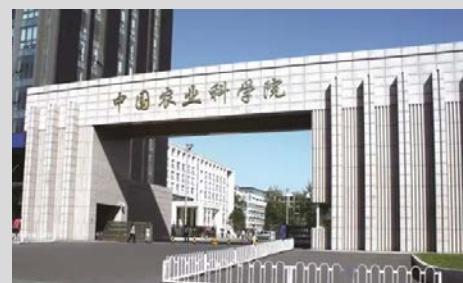
Designation period

2019-2023



Chinese Academy of Agricultural Sciences
No.12 Zhongguancun South St.,
Haidian District, Beijing
P.R.China
diccaas@caas.cn

<http://www.caas.cn/en/>



IAEA Collaborating Centre



China Atomic Energy Authority



国家原子能机构
CHINA ATOMIC ENERGY AUTHORITY

Collaboration on

Research, Development, Testing, and Training on Nuclear Security Detection and Physical Protection Technologies

Objectives

- Develop and deliver training on performance testing of radiation detection equipment and physical protection systems.
- Enhance the research and development of nuclear detection and interrogation technology and techniques for CBRN and other contraband, and publish corresponding technical documents.
- Increase the sustainability of nuclear detection technologies and nuclear security equipment by developing and demonstrating safe, secure, and effective operations.

Main Activities of the Collaboration

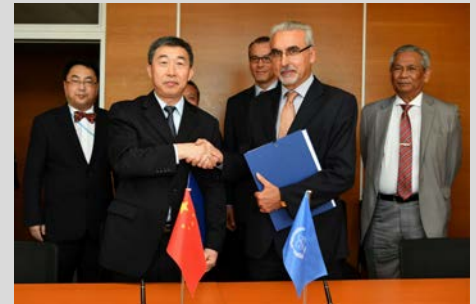
- Research and development to improve nuclear security systems/equipment and specifications. (SNSTC)
- Performance testing and effectiveness evaluation using environmental and physical test facilities. (SNSTC)
- Research, development, testing and evaluation of nuclear detection technologies and the application of the nuclear technology to detect nuclear materials, chemicals, explosives, and other contraband. (CIAE)
- Development of new approaches for rapid calibration, false alarm reduction, and state of health for equipment. (CIAE)
- Capacity building on nuclear security systems specification, testing, and use by sharing of experiences and good practices through technical meetings, workshops, and training.
- Support the implementation and capacity building aspects of Coordinated Research Projects for nuclear security.

Related IAEA Projects

Subprogrammes 3.5.2 Nuclear Security of Materials and Facilities; 3.5.3 Nuclear Security of Material outside of Regulatory Control; and 3.5.4 Programme Development and International Cooperation

Designation period

2019-2023



CAEA
A8 Fucheng Lu Street
Haidian District
100048 Beijing
China
www.caea.gov.cn



CIAE
PO Box 275, Xinzhen,
Fangshan District
102413 Beijing
China
www.ciae.ac.cn



SNSTC
No 67, Fusheng Street
Fangshan District
102401 Beijing
China
www.snstc.org



IAEA Collaborating Centre



Centro de Investigación en Contaminación Ambiental (CICA)



Collaboration on

eLearning and accelerated capacity building for food and environmental protection (EACB)

Objectives

- To improve laboratory and regulatory practices and methodologies in the areas of food safety and related environmental protection in order to safeguard the health of farmers and other stakeholders, help to facilitate international trade and enhance food security.

Main Activities of the Collaboration

- Contribute to maintain and further develop the RALACA web site on food safety initiated by the FAO/IAEA FEPL.
- Make CICA staff available for expert missions.
- Provide ad hoc training.
- Organize technical meetings.
- Organize awareness raising meetings for decision makers.
- Provide advisory services.

Related IAEA Projects

- Subprogramme 2010015: 'Improvement of Food Safety and Food Control Systems' with particular importance for Project 2000017 'Traceability to improve food safety and quality and enhance international trade' which has for objectives 'To improve Member State laboratory capabilities, practices and methodologies to enhance food quality and safety'.

Designation periods

2010-2013 / 2014-2018



CICA



Ciudad Universitaria Rodrigo Facio
11501-2060 Montes de Oca,
San Pedro, San Jose
COSTA RICA

www.cica.ucr.ac.cr



IAEA Collaborating Centre



National Cancer Institute (NCI), Cairo University



NCI Cairo University

KASR EL-AINI Str.
FOM EL-KHALIG square
11796 Cairo
Egypt



www.nci.cu.edu.eg

Collaboration on

Human Resources Development, Quality Assurance and Research in Radiation Oncology

Objectives

- Support the educational and research components of the programme of the Division of Human Health in the field of Radiation Oncology.
- Strengthen IAEA support to its Member States through the Technical Cooperation Programme.

Main Activities of the Collaboration

- Training of fellows/students recommended by the IAEA, in the field of expertise of NCI.
- Host Inter-regional, regional or sub-regional training events in radiation oncology supported by the IAEA.
- Provision of experts in radiation oncology to IAEA.
- Support IAEA coordinated research activities.
- Support IAEA 's activities in the development of best-practice and evidence-based guidelines in radiation oncology.
- Support the production of specific training and e-learning material in radiation oncology for the IAEA's Human Health Campus.
- Support IAEA activities in quality improvement in radiation oncology in Africa by promoting QUATRO methodology and participating in QUATRO missions in the region.
- Support IAEA for the update of radiotherapy data for DIRAC.



IAEA Collaborating Centre plaque handover ceremony to NCI, Cairo University: it happened during the Bilateral meeting between HE Dr Mohamed Shaker Elmarkabi, Minister of Electricity & Renewable Energy of Egypt and Cornel Feruta, IAEA Acting Director General at the IAEA 63rd General Conference, IAEA HQs, Vienna on 16 September 2019.

Related IAEA Projects

- Optimisation of Radiotherapy in Low Resource Settings: Paediatric Cancer Patients (2008-2014)
- E-Learning for Teaching and Assessing Competency in Radiotherapy Contouring for Multidisciplinary Teams in low and middle income countries (2018-2021)
- Resource Sparing Curative Radiotherapy for Locally Advanced Squamous Cell Cancer of the Head & Neck (2010-2019)
- Improving Radiotherapy Treatment Planning for Patients with Nasopharyngeal Carcinoma in Low and Middle Income Countries (2015-2020)

Designation period

2019–2023

IAEA Collaborating Centre



Aérial

Collaboration on

Multidisciplinary applications of electron beam and x-ray technologies and related dosimetry, especially for food irradiation

Objectives

- To develop applications of electron beam and X ray technologies and related dosimetry and share expertise in these fields.

Main Activities of the Collaboration

- Hands-on training in operation and control of electron beam and X-ray accelerators.
- Hands-on training in good dosimetry practices and compliance with international dosimetry for electron beam and X-ray irradiation. In particular for but not limited to CRP D61024 (Development of EB and X-ray for food irradiation).
- Development & sharing of expertise regarding the detection methods for irradiated food and the application of ISO/CEN methods.
- Use of treatments such as freeze-drying, modified atmosphere packaging or reduced water activity in combination with EB or X-ray irradiation for the preparation of novel or improved biological, pharmaceutical or food products.
- Support for the design and nutritional and sensory evaluation of irradiated food products.
- Improvement of optical and ESR dosimetry equipment.
- Hosting of scientific visitors in particular from developing countries, on dosimetry and food irradiation technologies and applications.

Related IAEA Projects

- Project 2000016 (2.1.3.001): "Food Irradiation Applications Using Novel Radiation Technologies"

Designation period

2016-2020



Aérial

250, rue Laurent Fries,
Parc d'Innovation
C.S. 40443
67412 ILLKIRCH Alsace
FRANCE



www.aerial-crt.com



IAEA Collaborating Centre



National Institute for Nuclear Science and Technology (INSTN)

instn

Collaboration on

Education and training in nuclear technologies industrial and radiopharmaceutical applications

Objectives

- To develop specific courses in its field of activity in collaboration with IAEA, on its request, for example, training course on the detection of ionizing radiation and industrial applications.
- To provide the suitable environment for such courses such as classrooms, laboratories for practical work, equipment, syllabuses, radionuclides, radiological safety clearance, radiological safety officer.

Main Activities of the Collaboration

- Development of tailor-made trainings on tracing techniques and applications of sealed sources for IAEA requests.
- Assistance and advice for IAEA for the development of educational resources based on distance learning in industrial and radiopharmacy fields.
- Development of tailor-made trainings on radiopharmaceutical techniques for IAEA requests.
- Holding specific courses under IAEA's requests under ISTRA certification scheme.

Related IAEA Projects

- Project 2000094: 'Industrial Applications of Radioisotopes And Radiation Techniques' aimed at enhancing Member States capabilities in 'radiation technology applications for health care and cleaner industrial processes and practices'
- Project 2000091: 'Development of Diagnostic and Therapeutic Radiopharmaceuticals' aimed at enhancing Member States capabilities in 'production of diagnostic and therapeutic radiopharmaceuticals having potential clinical application'

Designation period

2016-2020



INSTN



Centre CEA de Saclay
Point courrier 35
91191 GIF-SUR-YVETTE Cedex
FRANCE

www-instn.cea.fr



IAEA Collaborating Centre



Hungarian Academy of Sciences Centre for Energy Research (MTA EK)



Collaboration on

Nuclear forensics

Objectives

- The proposed activities will promote and foster nuclear forensic capabilities both at MTA EK and with the IAEA Division of Nuclear Security by providing access to technical facilities important for nuclear forensics implementation with a focus on Central Europe, outreach to the Member States in addition to advances in nuclear science in the portfolio of a leading research institution.

Main Activities of the Collaboration

- Development of nuclear forensic analytical non-destructive and destructive methods and interpretative capabilities for a robust nuclear forensics examination which can be shared with the Member States to include approaches for the development of a national nuclear forensics library.
- Coordination and cooperation, outreach, introductory and advanced methodologies training, written guidance and confidence building measures in nuclear forensics with access to a leading nuclear forensics laboratory.
- Research and development in nuclear forensics that can be shared with the Member States to feature the unique capabilities at MTA EK:
 - 1) High resolution gamma ray spectrometry (new detectors, age dating and uranium quantification in unknowns),
 - 2) Development of new methods and techniques for origin assessment utilizing analysis of different type of nuclear materials and radiological sources and
 - 3) Identification of priority nuclear forensics signatures using analysis of confiscated nuclear and other radioactive materials.

Related IAEA Projects

- Project 3000158: Nuclear forensics assistance aimed at enhancing Member States capabilities 'to assist States to undertake a nuclear forensics examination in support of investigations involving nuclear or other radioactive material out of regulatory control, and to identify the origin and history of such material supporting law enforcement investigations and nuclear security vulnerability assessments.'

Designation period

2016-2020



MTA EK

Konkoly-Thege M. 29-33
P.O. Box: 49 (Postal Code : 1525)
1121 Budapest XII.
HUNGARY



www.energia.mta.hu



IAEA Collaborating Centre



National Food Chain Safety Office FFSD RRL



Collaboration on

Production and characterization of reference materials

Objectives

- To enhance the reliability and comparability of radioanalytical measurement results by provision of suitable reference materials for quality control.

Main Activities of the Collaboration

- Preparation of new candidate reference materials (milling, spiking, homogenization), especially in the food area.
- Characterization of reference materials on radionuclide activities.
- Feasibility study of correct interpretation of gross-alpha and gross-beta measurements.
- Establishment of a suitable organic C-14 reference material.
- Feasibility study on large surface reference materials.

Related IAEA Projects

- Project 2000067 (2.4.1.1): Provision of Reference Products within the subprogramme 2.4.1 IAEA Reference Products For Science And Trade and fulfil the objective 'To enhance the access of Member State laboratories to high-quality Agency matrix reference materials, through improved management of their production, storage and distribution'.

Designation period

2013-2017 / 2017-2021



Radioanalytical Reference Laboratory National Food Chain Safety Office

Folgoly u. 13-15
1182, Budapest
HUNGARY

<http://portal.nebih.gov.hu/>



IAEA Collaborating Centre



St John's Research Institute St John's National Academy of Health Sciences



Collaboration on

Nuclear techniques in nutrition

Objectives

- Contribute new education resources related to nuclear techniques in nutrition to the IAEA Human Health Campus.
- Develop accurate methods of assessing of assessing body composition in infants suitable for use in low resource settings.
- Develop non-invasive methods of assessing protein digestibility in infants.
- Improve capacity in the use of nuclear techniques in nutrition.

Main Activities of the Collaboration

- Prepare an eLearning module on assessing body composition in infants by stable isotope dilution.
- Design and build a whole body potassium counter to assess body composition by measuring body cell mass in infants.
- Validate new methods of assessing protein digestibility in infants and young children using intrinsically labelled foods.
- Provide training in nuclear techniques in nutrition by hosting workshops, training courses, fellowships and scientific visits, and providing experts for missions to the Member States.

Related IAEA Projects

- Project 2000010 (2.2.1.1): 'Health Effects on Nutrition and the Environment' aimed at enhancing Member States capabilities in 'combatting malnutrition for better health throughout the lifecycle'.

Designation periods

2010-2014 / 2015-2019



SJRI

Koramangala
560 034 BANGALORE
Karnataka State, INDIA



www.sjri.res.in



IAEA Collaborating Centre



Center for Isotopes and Radiation Application (CIRA), National Nuclear Energy Agency of the Republic of Indonesia (BATAN)



Collaboration on

Plant Mutation Breeding for Climate Smart Agriculture (PMBCSA)

Objectives

- To support and improve plant mutation breeding programme and enhance capacity building of Asian countries.

Main Activities of the Collaboration

- Upon request from IAEA to provide irradiation services to MSs in the region, particularly new MSs from pacific islands.
- To support training of professionals in mutation breeding and related nuclear techniques through IAEA fellowship programme.
- Upon request of IAEA to organize regional training courses and provide training material and protocols and adequate facilities.
- To collaborate with IAEA for developing mapping populations and phenotyping for marker development in rice and other important crops.
- To validate and co-develop protocols for mutation breeding of rice, sorghum and soybean involving germplasm exchange with NAFA, IAEA.

Related IAEA Projects

- Project 2000003: 'Integrated Techniques for mutation breeding and biodiversity.' Development of Plant Mutation Breeding and Related Nuclear Techniques aimed at enhancing Member States capabilities in 'Capacity Building for Increasing Food Production and Food Security and also in Triggering Business Corporation.'
- Project 2000031: 'Mutation Induction for better adaptation to climate change.' Mutation Breeding and Related Nuclear Techniques aimed at enhancing Member States capabilities in 'Mitigating Climate Change.'

Designation period

2017-2021



BATAN

Jl. Lebak Bulus Raya No. 49
DKI
Jakarta, INDONESIA



www.batan.go.id



IAEA Collaborating Centre



National Nuclear Research Energy Agency of Indonesia (BATAN)



Collaboration on

Research and development and capacity building in non-destructive diagnostics, testing and inspection technologies

Objectives

- To assist the IAEA in implementing activities related to research and development and capacity building in the field of Non-destructive Diagnostics, Testing and Inspection Technologies.

Main Activities of the Collaboration

- Capacity building through TC fellowships, Scientific Visits, hosting for training courses and technical meetings.
- Preparation of technical documents (Training Course Series, Tecdocs, training material, guidelines, etc.)
- Preparation of protocols, standards, working instructions, procedures in various techniques such as radiotracers for leakage detection, column scanning, Computed Tomography (CT), digital radiography.
- Development of prototype and software for NDI new technologies such as CT fan beam system, software for its design, software for reconstruction. A workshop is planned to be held in 2016 on CT and data fusion and the results will be available for dissemination to MSs.
- Assistance and support to IAEA in organizing the World Conference on Tracers and Tracing methods.

Related IAEA Projects

- Project 2000094 (2.5.2.001): 'Industrial Applications of Radioisotopes And Radiation Techniques' and fulfil its objective 'to strengthen the national capabilities to effectively use radioisotope and radiation-based techniques for supporting cleaner and safer industrial process management and compositional analysis of materials/objects.'

Designation period

2015-2018



BATAN

Jl. Kuningan Barat Mampang
Prapatan
Jakarta, INDONESIA

www.batan.go.id



IAEA Collaborating Centre



Centro Agricoltura Ambiente “G.Nicoli” Italy



Via Argini Nord 3351
40014 Crevalcore (BO)
Italy



<http://www.caa.it>



Collaboration on

Development and Implementation of a Sterile Insect Technique Package for Aedes Mosquitoes Suppression

Objectives

- Collaborate with the IAEA on preparing the way to the application of SIT technology in the suppression of Aedes mosquitoes
- Integrate the SIT technology in existing mosquito control practices

Main Activities of the Collaboration

- To develop the SIT package against Aedes species transmitting diseases.
- To focus efforts on mass rearing, quality control methods, sexing technologies, sterile males packaging, long distance transportation, field monitoring.
- To maintain Aedes colonies as seed materials useful to assist other organizations interested to develop SIT programs.
- To assist capacity building of MSs through the hosting of fellows and the organization of training courses in collaboration with the IAEA.
- To provide expertizes for IAEA expert missions and technical meetings.

Related IAEA Projects

- Co-organization of the INT5155 workshop “Sharing Knowledge on the Sterile Insect and Related Techniques for the Integrated Area-Wide Management of Insect Pests and Human Disease Vectors” 14-17 May 2018, Bologna, Italy.
- Participation in the CRP “Exploring Genetic, Molecular, Mechanical and Behavioural Methods of Sex Separation in Mosquitoes”.
- Participation to the TC Project RER5022 “Establishing Genetic Control Programmes for Aedes Invasive Mosquitoes”.

Designation period

2018-2022

IAEA Collaborating Centre



Elettra-Sincrotrone Trieste S.C.p.A.



Elettra Sincrotrone Trieste

Collaboration on

Advanced Light Sources: Hardware and Development of Multi-Disciplinary Methodologies

Objectives

- Improvements in knowledge and training in developing Member States in how to design and build advanced light sources and their associated instruments, and how to utilise this equipment to its best advantage.

Main Activities of the Collaboration

- Assistance to developing Member States who intend to build synchrotron facilities including training their scientists and technologists in (A) Light sources design and recent developments; (B) Beamlines design - optics, control systems and detectors.
- Assistance to developing Member States in (C) Implementation of new methodologies for expanding the application fields of synchrotron and free electron laser techniques.
- Quality control of the performance (machine-beamlines) and utilization (user proposals) of new synchrotron facilities. Ranking, reviewing, and feedback for improvement of hardware and research impact.

Related IAEA Projects

Project 1000162: Accelerator Applications in Multiple Disciplines

Designation period

2020-2023



Elettra

Strada Statale 14- km 163,5 in
AREA Science Park
34149 Basovizza
Trieste
Friuli Venezia Giulia
Italy

www.elettra.trieste.it



IAEA Collaborating Centre



Sogin S.p.A. (Italy)



Collaboration on

Nuclear decommissioning knowledge transfer, education and training, technical innovations and circular economy principles

Objective

To enhance and strengthen IAEA support to Member States in knowledge transfer, education and training & technical innovations and circular economy principles in nuclear decommissioning.

Main Activities of the Collaboration

To promote innovations in decommissioning;

To facilitate knowledge sharing on current good practices;

To promote long-term development of a skilled workforce in waste management and decommissioning activities.

Related IAEA Projects

Project 1000028 “Decommissioning of Nuclear Facilities”

Designation period

2019-2023



CONTACT

info@sogin.it
www.sogin.it



IAEA Collaborating Centre



Hiroshima International Council for Health Care of the Radiation-Exposed (HICARE)



Collaboration on

Health care of the radiation-exposed for cooperation in the medical field

Objectives

- To enhance the prevention, diagnosis and treatment of human health problems through the application of nuclear techniques through research, development and training in nuclear technologies.

Main Activities of the Collaboration

- Capacity Building: Training of 20 fellows recommended by the IAEA, free of charge, in the field of expertise of HICARE participating institutions, such as biodosimetry, advances in radiation therapy and effects of low-dose radiation in human health.
Capacity Building through dispatch of medical students of Hiroshima University, one of the main institutions of HICARE, to the Internship program in IAEA.
Capacity Building through contribution of HICARE research findings to IAEA, in epidemiological and molecular studies on radiation-induced cancers, systemic consequences of radiotherapy treatment such as abscopal (or out-of-field effects), and second tumours (in- and out-of-field) and radiological and non-radiological consequences of Fukushima accident.
- Implementation of the Phoenix Leader Education Program by one of the main institutions of HICARE (Hiroshima University) in further curriculum development and implementation and consolidating the use of STS (Science, Technology and Society) approach to radiation disaster medicine curriculum. This program will be developed based on the consultation between the IAEA and the HICARE.
- Provision of HICARE experts to IAEA on a cost-free basis in the fields of expertise of HICARE participating institutions, such as bio dosimetry, advances in radiation therapy and health effects of low and high-dose radiation in Fukushima accident.

Related IAEA Projects

- Project 2000024 (2.2.3.001) "Clinical radiation oncology"
- Project 2000042 (2.2.3.002) "Biological effects of radiation"

Designation periods

2014-2017 / 2017-2021



HICARE



Atomic Bomb Survivors Support
Division
10-52 Motomachi, Naka-ku
730-8511 Hiroshima
JAPAN

www.hicare.jp



IAEA Collaborating Centre



National Institute for Quantum and Radiological Science and Technology (QST)

formerly: National Institute of Radiological Sciences (NIRS)



Collaboration on

Biology of risk reduction of radiotherapy; nuclear medicine and diagnostics imaging; charged particle

Objectives

- To provide expertise and capacity building in Radiobiology, Charged Particle Therapy and Molecular Imaging

Main Activities of the Collaboration

In relation to the projects mentioned below:

- Organize educational workshops and training courses in cooperation with the IAEA
- Provide training to develop human resources including clinical practices, medical imaging, dosimetry and medical physics, radiobiological aspects, accelerator physics and engineering.
- Provide technical support for planning and constructing of accelerator and treatment rooms for charged particle therapy
- Provide sustainable support and consultation on charged particle therapy
- Assess cancer risks of fetuses and children
- Provide the novel evidence on cellular responses unique to low dose radiation: adaptive response, bystander effects and genetic instability

Related IAEA Projects

- Project 2000015 (2.2.2.001) "Nuclear medicine in diagnosis and therapy of non-communicable diseases"
- Project 20000? (2.2.2.002) "Educational resources for use of nuclear techniques in human health"
- Project 2000024 (2.2.3.001) "Clinical radiation oncology"
- Project 2000042 (2.2.3.002) "Biological effects of radiation"
- Project 2000046 (2.2.4.001) "Calibration and auditing services "
- Project 2000004 (2.2.4.002) "Developments in radiation dosimetry"
- Project 2000029 (2.2.4.003) "Clinical medical radiation physics"

Designation periods

2014-2018 / 2018-2022

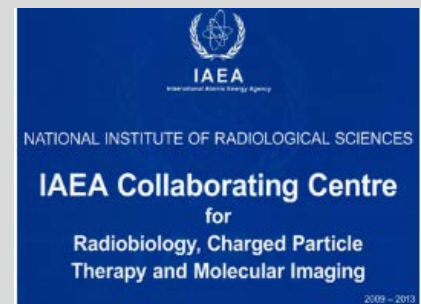


QST

4-9-1 Anagawa, Inage-ku
Chiba
JAPAN



www.nirs.go.jp



IAEA Collaborating Centre



Kuwait Institute for Scientific Research

Collaboration on

Use of Nuclear and Isotopic Techniques to Advance Coastal and Marine Science

Objectives

- Assessment and fate of radioactive and non-radioactive pollution in the marine environment under current situation and climate change scenarios

Main Activities of the Collaboration

- Undertaking laboratory experiments to understand the change in bioavailability and uptake of contaminants in marine organisms under different climate change scenarios;
- Experimental studies to assess the adsorption and absorption of contaminants by phyto and zooplankton under different pH and temperature conditions;
- Field study on trophic transfer of metals, radionuclides, PAHs, PCBs, OCs and EDCs;
- Assessment of micro- and nano-plastic in marine environment and organisms;
- Experiments on loss of radioisotopes due to different food preparation in seafood;
- ^{210}Po as a tracer for contaminant transport in marine environment;
- Assessment of radionuclides ^{210}Bi , ^{210}Po and ^{210}Pb in aerosol; and
- Assessing Harmful Algal Blooms using Receptor Binding Assay

Related IAEA Projects

Nuclear Techniques for Control of Environmental Pollution;
Measurement and Assessment of radionuclides in the coastal and marine environment;
Addressing Ocean Acidification and Carbon Export in marine water; and
Managing Harmful Algal Bloom through Advanced nuclear techniques

Designation period

2019-2023

PHOTO



CONTACT

+965 24989000, 24989100,
24986550, 24989224

dgkisir@kisir.edu.kw

osavegh@kisir.edu.kw

sdin@kisir.edu.kw

webpage

www.kisir.edu.kw

PHOTOS



IAEA Collaborating Centre



The Malaysian Nuclear Agency

Collaboration on

Research, development and training in nuclear sciences and applications

Objectives

Plant Mutation Breeding using Chronic Gamma Irradiation

- Wider utilization of chronic gamma irradiation for crop/plant improvement in the region.
- Technical capacity building in the region for plant mutation breeding.
- Collaborative R&D to determine the molecular bases of improved performance in mutant lines/varieties from chronic gamma irradiation

Advanced Non-Destructive Testing

- To assist Member States mobilize peaceful applications of nuclear science and technology
- Contributes to goals of sustainable development in fields of industry and cooperation in key areas of nuclear science and technology
- Support IAEA programme on radioisotope production and radiation technology which responds to Member States requests for industrial applications especially on Non-Destructive Testing (NDT)

Radiation Processing of Polymers, Waste Polymers and Biocomposites

- Technical capacity building in the region for radiation processing of polymeric materials.
- Support IAEA programme on radioisotope production and radiation technology which responds to Member States requests on radiation processing of polymeric materials.
- Knowledge sharing know-how with interested recipient institutions and countries.

Designation period

2019-2023



**Malaysian Nuclear Agency,
Ministry of Energy, Science,
Technology, Environment and
Climate Change,
Bangi 43000 Kajang,
Selangor, Malaysia**
Tel: +603-8911 2000
Fax: +603-8911 2153

Webpage :

<https://www.nuclearmalaysia.gov.my>



IAEA Collaborating Centre



National Institute of Nuclear Research (ININ)



instituto nacional de
investigaciones nucleares

Collaboration on

Safe operation, maintenance and upgradation of gamma irradiation facilities

Objectives

- To enhance capacity building on safe operation, maintenance and upgradation of safety, control features of gamma radiation facilities and to disseminate irradiation technologies following the best practices in radiation facilities operations.

Main Activities of the Collaboration

- Practical and hands on training on safe operation of radiation facilities.
- Training on QA/QC and quality management practices at radiation facilities.
- Elaboration of didactic materials (manuals, presentations and evaluations).
- Training workshops related to upgradation of safety and control features of gamma irradiators.

Related IAEA Projects

- Project 2000095: 'Radioisotope Production and Radiation Technology Programme' aimed at enhancing Member States capabilities in 'Radiation Technology for Healthcare and Environmental Applications.'

Designation period

2017-2021



ININ



Carretera Mexico Toluca S/N,
Ocoyoacac, 52750
La Marquesa, MEXICO



IAEA Collaborating Centre



Programa Moscas de la Fruta DGSV-SENASICA-SAGARPA



Collaboration on

Development and application of the sterile insect technology for fruit fly area-wide control

Objectives

- Research and development and capacity building in member states for effective control of fruit fly pests using an integrated area-wide approach with a sterile insect technique component.

Main Activities of the Collaboration

- Development of new and improved technologies for fruit fly control through research contracts and CRPs.
- Support to capacity building for fruit fly management through: Individual training, training courses and expert missions.
- Sterilization of mosquito species for field releases through the use of the irradiation facilities at the Moscamed Program facility in Metapa, Chiapas. Provision of sexing strains and parasitoids at the request of member states.

Related IAEA Projects

- Project 2000021: Strengthening Fruit Fly Surveillance And Emergency Response Capability, As Well As, Control Measures Using The Sterile Insect Technique In An Area Wide And Integrated Pest Management Approach For The Protection And Expansion Of Horticultural Production aimed at enhancing Member States capabilities in 'Preparedness for early detection of introduced non-native fruit flies and risk management and developing capacity for establishing and maintaining fruit fly free and low prevalence areas for fruit production and commercialization.'
- Project 2000023: FAO/IAEA Interregional Training Course aimed at enhancing Member States capabilities in 'Use of the Sterile Insect and Related Techniques for the Area-wide Integrated Pest Management of Native and Exotic Insect Pests.'

Designation periods

2010-2014 / 2016-2020



PMF

Kilómetro 19.8, Carretera Puerto Madero Point courier 35
30832 TAPACHULA
Chiapas, MEXICO



IAEA Collaborating Centre



National Centre for Nuclear Energy, Science and Techniques (CNESTEN)



Collaboration on

Water resources assessment and management

Objectives

- To assist the IAEA in the efforts to promote the routine use of isotope hydrology at national and regional levels through the development of National Hydrological Networks for Water Resources Assessment. The efforts will be complemented with the provision of basic and advanced training in analytical methods and use of Isotope Hydrology tools in the French language.
- Provision of analytical services (hydrochemistry and environmental isotopes) for TC projects in Africa.

Main Activities of the Collaboration

- Establishment of a collaborative agreement with several Moroccan institutes with a mandate on water resources promoting the routine use of isotope hydrology methods and approaches in water resources assessment projects.
- Provision of customized group and individual training in the field of isotope hydrology and related environmental disciplines in French to counterparts of African TC projects, at lower cost to the IAEA.
- Provision of analytical services (hydrochemistry and environmental isotopes) with the required analytical quality, in a timely and cost effective manner, upon request by the IAEA.

Related IAEA Projects

- Project 2000059: 'Comprehensive Assessment of Resources' aimed at enhancing Member States capabilities in 'strengthening the use of isotope hydrology for sustainable groundwater management at national and regional levels and promoting the development of National Hydrological Networks'.

Designation period

2015-2019



CNESTEN
P.O. Box 1382
10001 Rabat
MOROCCO



www.cnesten.org.ma



IAEA Collaborating Centre



Reactor Institute Delft (RID), TU Delft



Collaboration on

Neutron-activation based methodologies of research reactors

Objectives

- Fostering, enhancing and sustaining research reactor utilization, as well as demonstrating the relevance and unique opportunities of neutron-activation and beam-based methodologies is the overall objective of the RID as an IAEA Collaborating Centre.

Main Activities of the Collaboration

- Improvement of the quality and quantity of neutron activation analysis (NAA), hosting scientific visits, training courses, providing expert services and access to RID's facilities.
- Application of NAA in trace element research and stable-isotope tracer methods as related to humans, hosting scientific visits, training courses, providing expert services and access to RID's facilities.
- Improvement of utilization of research reactor and accelerator-based neutron sources with PEARL-like diffractometers and other neutron-scattering instruments, hosting scientific visits and Providing access to RID's facilities for neutron beam instruments (SANS, diffractometry, reflectometry, neutron depolarization analysis).
- Improvement of management of research reactors and accelerator-based neutron sources, using the Delft experiences with installation of a cold neutron source in an existing reactor as example, hosting meetings and providing expert services.

Related IAEA Projects

- Project 1000067 (1.4.2.1): 'Enhancement Of Utilization And Application Of Research Reactors'
- Project 1000162 (1.4.3.1): 'Fostering Accelerator Applications In Multiple Disciplines'

Designation periods

2013-2016 / 2016-2020



RID

Mekelweg 15
2629 JB DELFT
NETHERLANDS



www.rid.tudelft.nl



IAEA Collaborating Centre



IFE - Institute for Energy Technology



Collaboration on Digitalization of Knowledge Management for Nuclear Decommissioning

Objectives:

Assist IAEA's activities in the field of human resource development for decommissioning through:

- development of digital technologies to support decommissioning planning and implementation, and
- providing training and secondment opportunities focussed on the use of digital technologies.

Main Activities of the Collaboration:

- Development of strategic planning techniques based on the application of 3D modelling and associated scenario simulation
- Development of techniques for enhancing the training of field workers in decommissioning projects
- Development of methodologies for improving knowledge and workforce management
- Development of methodologies for enhanced linkage of plant information and relevant safety requirements and documentation
- Development of relevant eLearning materials
- Hosting of workshops/training events in collaboration with the IAEA

Related IAEA Projects

- Activities to support Member States' capabilities to implement the decommissioning of nuclear facilities
- Activities in the field of human resource development for decommissioning

Designation period

2019-2023



Institute for Energy Technology
Os Alle 5, NO-1777 Halden
Norway

www.ife.no/en/



IAEA Collaborating Centre



Pakistan Institute of Engineering and Applied Sciences (PIEAS)



PIEAS

Collaboration on

Research, development and capacity building for multidisciplinary application of advanced and innovative nuclear technologies

Objectives

- Contribute to creation of new and support of the IAEA ongoing activities on the advancements and innovation in reactor designs and their applications
- Develop new experiments at nuclear engineering facilities to create new benchmark databases in support of on-going and planned IAEA programmatic activities in reactor simulation and modelling and multipurpose applications of advanced and innovative reactor designs, and the IAEA HOPS part-task simulator web-platform
- Co-organize/host workshops, training courses and seminars, including development of training materials and IAEA relevant publications
- Host researchers and IAEA fellows wishing to conduct joint research and/or training in supporting capacity building for multidisciplinary applications of advanced and innovative nuclear reactor systems (electrical and non-electrical applications, hybrid energy systems, large power reactor design and their abilities for isotope production)
- Sharing the experience of PIEAS with IAEA Member States on laboratory experiments, numerical modelling and nuclear education
- Providing experts to IAEA in the relevant areas of work

Main Activities of the Collaboration

- Research and development in the advancements and innovation of reactor designs and reactor numerical modelling and simulations
- Contribute to technical development, system analysis, and optimization of nuclear-renewable hybrid energy systems
- Conduct new experiments at the research facilities creating new experimental data for the validation of computer codes for modelling of advanced and innovative reactor designs and contribute to the IAEA HOPS platform in the development, validation and verification of the part-task simulators
- Train professionals on advanced and innovative reactor designs with the use of IAEA basic principle simulators and contribute to the creation of new IAEA relevant publications
- Develop educational and training materials for hands-on capacity building

Related IAEA Projects

All projects under IAEA's sub-programme on Technology Development for Advanced Reactors and Non-Electric Applications (1.1.5) and specific projects under IAEA's sub-programmes on Research Reactors, Nuclear Knowledge Management, and NA-Division of Physical and Chemical Sciences.

Designation period

2019-2023

PIEAS

Islamabad, 45650 Pakistan

www.pieas.edu.pk



IAEA Collaborating Centre



Philippine Nuclear Research Institute (PNRI)



Collaboration on

Harmful algal bloom studies in the context of environmental and global changes

Objectives

- To optimize and standardize the receptor binding assay protocol using iodinated conotoxin, recently produced by PNRI and UP-MSI.
- To produce a harmonized ciguatera fish poisoning monitoring strategy using nuclear-based receptor binding assay.
- To apply stable isotope and radiotracer techniques towards understanding harmful algal bloom events.
- To develop operating procedures and method validation processes of the receptor binding assay in compliance with internal standards.
- To promote the receptor binding assay as a monitoring tool to be adopted by regulatory agencies.

Main Activities of the Collaboration

- Optimizing the parameters and conditions of the paralytic shellfish poisoning-receptor binding assay (PSP-RBA) using radioiodinated conotoxin and conduct intra-laboratory validation.
- Monitoring and studying ciguatera in fish and seawater in at least one ciguatera fish poisoning (CFP) hotspot to improve CFP management.
- Identifying and assessing nutrient sources and associated contaminants in relation to harmful algal bloom (HAB).
- Producing Standard Operating Procedures (SOP) and completion of requirements such as audits and intra-laboratory validation in compliance with international standards.
- Organizing a minimum of one training course/seminar/fellowship per year, and prepare promotional activities on AOAC Accredited RBA for PSP to the HAB regulatory body.

Related IAEA Projects

- Project 200037: "Nuclear Techniques For Management Of Ecosystem Services"

Designation periods

2010-2013 / 2016-2020



PNRI

Commonwealth Avenue, Diliman
1101 Quezon City
NCR, PHILIPPINES

www.pnri.dost.gov.ph



IAEA Collaborating Centre



Institute of Nuclear Chemistry and Technology (INCT)



Collaboration on

Radiation dosimetry and industrial radiation processing

Objectives

- To further enhance the applications of radiation processing for healthcare, environmental and industrial applications using international Quality assurance procedures in Member States.

Main Activities of the Collaboration

- Advanced materials:
 - Radiation curing of the package thermo-shrinkable foil.
 - Study on cable insulation degradation.
 - Development of new radiation grafting methods.
- Development of sterilization techniques for new generation of healthcare products specially sterilization of graft tissues.
- Inter-comparison of Dosimetry among radiation facilities in the Member State and among Member States.
- Research and development on wastewater and flue gas treatment:
 - Construction of the flow facility for wastewater treatment.
 - Development of modelling tools for Electron Beam Flue Gas Treatment.
- Capacity Building on radiation processing applications with sharing of experiences of educational programmes being conducted under EU framework in this area.

Related IAEA Projects

- Project 2000095: 'Radioisotope Production And Radiation Technology Programme' aimed at enhancing Member States capabilities in 'radiation Technology for Healthcare and Environmental Applications'.

Designation periods

2010-2014 / 2016-2020



INCT

Dorodna 16
03 – 195 Warsaw
POLAND



http://www.ichtj.waw.pl/drupal_eng



IAEA Collaborating Centre



ICNAS - Institute for Nuclear Sciences Applied to Health / University of Coimbra



Collaboration on

Production and R&D of Radioisotopes and radiopharmaceuticals

Objectives

- To develop specific courses at the agency's request, on the production and quality control of cyclotron-based radioisotopes and radiopharmaceuticals.
- To provide educational environment for Member States workforce on cyclotron operation and maintenance, radiochemistry and radiopharmacy, pre-clinical and clinical imaging based on good practices (GMP, GLP, GCP).
- To share ICNAS experts' knowledge in technical meetings and documents
- To participate and collaborate with Technical Cooperation Projects in the above-mentioned areas.

Main Activities of the Collaboration

- Contribution to initiation and completion of RPRT-NAPC-NA-IAEA publications.
- Development of tailor-made training courses on radiopharmaceutical techniques at IAEA's requests.
- Contribution to an IAEA Webinars and outreach materials.
- Active participation on the planning and implementation of ISTR-2023.

Related IAEA Projects

Project 2000090 (2.5.1.001) "Development and production of medical radioisotopes"

Project 2000091 (2.5.1.002) "Development of diagnostic and therapeutic radiopharmaceuticals"

Designation period

2020-2024

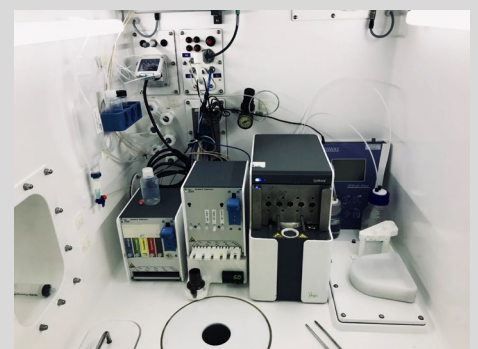
ICNAS

Polo das Ciências da Saúde
Universidade de Coimbra
Azeituga de Santa Comba,
3040-548 Coimbra
Portugal

Tel. +351239488510

Email: icnas@uc.pt

www.uc.pt/en/icnas



IAEA Collaborating Centre



Advanced Radiation Technology Institute (ARTI), Korean Atomic Energy Research Institute (KAERI)



Collaboration on

Radiation application research for environmental remediation, advanced materials, foods and biotechnology

Objectives

- To provide expertise and capacity building in Radiation Application Research for Environmental Remediation, Advanced Materials, Foods, and Biotechnology

Main Activities of the Collaboration

- Environmental Remediation Using Radiation Technology:
I. Practical and hands-on training on waste water treatment with an EB accelerator. II. Demonstration of air pollutant (greenhouse gases, etc.) treatment with a mobile EB accelerator.
- Development of Advanced Materials by Radiation Processing:
I. Training on radiation processing to prepare advanced materials and analysis methods for characterization and evaluation.
II. Demonstration of the pilot-scale production of EB-treated materials.
- Food Irradiation: I. Practical and hands-on training on new and rapid identification methods for irradiated food. II. Demonstration of food irradiation by gamma-ray, EB, and X-ray. III. Dissemination of information related to food irradiation.
- Capacity building: I. Training on biotechnology fused with radiation technology. II. Diversification of radiation source available for plant breeding. III. Demonstration of radioisotope-labeled drugs for diagnosis and therapeutic uses. IV. Support of KOICA-IAEA Joint Training Program on radioisotopes and radiation technology.

Related IAEA Projects

- 2000016 (2.1.3.001): Food irradiation applications using novel radiation technologies
- 2000095 (2.5.2.002): Radiation technology for health care and environmental applications

Designation periods

2012-2016 / 2017-2021

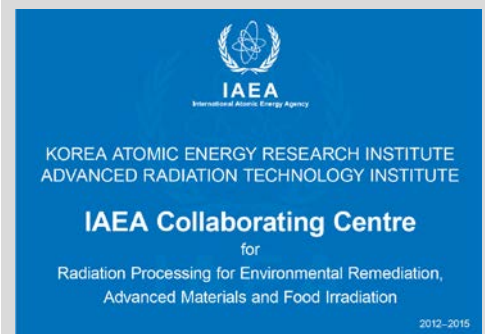


ARTI

Advanced Radiation Technology Institute, KAERI
Jeongeup-Si, Jeollabuk-Do
REPUBLIC OF KOREA 56212



www.kaeri.re.kr



300-keV Ion Implanter in ARTI

IAEA Collaborating Centre



Korea Institute of Nuclear Safety (KINS)



Collaboration on

Enhancing reliability and comparability of environmental radioactivity measurement results

Objectives

- To develop and validate IAEA recommended procedures for radionuclide analysis in environmental samples, to be used for emergency and routine monitoring.
- To support characterization of IAEA reference materials.
- To strengthen ALMERA network in the Asia-Pacific region.

Main Activities of the Collaboration

- Characterization of candidate reference materials and participation to the ALMERA PT (2016-2020).
- Organization of the 1st regional proficiency test for Asia-Pacific region ALMERA member laboratories (on-going) (2016-2017).
- Co-ordination with IAEA of the ALMERA analytical method development on “Rapid Simultaneous Determination of 89Sr and 90Sr in Soil Samples”. Member of expert group and participant to method validation (on-going) (2016-2017).
- Organization of regional proficiency test for Asia-Pacific region ALMERA member laboratories (137Cs in the ash sample, 89Sr and 90Sr in Milk) (2017-2018).
- Hosting of ALMERA training courses on “Basic In-situ Gamma Spectrometry and Field Exercise” (2017-2018), “Rapid Simultaneous Determination of 89Sr and 90Sr in Soil Samples” (2018-2019) and “Mobile Radioactivity Monitoring” (2019-2020).
- Characterization of a Reference site for in-situ gamma-ray spectrometry intercomparison exercise (2019-2020).

Related IAEA Projects

- Project 2.4.1 (AIPS project 2000067): ‘IAEA Reference Products For Science And Trade’ aimed at enhancing Member States capabilities in ‘enhancing reliability and comparability of environmental radioactivity measurement results’

Designation periods

2011-2015 / 2016-2020

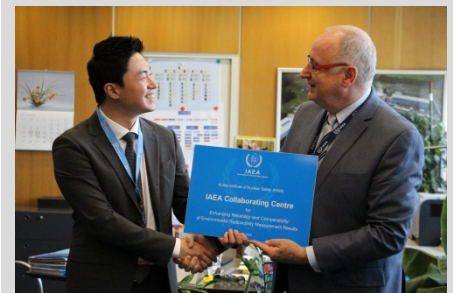


KINS

62 Gwahak-ro, Yuseong-gu
305-338 DAEJEON
REPUBLIC OF KOREA



www.kins.re.kr/en/



IAEA Collaborating Centre



Rosatom Technical Academy (Rosatom Tech)



Collaboration on

Knowledge Management and Human Resources Development for Nuclear Energy and Nuclear Security

Objectives

- Personnel training and competence building in the areas of nuclear knowledge management and human resources development;
- Development of programmes and teaching materials, training of trainers, conducting training courses, seminars, scientific and technical visits, the exchange of experience in the field of training in physical protection and nuclear security.

Main Activities of the Collaboration

- Hosting the various IAEA Nuclear Energy Management (NEM), Nuclear Knowledge Management (NKM) and Nuclear Security (NS) Schools;
- Supporting IAEA Knowledge Management Assist Visit (KMAV) missions and workshops;
- Supporting the IAEA's International Nuclear Management Academy (INMA) programme for Nuclear Technology Management (NTM) university degree programmes;
- Developing and translating into Russian of the IAEA nuclear security training course materials;
- Conducting various IAEA nuclear security training courses, workshops and seminars.

Related IAEA Projects

- Project 1000158 (1.3.3.001) 'Implementing Knowledge in Management in Nuclear Organizations'
- Project 1000050 (1.3.3.002) 'Facilitating Sustainable Education in Nuclear Science and Technology'
- Project 300160 (3.5.4.002) 'Education and Training Programmes for Human Resource Development'

Designation period

2019-2023



Rosatom Tech
Kurchatova Str. 21
249031 OBNINSK
RUSSIAN FEDERATION
www.rosatomtech.com



IAEA Collaborating Centre



King Faisal Specialist Hospital & Research Centre



مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
مؤسسة عامة Gen. Org.

Collaboration on

Quality assurance in radiation medicine

Objectives

- To support the Agency's activities in Quality Assurance in radiation medicine by testing its draft guidelines, implementing regional dosimetry comparisons and contributing to education and training in the region.

Main Activities of the Collaboration

- Pilot test new IAEA publications on QA/QC and dosimetry.
 - Code of practice on small field dosimetry: 2015-2017.
 - QA IGRT: 2016-2018.
 - Therapeutic dosimetry in nuclear medicine: 2018-2020.
- Conduct regional/sub-regional dosimetry comparison in radiotherapy, radiation protection and X-ray diagnostic radiology.
 - Radiation protection dosimetry: 2016-2017.
 - X-ray diagnostic radiology: 2018-2020.
- Expand KFSH&RC SSDL to include calibrations for radiotherapy, X-ray diagnostic radiology and high dose rate brachytherapy (HDR) and make them available for training of IAEA fellows: 2016.
- Support the production of e-learning material (videos and presentations on practical QC guidelines), brochures and posters on quality assurance in radiation medicine. The material will be made available cost-free to the Agency for its posting on its Human Health Campus: 2016-2020.
- Conduct an IAEA QUAADRIL audit for KFSH&RC Radiology Department: 2017.
- Set up national/regional QUATRO and QUAADRIL teams to conduct QUATRO and QUAADRIL audits in the Kingdom and the region: 2018.
- Support the organization (at no cost to the Agency) of a regional workshop on Diagnostic radiology reference levels: 2018.

Related IAEA Projects

- Project 2000029: "Clinical Medical Radiation Physics"

Designation periods

2013-2015 / 2016-2020



KFSH

Takhassussi Rd
P.O. Box 3354
11211 Riyadh
SAUDI ARABIA

www.kfshrc.edu.sa



IAEA Collaborating Centre



Centro Nacional de Aceleradores (CNA)



Collaboration on

Accelerator-based analytical techniques for the study of radionuclides in marine samples

Objectives

- To improve and optimise methodology for the study of radionuclides in marine samples using accelerator-based analytical techniques.

Main Activities of the Collaboration

- Conducting review and planning coordination meetings.
- Training and technical visits of CNA and IAEA representatives for joint laboratory work.
- Using Accelerator mass spectrometry (AMS):
 - Determination of C-14 in corals and sediments; development of methodology for determination of C-14 in seawater.
 - Determination of I-129, U-236, Pu-239 and Pu-240 in IAEA reference materials.
 - Improvement of methodologies for determination of actinides (U-236, Np-237 and Pu isotopes) in marine samples. Development of methodology for determination of U-233.
 - Determination of actinides (U-236, Np-237 and plutonium isotopes) and their ratios in marine samples.
 - Determination of I-129 in marine samples.
 - Determination of long-lived radionuclides in atmospheric samples to assess inputs to the ocean.

Related IAEA Projects

- Project 2.4.1.1 (2000067): "Provision of Reference Products and Laboratory Performance Support"
- Project 2.4.2.1 (2000131): "Isotopic Tools to Study Climate and Environmental Change"
- Project 2.4.3.1 (2000076): "Measurement and Assessment of Radioactive and Non-Radioactive Pollution and Its Impact On Land, Coastal And Marine Ecosystems"
- Project 2.4.4.1 (2000137): "Developing Methodologies for Environmental Assessment and Remediation"

Designation periods

2010-2014 / 2016-2020 / 2020-2024



CNA

Parque Cartuja 93,
Avenida Tomas Alva Edison 7
41092 SEVILLA
Andalucia, SPAIN



www.cna.us.es

IAEA Collaborating Centre



CENTRO DE ADIESTRAMIENTOS EN DESACTIVACIÓN DE EXPLOSIVOS Y DEFENSA NRBQ (CADEX-NRBQ)

Collaboration on

Nuclear Security Response

Objectives

- Development new training curricula to increase competence and skills of Law Enforcement Personnel in the area of response to nuclear security events.
- Assistance to the IAEA's training programme, with specific focus on Spanish-speaking populations.
- Support in developing IAEA nuclear security guidance documents focused on response to nuclear security events.

Main Activities of the Collaboration

- Human resource development for law enforcement personnel through the design, development, delivery and evaluation of nuclear security response training courses, workshops and exercises.
- Active participation in IAEA Expert Missions and Advisory Services through the provision of experts in nuclear security response activities
- Support for the nuclear security response working group, developing ideas and sharing best practices through the provision of experts in nuclear security response

Related IAEA Projects

- Institutional Infrastructure for Material Out of Regulatory Control
- Nuclear Security Detection and Response Architecture
- Radiological Crime Scene Management and Nuclear Forensics Science

Designation period

2019-2023



Complejo de la Guardia Civil
Carretera Nacional A-4, km 25,400,
C.P. 28342, Valdemoro (Madrid),
SPAIN

<http://www.guardiacivil.es/en/>



IAEA Collaborating Centre



ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL)

EPFL

EPFL

Rote Cantonale, 1015 Lausanne, Vaud, Switzerland

<https://www.epfl.ch/en/>



Collaboration on

Advanced reactor experiments and high-fidelity multiphysics nuclear simulation techniques for open-source code development and validation

Objectives

- Creating a novel open-source platform for reactor analysis, which will be available to IAEA Member States;
- Conducting various experiments at research facilities to create different benchmarking databases for code validation;
- Co-organizing workshops, training courses etc., including creation of material (electronic/physical) for education and training activities;
- Providing experts to IAEA in the relevant areas of work and related activities;
- Hosting researchers as well as IAEA fellows that wish to conduct research at the EPFL laboratory for reactor physics and system behaviour;
- Promoting coordinated research activities in the area of development of open source codes for nuclear power applications;
- Sharing the experience of EPFL in reactor experiments, analytical modelling and nuclear education with IAEA Member States.

Main Activities of the Collaboration

- Build an open source, multi-physics toolset for reactor analysis;
- Conduct new experiments at the research facilities (eg. CROCUS) for the creation of new experimental data for the validation of modern solvers;
- Collect open experimental data and numerical benchmarks from partner organizations;
- Develop an online repository/database for codes, documentation, tutorials, and material for validation and verification (experimental data, regression tests, etc);
- Train professionals in the field of modeling and simulation, particularly focused on OpenFOAM based multi-physics toolsets for nuclear applications;
- Development of training material and other learning resources for capacity building;
- Form international network/user group.

Related IAEA Projects

All the projects under IAEA's sub-programme on Technology Development for Advanced Reactors and Non-Electric Applications (1.1.5) as well as specific projects under IAEA's sub-programmes on Research Reactors and Nuclear Knowledge Management.

Designation period

2019-2023



Spiez Laboratory



Collaboration on

Sampling and analytical techniques for the study of radionuclides in environmental samples applying ISO/EN/17025 accreditation standards, with a focus on capacity building within the ALMERA network

Objectives

- To support Member States in strengthening quality management in the development and application of methods for the analysis of radionuclides in the environment, with particular focus on capacity building within the network of Analytical Laboratories for the Measurement of Environmental Radioactivity (ALMERA).

Main Activities of the Collaboration

- Training in sampling and analysis of radionuclides in environmental samples by multiple techniques, including gamma and alpha spectrometry, LSC and ICP-MS.
- Training on in-situ gamma ray spectrometry for routine and emergency situations
- Participation in development and validation of radioanalytical methods for radionuclides in environmental samples in the framework of the ALMERA collaboration. Development of procedures and instructions according to international quality standards.
- Characterisation of IAEA Certified Reference Materials, stability testing and re-certification of legacy materials.
- Capacity building through TC fellowships, Scientific Visits, hosting of training courses and technical meetings in the framework of the ALMERA collaboration; provision of expertise in environmental radioactivity monitoring and assessment; support to PhD and Postdoctoral students in Member States.

Related IAEA Projects

- Project 2.4.1.2 (2000068): "Quality Management and Supporting Network Activities"
- Project 2.4.3.1 (2000076): "Radioactive and non-radioactive pollution and impact on environment"

Designation period

2016-2020



Labor Spiez
Austrasse
CH-3700 Spiez
SWITZERLAND

www.labor-spiez.ch



Staatliche Eidgenössische
Anstalt für Wasserbau,
Landwirtschaft und
Forstwesen (AWL)

ALMERA in situ workshop, 2 - 6 November 2015
Spiez, Switzerland



IAEA Collaborating Centre



Thailand Institute of Nuclear Technology (TINT)



Collaboration on

Water Resources Assessment and Management

Objectives

- To contribute and promote the wider and larger use of isotope hydrology in a routine manner at national level for both hydrological and climatological studies, and identification of national projects and coordinators. The effort will be complemented with a provision of basic and advanced training in analytical methods and use of isotope hydrology tools in Thai language.
- To provide analytical services (hydrochemistry and environmental isotopes) and assistances for IAEA initiated projects (CRPS, TCPs) to the MSs in the Asia Pacific Region.

Main Activities of the Collaboration

- Research and Development of analytical techniques in groundwater studies and other purposes in Thailand
- Capacity building on application of isotope techniques and other techniques in groundwater studies of Thailand
- Installation and operation of a national isotope monitoring network of precipitation in Thailand
- Provision of analytical services (hydrochemistry and environmental isotopes) as and when requested by the IAEA for MSs
- Create an online isotopes database of rainfall for long-term for use by stakeholders

Related IAEA Projects

- Use of isotope hydrology for groundwater management (THA8015)
- Application of Isotope Hydrology on the Study of Surface and Groundwater Mixing in the Unconsolidated Aquifer a Long Lower Ping River (THA7005)

Designation period

2018-2021



TINT

9/9 Moo 7

Tumbol Saimoon,
Ongkharak, Nakhon Nayok
THAILAND 26120

www0.tint.or.th/en/index.html



IAEA Collaborating Centre



Khalifa University of Science and Technology (KU)



Collaboration on

Nuclear power infrastructure and human resource development

Objectives

- Share UAE's experience and expertise in nuclear infrastructure development, particularly through implementing specific training courses in collaboration with IAEA, and dispatching experts to support IAEA activities.

Main Activities of the Collaboration

- Train professionals recommended by the IAEA in the field of nuclear power infrastructure development.
- Develop and implement tailor-made training courses, workshops and work-plans for fellowship programmes, with the IAEA, to address specific issues relevant to embarking countries.
- Provide experts to the IAEA to support workshops, meetings and expert missions.
- Implement the revised GNEII Program structured in modules (Certificate, Diploma and Applied Masters degree).
- Support through UAE experts the development of standardized training materials, including e-learning and human resource tools for capacity building.
- Organize, with the IAEA, the first Nuclear Infrastructure Development Conference in Abu Dhabi (expected 2021).

Related IAEA Projects

- Strengthening Nuclear Power Infrastructure aimed at enhancing Member States capabilities in “building and assessing the infrastructure required for a nuclear power programme”
- Capacity Building for the Introduction of Nuclear Power aimed at enhancing Member States capabilities in “developing critical competencies required for infrastructure development”

Designation period

2017-2021

Khalifa University (KU)

Al Murour Road
PO box: 127788
Abu Dhabi
United Arab Emirates

www.ku.ac.ae



IAEA Collaborating Centre



National Nuclear Laboratory (UK-NNL)



Collaboration on

Advanced Fuel Cycle

Objectives

- Personnel training and competence building in the areas of advanced nuclear fuel and fuel cycles;
- Development of programmes and teaching materials, conducting training courses, seminars, scientific and technical visits, the exchange of experience in the fields of advanced nuclear fuel and fuel cycles.

Main Activities of the Collaboration

- Facilitate knowledge sharing on the development of various advanced fuel types, such as Accident Tolerant Fuels (ATF), Advanced Technology Fuels, Fast Reactors Fuels, SMR Fuels (e.g., HTGR fuels, coated particle fuels), through the:
 - Participation in joint research activities coordinated by the IAEA;
 - Co-organization and hosting of national and international events in collaboration with the IAEA;
 - Contribution to IAEA technical documents on advanced fuels and fuel cycles development.
- Conducting training courses and seminars on the modelling of advanced nuclear fuel and fuel cycle performances.
- Furthering the understanding of backend issues in advanced fuel cycles involving ATFs, FRs fuels, SMRs fuels, etc., in order to minimize waste burden.
- Promoting long-term development of a skilled workforce through the joint development of e-learning materials on advanced fuels (FR fuels, ATFs, PIE and fuel fabrication) and fuel cycle covering a wide range of technologies.

Related IAEA Projects

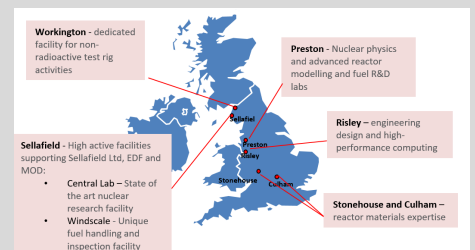
- Project 100003 (1.2.2.001) 'Nuclear power reactor fuel engineering and operation'
- Project 1000035 (1.2.2.003) 'Fuel cycle facilities operation and life management'
- Project 1000037 (1.2.3.002) 'Spent fuel recycling'

Designation period

2020-2024



National Nuclear Laboratory Ltd
5th Floor, Chadwick House
Birchwood Park
Warrington, WA3 6AE
UNITED KINGDOM
www.nnl.co.uk



IAEA Collaborating Centre



National Center for Electron Beam Research (NCEBR) at Texas A&M Agri Life Research



Collaboration on

Electron beam technology for food, health and environmental applications

Objectives

- To develop electron beam irradiation technologies for applications in the human food, animal feed, medical therapeutics, medical device sterilization, environmental treatment of municipal and agricultural wastes.

Main Activities of the Collaboration

- Evaluate techno-commercial aspects of electron beam methodologies for treatment of bio solids.
- Conduct studies on degradation of newly recognized pollutants using high energy radiation from electron beams
- Develop radiation processed biodegradable plastics based on agricultural residues and holding Meetings + Workshops
- Graft microbial cells onto polymers to develop next generation of biopolymers.
- Assist and support IAEA in organizing an International Conference on Radiation Processing in 2017.
- Provide hands-on training in electron beam and X-ray technologies and dosimetry for food processing.
- Support EB and X-ray irradiation facilities seeking approval by phytosanitary authorities.
- Support the design, performance and evaluation of irradiation test treatments on food products.
- Develop communication strategy on irradiated products to reach traders, retailers, food industry and investors.

Related IAEA Projects

- Project 2000095: "Radiation technology for health care and environmental applications"
- Project 2000016: "Food Irradiation Applications Using Novel Radiation Technologies"

Designation period

2014-2017 / 2019-2023



NCEBR

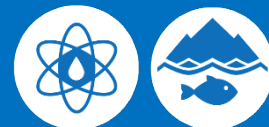
Texas A&M University
400 Discovery Drive
77845 College Station, USA



<http://ebeam-tamu.org>



IAEA Collaborating Centre



Vietnam Atomic Energy Institute (VINATOM)

Collaboration on

Water and Environment

Objectives

- Promoting the use of nuclear techniques for water and environment assessment and monitoring in Vietnam, as well as Integrated Watershed and Coastal Area Management (IWCAM) more broadly in South-East Asia.

Main Activities of the Collaboration

- Research and development of analytical procedures for radionuclides, stable isotopes and heavy toxic chemical elements in environmental samples
- Enhancing integrated use of radioisotopes and stable isotopes in environmental studies
- Capacity building on the use of stable isotopes in studies of environmental processes and water pollution and isotope data interpretation for groundwater management
- Operation of a national isotope monitoring network for precipitation, rivers, and soils
- Application of nuclear and isotope techniques in study of soil erosion, soil degradation and effectiveness of soil protection measures on a basin scale, in studying sedimentation processes in river, reservoirs and estuaries
- Assessment of current radioactive baseline in the marine environment in Vietnam, study on possibility of radiation emission and spreading from nuclear power plants operating near Vietnamese territory

Related IAEA Projects

- Agency Project 2.4.2.1. Isotopic Tools to Study Climate and Environmental Change
- Agency Project 2.4.3.1. Radioactive and Non-Radioactive Pollution and Impact on Environment
- Agency Project 2.3.1.1. IAEA Isotope Data Networks for Precipitation, Rivers and Groundwater
- Agency Project 2.3.2.1. Comprehensive Assessment of Resources

Designation period

2018-2021



CONTACT

Mr Toan Ngoc Tran

<https://vinatom.gov.vn/>

