



Nuclear  
Sciences and  
Applications



## Securing A Better Future For All Nuclear Techniques for Global Development and Environmental Protection

# Nuclear Sciences and Applications Collaborating Centres

## Establishing a Culture of Cooperation

As a large international organization with a variety of programmes, initiatives and laboratories, one of the mandates of the IAEA is to promote the peaceful use of nuclear techniques worldwide while also collaborating with other institutions in its Member States in order to implement part of its approved activities. In this regard, the IAEA designates selected institutions as official IAEA collaborating centres (IAEA-CCs). Recognizing the need to preserve and transfer nuclear knowledge, the IAEA-CCs are dedicated to furthering the research, development and training in peaceful applications of nuclear science and technology. By working alongside various nuclear related institutions from around the world, the IAEA contributes to reaching important targets laid out by the United Nations Millennium Development Goals.

The IAEA-CCs are, in general, scientific institutions such as laboratories, universities, research facilities, etc., that receive public recognition by the IAEA and have been designated to collaborate with the IAEA in a variety of fields, such as food safety, environmental protection, water resources and human health. In line with the objectives of the IAEA, IAEA-CCs are expected to further the research, development and training in the peaceful applications of nuclear science and technology.

Through these research and academic institutions, Member States can assist the IAEA with their own original research, development and training in nuclear technologies. As a cooperative mechanism, the IAEA-CC is also efficient, as it encourages centres to share resources, knowledge and expertise.

One of the goals of the IAEA-CC is also to help developing Member States expand their capabilities in these areas and thus improve the quality of life of their citizens. So far, the IAEA-CC has led to socioeconomic benefits in many parts of the world, from Asia to Latin America.

### Quick Facts

There are more than 20 IAEA-CCs worldwide in both developed and developing countries.

In addition to a single institution, a department or laboratory within an institution may also be designated as a collaborating centre.

Official selection of an IAEA-CC depends on a variety of criteria, including their adherence to nuclear safety and security guidelines, and a proven record of collaboration with the IAEA.



## Fostering Human Nutrition in India and Worldwide

The IAEA formalized its relationship with the St. John's Research Institute (SJRI) in Bangalore, India, by designating it an IAEA-CC in May 2010. The SJRI has been working with the IAEA's Nutrition and Health Related Environmental Studies Section since 1988 and is well networked, both in India and internationally. The SJRI was the first collaborating centre designated by the IAEA in the field of human nutrition. Its research also focuses on cancer, infectious diseases and lifestyle related diseases.

The longstanding relationship between the IAEA and SJRI has allowed them to collaborate on a variety of levels. For example, the SJRI analyses samples for Asian and African Member States, provides lecturers for the IAEA's courses on stable isotope techniques and trains research fellows from Member States worldwide.



## Protecting Marine Life with Nuclear Techniques

The Philippine Nuclear Research Institute (PNRI), which is the only IAEA-CC on harmful algal blooms in the world, undertakes research jointly with the IAEA environment laboratories in Monaco to track the impacts and fate of biotoxins in the marine food chain using radiolabelled analogues. Recently, the PNRI undertook studies in Manila Bay to assess the transfer of paralytic shellfish poisoning toxins from harmful algae to green mussels farmed in that area. In addition, a field test based on the use of radiolabelled toxins is currently under development at the PNRI to facilitate the monitoring of aquaculture products.

## Sharing Accelerator based Analytics with the Global Community

In 2010, the IAEA added El Centro Nacional de Aceleradores in Seville, Spain, to its list of collaborating centres for its outstanding research activities in accelerator based analytical techniques. During the four year work plan, the two organizations will work on a common project studying long lived radionuclides in marine samples in order to provide Member States with state of the art accelerator based science.



## Eradicating Fruit Flies to Facilitate Trade

The IAEA-CC for the Development and Application of the Sterile Insect Technique for Fruit Fly Area Wide Integrated Pest Management in Southern Mexico and Guatemala is a recent addition to the IAEA-CC scheme. The initial goal of the project is to reduce both horticultural losses and insecticide use while also facilitating more international trade in fruits and vegetables. The programme provides training for entomologists and plant protection officials from the entire region. It also develops and validates new methodologies that complement the research done by the IAEA. Thanks to this method, both the Mediterranean and Mexican fruit flies have been almost completely eradicated in Mexico.



## Quick Facts

Once the institution's host government concurs with the designation, the IAEA informs the institute officially and finalizes the designation formalities, which includes presenting the institution with a plaque for public display. Subsequently, the institution may officially refer to itself as an IAEA collaborating centre.

The IAEA works alongside collaborating centres in accordance with a time limited work plan, which can be up to four years. The work must have clearly defined targets and expected results while also meeting the objectives of the IAEA's ongoing projects.

Collaborating centres carry out the work at no cost to the IAEA. Nevertheless, in selected cases, the IAEA may agree to provide limited funding for supplies, materials, or necessary services for work plan implementation.

Designation may be renewed by mutual agreement and requires a new or extended work plan.

