

Institutional donors from three countries contribute to IAEA laboratory modernization

Nuclear research institutions from Poland, Morocco and the Philippines have contributed close to €30 000 towards the ongoing modernization of the IAEA's nuclear applications laboratories in Seibersdorf, Austria.

“The work of the IAEA in the areas of radiation protection, radiation dosimetry and nuclear medicine, among others, is crucially important to serve the needs of Member States and for the advancement of science,” said Andrzej Chmielewski, Director General of Poland's Institute of Nuclear Chemistry and Technology. “With our contribution, we hope to add to the IAEA's capacity to carry out research and development and training.”

Besides the institute from Poland, two other institutions have made

contributions: the Philippines' Nuclear Research Institute and Morocco's National Centre for Energy, Science and Nuclear Techniques.

The modernization includes the construction of two new buildings: a new Insect Pest Control Laboratory and the Flexible Modular Laboratory, which will house the Animal Production and Health Laboratory, the Food and Environmental Protection Laboratory and the Soil and Water Management and Crop Nutrition Laboratory. It also includes the enhancement of the remaining laboratories, acquisition of new equipment and infrastructure upgrades.

“We are happy to have such great support from institutions that recognize the importance of the work we are doing in nuclear applications,”

said Andy Garner, Laboratory Coordinator, who is in charge of the laboratory modernization project at the IAEA. “We will continue to foster partnerships with national institutions as well as with private companies to enhance the IAEA's capacity to deliver quality support to our Member States.”

He added that Member States are recognizing new channels by which to contribute to the ongoing modernization work, and that institutions represent one such avenue.

Cash contributions to the modernization, primarily made as extrabudgetary contributions from national governments, have amounted to over €32 million since 2014.

— *By Matt Fisher*

Tackling childhood obesity in Europe with the help of nuclear techniques: IAEA symposium at the European Congress on Obesity

Childhood obesity is on the rise worldwide and is quickly becoming one of the most serious public health challenges of the 21st century, according to the World Health Organization (WHO). An IAEA project presented at the 2018 European Congress on Obesity (ECO 2018) last May is helping nutrition and health professionals in ten countries in Europe assess body composition using stable isotope techniques. The data gathered will allow policy makers to design interventions to prevent and control childhood obesity.

The symposium titled ‘Assessing body composition for better understanding of risks related to childhood obesity and designing effective interventions’, organized by the IAEA, was held as a parallel session during ECO 2018. Case studies from Bosnia and Herzegovina and Latvia were presented on how the deuterium oxide dilution technique is used

to accurately measure body fat as a risk factor for obesity among school-age children in the respective countries. Information generated from this project will contribute to the formulation of policies and interventions to reduce obesity in Europe. The two countries are already involved in the WHO-led Childhood Obesity Surveillance Initiative.

Growing burden of childhood obesity

Every third eleven-year-old child in Europe and Central Asia is overweight or obese, according to the WHO. Changes in dietary habits, sedentary lifestyles and lack of physical activity are the leading causes of rising obesity rates. Without interventions, overweight and obese children will likely stay overweight or obese into adulthood and will be at increased risk of developing non-communicable illnesses, such as diabetes and

cardiovascular diseases, at a younger age.

“Closely linked to regional WHO strategies on childhood obesity and on the prevention of non-communicable diseases, the project will provide a much-needed evidence base to formulate policies and design effective interventions,” said Inese Siksna, a nutritionist at Latvia's Institute of Food Safety, Animal Health and Environment.

Accurately monitoring obesity

During the symposium, IAEA experts discussed how body composition can be used as a tool to accurately monitor obesity, and representatives of the WHO and other partners discussed the importance of using accurate data, obtained with the help of stable isotope techniques, in policy making.

Aida Filipović Hadžiomerađić, from the Public Health Institute of Bosnia and Herzegovina, noted the importance of the collaboration in sharing expertise and knowledge. “Previously held workshops and trainings have greatly assisted representatives from Bosnia and Herzegovina, such as doctors, nurses and technicians to gain the necessary skills and expertise to assess body composition using the deuterium dilution technique by Fourier Transform Infrared Spectroscopy (FTIR) and bioelectrical impedance, and to use accelerometry to measure physical activity levels and sedentary behaviour among children,” she said.

The IAEA has supplied FTIR equipment to authorities in Albania, Bosnia and Herzegovina, Greece and Montenegro to help with the analysis

of deuterium enrichment in saliva samples from all ten participating countries. The project is implemented through the IAEA technical cooperation programme.

The deuterium dilution technique may also be used as a reference method to validate existing approaches to screening and monitoring obesity in Latvia, Siksna said.

The symposium was organized in collaboration with the World Health Organization–European Regional Office, the European Association for the Study of Obesity and N8 AgriFood, a multidisciplinary research programme across eight universities in the north of England.

The countries participating in the project are Albania, Bosnia and

Herzegovina, Greece, Hungary, Latvia, the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Portugal and Ukraine. The IAEA is assisting countries in the overall coordination of the project and in providing equipment, expertise and training.

— *By Mariam Arghamanyan*

IAEA guidance on managing disused radioactive sources now available

The Guidance on the Management of Disused Radioactive Sources, endorsed by the 61st IAEA General Conference in September 2017, is now available on the IAEA’s web site. The document stands as supplementary guidance to the Code of Conduct on the Safety and Security of Radioactive Sources, along with the Guidance on the Import and Export of Radioactive Sources.

Millions of radioactive sources are in use around the world in medicine, industry, agriculture and research. Sources may remain radioactive long after the end of their useful life, so it is essential that they be safely managed and securely protected. The Code of Conduct and its supplementary documents foster management and protection by providing guidance on the development, harmonization and implementation of national policies, laws and regulations, and by promoting international and regional cooperation among Member States.

“The Guidance promotes a more rigorous radiation safety and security culture, which will be further enhanced once Member States put the recommendations of the Guidance into practice,” said Hilaire Mansoux,

Head of the IAEA’s Regulatory Infrastructure and Transport Safety Section.

The Guidance, which is not legally binding, describes a variety of options for the management and protection of disused radioactive sources and outlines the responsibilities of relevant parties, including regulatory bodies. It emphasizes disposal as the final management option for disused sources and encourages countries to have national policies and strategies to manage disused radioactive sources in a safe and secure manner. It also contains provisions on bilateral relations, including advice on the return of sources in cases where such arrangements have been agreed.

Muhammed Khaliq, Head of the IAEA’s Nuclear Security of Materials and Facilities Section, noted that the Guidance, once applied, will strengthen nuclear security as well.

“The effective and continuous regulatory and management control of radioactive sources, from cradle to grave, is of utmost importance for the prevention of malicious acts with

harmful radiological consequences,” he said.

Member States make what is called a political commitment to the Code and its supplementary guidance in an official letter to the IAEA, in which they affirm their decision to act in line with the recommendations. Of the IAEA’s 170 Member States, 137 have so far expressed commitment to the Code of Conduct and 114 to the Guidance on the Import and Export of Radioactive Sources.

The IAEA supports Member States in the implementation of the Code of Conduct and Guidance documents through projects and information exchange. This includes a formal process that was established in 2006. The first international meeting for the exchange of experience on the implementation of the Guidance on the Management of the Disused Radioactive Sources is planned for 2020 in Vienna.

— *By Matt Fisher*