PUI STORIES

IAEA 60 Years
Atoms for Peace and Development

What is the Peaceful Uses Initiative (PUI)?

The Peaceful Uses Initiative (PUI), launched in 2010, has become instrumental in mobilizing extra-budgetary contributions which supplement the Technical Cooperation Fund to support technical cooperation footnote-a projects and other unfunded projects of the IAEA in the areas of peaceful application of nuclear technology.

Extra-budgetary contributions made through the PUI have been used to support a wide variety of IAEA activities aimed at promoting broad development goals in Member States, such as in areas of food security, water resource management, human health, nuclear power infrastructure development and nuclear safety, many of which would have remained unfunded without the PUI.

The PUI has also allowed the IAEA to be more flexible and quicker in responding to shifting priorities of Member States, as well as to unexpected needs or unforeseen emergency events, as demonstrated in the response to the Ebola virus disease in West African States and the recent outbreak of the Zika disease in Latin America and the Caribbean. To date, the PUI has helped mobilize over €90 million in financial contributions from 19 Member States and the European Commission, in support of more than 190 projects that benefit more than 150 Member States. The IAEA will continue its work on the PUI to further promote the benefits of the peaceful uses of nuclear science and technology, contributing to the "Atoms for Peace and Development" and the attainment of the Sustainable Development Goals.

To make an extra-budgetary contribution through the PUI:

- Member States initiate the process by sending a pledge letter to the IAEA. These letters should be addressed to the Director General and should include the following information:
  - The name and contact details of the Member State making the contribution;
  - The amount of the contribution and the specific project to fund; and
  - Indicate in the pledge letter that the contribution is made through the PUI;
- The IAEA will initiate the formal acceptance process for the contribution and respond to the initial pledge letter.

Member States that are considering a contribution through the PUI are encouraged to closely consult with the Secretariat prior to making an official pledge.

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ATOMS FOR PEACE AND DEVELOPMENT: contributing to global progress through nuclear science and technology

The IAEA plays an important role in tackling both emerging and longer term global challenges through the peaceful application of nuclear technology. Generating energy, addressing climate change, making the benefits of modern health available to all and helping countries respond to emergencies such as the Ebola and Zika viruses are just some of the areas in which the IAEA assists its Member States.

The Peaceful Uses Initiative (PUI) has been instrumental in supporting a wide variety of IAEA activities aimed at helping Member States achieve their development objectives. Assisting countries in the peaceful application of nuclear technology for development is as important to the IAEA as its non-proliferation work. For many developing countries, it is the most important thing we do.

Last year, world leaders adopted the Sustainable Development Goals. I very much welcome the fact that science and technology are explicitly recognised as important contributors to the post-2015 development agenda.

Nuclear science and technology, in particular, have much to contribute to sustainable development. The IAEA has assisted countries in developing new food crops that are resistant to drought, enabled them to develop a better understanding of ocean acidification and helped them to use nuclear techniques to manage limited water resources. Nuclear power can make an important contribution to reducing carbon dioxide emissions as countries work to meet their commitments under the Paris Agreement on climate change.

One of the most gratifying aspects of my work as IAEA Director General is meeting people whose lives have been changed for the better by our work. In this brochure, we illustrate the impact of the IAEA's work through four examples, financed by the Peaceful Uses Initiative, which span a broad range of our activities.

You will read about Zambian farmers who have more and healthier animals as a result of the control of transboundary animal diseases; about patients in Latin America and the Caribbean who have access to improved diagnosis and treatment of cancer and cardiovascular diseases; about communities in Central Asia which are benefiting from the clean-up of former uranium mining sites; and about a Kenyan government official who was able to plan more systematically for the possible introduction of nuclear power thanks to online learning tools offered by the IAEA. These are all examples of the application of nuclear science and technology to everyday problems.

The IAEA starts celebrating its 60th anniversary this year with the official motto *Atoms for Peace and Development*. Membership of the IAEA continues to grow and demand for our services in all areas of nuclear sciences and applications is increasing steadily. The PUI has been an effective mechanism in mobilizing additional resources to meet this growing demand. We will continue to put these resources to work for the benefit of *Atoms for Peace and Development* in the coming years.

— Yukiya Amano,
Director General, IAEA

"The farmer is the one who benefits. The more diseases we control, the more animals the farmers have. And if they have more animals, poverty is reduced."

Christopher Simuntala, Head, Central Veterinary Research Institute, Zambia

(Photo: IAEA)

Tackling transboundary animal diseases

How nuclear science is making a difference

Fast and accurate diagnosis and monitoring of animal diseases can make the difference between living in poverty and having a steady source of food and income. In countries where livestock play a key role in everyday life and development, a network of laboratories called 'VETLAB' offer scientists an avenue for diagnosing and monitoring diseases using nuclear and nuclear-derived techniques to help ensure a stable future for farmers. The network is financed through the Peaceful Uses Initiative (PUI) and the African Renaissance Fund.

"The farmer is the one who benefits. The more diseases we control, the more animals the farmers have. And if they have more animals, poverty is reduced," said Christopher Simuntala, Head of the Central Veterinary Research Institute in Lusaka, Zambia, who learned how to use these nuclear and nuclear-derived techniques at a training course held by the IAEA in partnership with the Food and Agriculture Organization of the United Nations (FAO).

One billion people, mostly pastoralists in South Asia and sub-Saharan Africa, depend on livestock for food and livelihood, according to the FAO. Many animal diseases are highly contagious and can spread extremely quickly within a country and across borders, hindering trade and, in some cases, affecting public health.

"Molecular diagnosis helps us understand the spread of diseases," Simuntala said. "We are able to tell whether a disease originated in our area, or started elsewhere and then moved to our country, and also which animals are carrying the diseases. This will help us in predicting threats and controlling disease."

Nuclear-based technologies can be used to detect viruses like capripox disease, peste des petits ruminants (PPR), African swine fever, foot and mouth disease, Newcastle disease, and highly pathogenic avian influenza in a single pathogen or a multi-pathogen detection system.

"Conventional methods used in many developing countries can detect the viruses, but this takes a long time and cannot determine its behaviour or character," said Charles Euloge Lamien, specialist in animal health at the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture. "And viruses change. With the use of full genetic sequencing, the detection method is more refined and sophisticated." (See The Science box, page 7)

Going after PPR

One of the most damaging livestock diseases in Africa, the Middle East and Asia is the highly contagious and widely spread PPR virus. It kills thousands of sheep and goats per year and causes annual economic losses estimated at over US $1.4 billion. First reported in 1942, PPR has since spread to over 70 countries and 50 others are considered at risk, according to the FAO and the World Organisation for Animal Health (OIE).

"Nuclear techniques will be indispensable in eradication efforts through the use of isotopic techniques in vaccine development and to monitor the spread of PPR."

Berhe Tekola, Director, Animal Production and Health Division, FAO

A global effort is now underway to eradicate PRR by 2030 using nuclear and other techniques, and the 'VETLAB' network of animal health laboratories will play a critical role in this effort. The Global Control and Eradication Strategy is fashioned after the successful global eradication programme for rinderpest, a virus closely related to PPR, which was declared eradicated in 2011 with the help of nuclear techniques and the VETLAB network.

"One of the major constraints faced by those involved in the livestock sector is PPR," said Berhe Tekola, Director of the FAO Animal Production and Health Division. "Nuclear techniques will be indispensable in eradication efforts through the use of isotopic techniques in vaccine development and to monitor the spread of PPR."

Among the nuclear-related techniques employed are nucleic acid-based diagnostics and serum-based virus tests, which can be used to diagnose and monitor PPR, as well as for developing, adapting and validating vaccines and diagnostic technologies and procedures. The laboratories comprising the VETLAB network provide training in these techniques, as well as support in early and rapid diagnosis and control of PPR.

Connect, exchange, contain

The VETLAB network of animal health laboratories connects scientists and laboratories across borders with the IAEA, FAO, OIE and other partners, and helps to ensure that advanced capacities are available to stay ahead of these diseases.

Through this network, scientists share their knowledge to more dynamically adapt strategies and further research and development that is essential to monitoring and containing the spread of transboundary animal and zoonotic diseases. According to Sabenzia Nabalayo Wekesa, Head of the Molecular Laboratory of the Central Vet Laboratories in Nairobi, Kenya, sharing diagnostic data is an important element of the entire animal disease control process. It allows for close collaboration with other countries and helps compare results, learn what diseases are circulating elsewhere, and prevent them from spreading.

In cases where key veterinary capacities are lacking, the VETLAB network facilitates scientific training and assists laboratories through providing equipment and technical support. Laboratories throughout the VETLAB network also offer rapid and early diagnostic and control services to other laboratories that lack the capacity to do this themselves. Together, this translates into more improved national and regional veterinary services and, ultimately, more effective animal disease control.


(Photo: N. Jawerth/IAEA)

THE SCIENCE:
Genetic sequencing

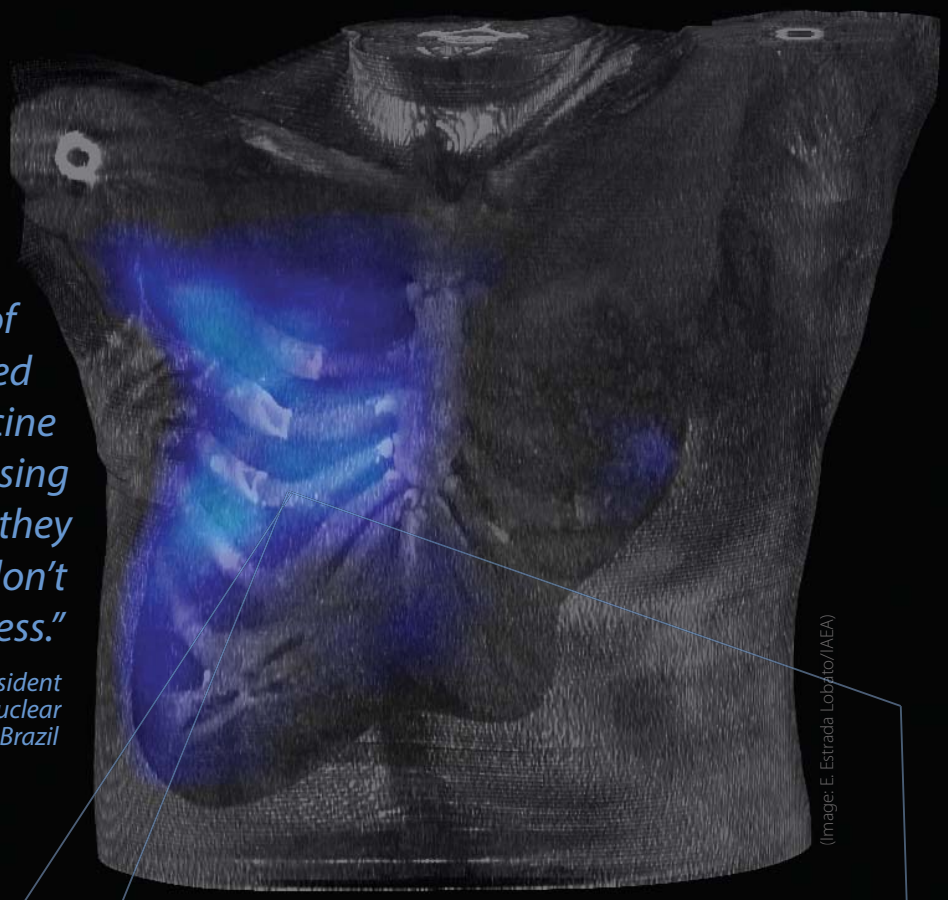
Sequencing is a nuclear-derived technique that involves finding the way the nucleic acid (RNA and DNA) information inside pathogens is gathered. Organisms, including viruses, have genetic material. Through genetic sequencing, scientists can find out how the information inside the genetic material is structured and how it behaves. This not only helps to diagnose a disease, but can also disclose its origin and evolution.

Radioactive labelling was the method used for the first molecular characterization of a virus genome, and it is still the preferred technique where high levels of sensitivity and specificity are needed, and where a single pathogen among a million similar micro-organisms has to be identified. However, in most cases, a simpler method, involving a less sensitive labelling approach using dyes, chromophores or mass spectroscopy can be sufficient to identify the pathogen threat.

These nuclear-based tools and techniques are also used for detecting diseases like the Ebola and Zika viruses.

"The number of patients that need nuclear medicine exams is increasing every year, but they often don't have access."

Claudio Tinoco, Mesquita, President of the Brazilian Society of Nuclear Medicine, Brazil



(Image: E. Estrada Lobato/IAEA)

Harnessing atoms to save hearts and fight cancer

Nuclear medicine in Latin America and the Caribbean

Over 600 million hearts are beating in Latin America and the Caribbean, pumping life into bodies that are living longer, but often leading more sedentary and unhealthy lifestyles. The continent's growing and aging population relies in part on access to nuclear medicine services that improve cost-effective management of the main causes of death: cardiovascular diseases and cancer.

"The number of patients that need nuclear medicine exams is increasing every year, but they often don't have access," said Claudio Tinoco Mesquita, President of the Brazilian Society of Nuclear Medicine. "In my country, for example, there should be at least double the number of nuclear medicine centres to cover the growing population's needs, from departments, equipment and trained

"Early and accurate diagnosis is critical for effective treatment of both cardiovascular diseases and cancer."

Diana Paez, Head, Nuclear Medicine and Diagnostic Imaging Section, IAEA

professionals, of everything. We are working very hard to improve access to nuclear medicine services. For that, the support of the IAEA has been essential."

Cardiovascular diseases (CVDs) kill more people than any other health condition in the world, closely followed by cancer. In Latin America and the Caribbean, about half of all deaths are due to CVDs and cancer, especially of the lungs, prostate, breast and cervix.

Nuclear medicine is a small, but key area of health care (see The Science box, page 11) that uses atoms that emit radiation, known as radionuclides, to diagnose, treat and manage diseases and health conditions. This field relies on specialized drugs called radiopharmaceuticals, sophisticated tools such as cyclotrons and diagnostic imaging devices such as positron emission tomography (PET) and single photon-emission computed tomography (SPECT) and highly specialized medical professionals.

"Early and accurate diagnosis is critical for effective treatment of both cardiovascular diseases and cancer," said Diana Paez, Head of the Nuclear Medicine and Diagnostic Imaging Section at the IAEA. "Nuclear medicine provides essential diagnostic and therapeutic services that help doctors care for cardiac and cancer patients, and when diagnosed early, treatment can begin sooner, leading to improved patient outcomes."

Access to nuclear medicine in Latin America and the Caribbean is often uneven and limited, particularly in rural areas, Paez said. "While private health care often offers more nuclear medicine services, many public facilities lag behind, and these are the hospitals most people rely on."

Providing equipment, offering training

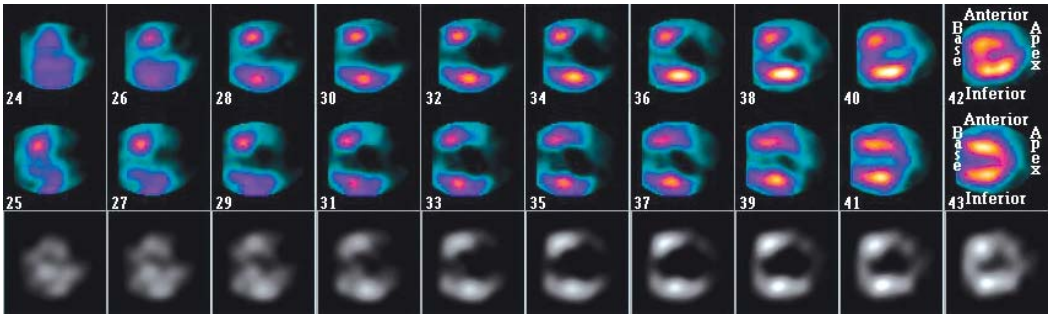
To help bridge gaps in health care, the IAEA, through its Technical Cooperation Programme and with the support of the Peaceful Uses Initiative (PUI), has played a key role in facilitating the development and improvement of nuclear medicine on a national level and across the region. This includes providing support for purchasing equipment, and, as of 2016, face-to-face training for more than 600 professionals in specialized skills and carrying out more than 500 expert missions to raise awareness among health care practitioners and decision makers of the clinical applications of nuclear medicine.

Through online training courses in nuclear medicine diagnostics, more than 1200

(Photo: E. Estrada Lobato/IAEA)

professionals have been trained in the region. In addition, over 1000 specialists have also participated in webinars, conferences, and other continuing education activities and post-graduate work supported, and in many cases sponsored, by the IAEA. The IAEA also supports research and development through, among others, partnerships with national and regional nuclear medicine institutes, as well as technical meetings and international conferences. The IAEA works with its Member States in part through the Regional Technical Cooperation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean Region.

"Assisting countries to improve their nuclear medicine services and to transfer innovative technologies to benefit patients is an important aspect of our development efforts in the region," said Luis Carlos Longoria Gandara, Director of the IAEA's Division for Latin America and the Caribbean. "Access to quality health care services like these can help prevent unnecessary deaths and improve people's lives."



(Image: E. Estrada Lobato/IAEA)

THE SCIENCE:
What is nuclear medicine?

Nuclear medicine techniques evaluate the function of any organ or structure in the body. They provide unique information and offer the potential to identify diseases in early stages.

The majority of nuclear medicine procedures take place inside the body through specialized drugs called radiopharmaceuticals, which contain radionuclides — atoms that emit radiation — produced in nuclear research reactors or cyclotrons, a type of machine that accelerates charged particles in a vacuum. When these drugs are taken into the body, the radionuclides interact with certain tissues or organs due to their specific chemical properties without disturbing or damaging them. A special detector, such as a gamma camera, outside the body can detect the small amounts of radiation emitted from the organ or tissue. The camera is then able to translate the information into images of the specific tissue or organ.

Among the more well-known and the fastest growing of these techniques is positron emission tomography (PET). PET scans are often combined with other scanning techniques such as computed tomography (CT) to further enhance the speed, accuracy and usefulness of nuclear medical imaging.

Nuclear medicine is also used for treatment of some diseases and health conditions, such as thyroid cancer or relieving or lessening bone pain related to metastases. Doctors choose small quantities of radiopharmaceuticals that certain body parts absorb more significantly and more effectively than other body parts. This allows them to target specific areas during treatment. The small amounts of radiation in the radiopharmaceuticals then kills off the cells causing the health condition, with minimal effect on other cells in the surrounding area and the rest of the body. The combination of the diagnostic and therapeutic applications of nuclear medicine is increasingly growing. It allows the identification of specific tumour cells, and therapy can be tailored to fit the needs of individual patients.

Cleaning up uranium sites of the past for a safer future

Environmental remediation in Central Asia

Monitoring and managing radioactivity levels and the environment at abandoned uranium production sites across rural Kyrgyzstan, thanks in part to IAEA technical support, is helping to keep the public and environment safe. This work is ongoing at around 10 sites, while further funds for the implementation of long-term remediation plans still need to be secured.

"Many of these sites contain toxic residues, and the possibility of seismic instability, such as landslides, poses the biggest risk to the surrounding environment," said Asel Seitkazieva, Deputy Director at the country's Ministry of Emergency Situations.

"Kyrgyzstan's positive experience with the IAEA could serve as a useful roadmap for future remediation efforts, especially when seeking ways to implement programmes within existing national regulatory frameworks," she said.

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Asel Seitkazieva, Deputy Director, Ministry of Emergency Situations, Kyrgyzstan

According to the Ministry of Emergency Situations of the Kyrgyz Republic, Kyrgyzstan has 35 tailings dumps and 25 sites with waste rock piles.

These uranium sites were built at a time when planning for eventual end-of-life management was not a common practice. For decades, they were used for uranium production (see The Science box, page 15) and were eventually shut down in the 1990s.

(Photo: IAEA)

The immediate focus has since been on addressing risks associated with the sites to help protect people and the environment. These risks include leftover residues of long lived radioactive and highly toxic chemical contaminants that pose substantial risks to public health and the environment, as well as flooding and seismic events, such as landslides.

"By some estimates, the quantity of uranium production residues in Central Asia — such as waste rock and tailings — approaches one billion tonnes," said John Rowat, Head of the Decommissioning and Remediation Unit at the IAEA Department of Nuclear Safety and Security. "Many of these materials are stored in an unsafe manner at sites scattered across the region. Due to lack of funding, work over the last decade has focused mostly on containment of the toxins in the former mining sites to restore their safety."

Through IAEA technical cooperation projects and financing through the Peaceful Uses Initiative (PUI), specialists from the country's Ministry of Health, the National Academy of Sciences, and the State Agency for Environmental Protection and Forestry have learned to use gamma and alpha spectrometry technology to assess and monitor radiation levels. IAEA-facilitated aid from other international organizations, such as the European Commission, is also helping them to make progress in partially remediating and cultivating waste piles and mill tailings. Several landslide-prone spots near tailings have been improved and re-engineered to reduce the likelihood of instability.

Alongside these immediate actions, environmental remediation plans and projects have been prepared by Kyrgyz authorities through support from the IAEA's Coordination Group for Uranium Legacy Sites (CGULS).

(Photo: IAEA)

"The Ferghana Valley is a good example of why it's important to take a regional approach to uranium legacy site remediation in Central Asia."

John Rowat, Head, Decomissioning and Remediation, Department of Nuclear Safety and Security, IAEA

While lack of funds has stalled progress on implementing remediation plans, preparing sites by "beginning to transfer tailings to safe zones and beginning to restore other tailings, the groundwork has been set for future remediation. Once further funding is secured, physical transfer of the waste and re-cultivation of the site will take place," Seitkazieva said.

Neighbouring countries can learn from each other

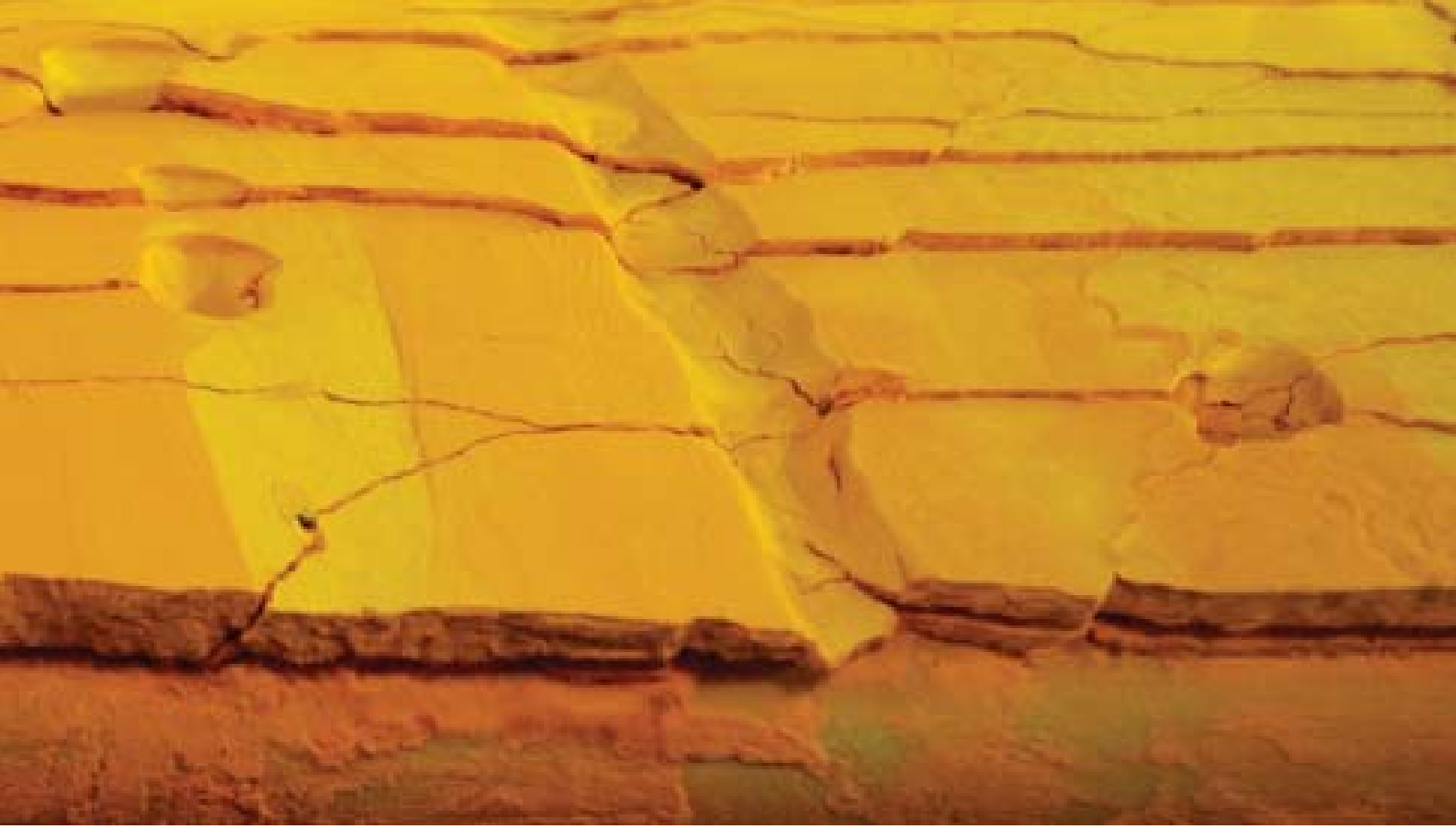
"Kyrgyzstan's experience with IAEA-supported remediation efforts may be helpful for neighbouring countries considering similar projects," said Seitkazieva. Tajikistan and Uzbekistan, for instance, have engaged the IAEA to procure laboratory equipment, arrange training of staff and assist in site characterization exercises, much like what Kyrgyzstan has already done.

Kyrgyzstan's neighbours often share common challenges when it comes to remediation. Along the border of Kyrgyzstan, Tajikistan and Uzbekistan, a valued agricultural watershed in the Ferghana Valley is under threat of contamination by toxic substances from former uranium production sites.

"The Ferghana Valley is a good example of why it's important to take a regional approach to uranium legacy site remediation in Central Asia, to complement country-specific programmes," Rowat said. The IAEA is working with the three countries to address remediation at the regional level. "Kyrgyzstan, Tajikistan, and Uzbekistan all draw upon the water resources of the Ferghana Valley."

Sustainable today for a better tomorrow

Uranium and associated minerals remain central to nuclear energy production. As countries continue to show an interest in nuclear power, ensuring proper regulatory frameworks and control capacities is essential.



To this end, the IAEA, in part through PUI, has helped countries worldwide to develop a better understanding of how uranium resources can be exploited in a safe and sustainable manner and how to reduce potential problems with uranium legacy sites. This includes helping countries to learn how to safely assess site-specific radiological impact on people and the environment stemming from uranium production, as well as the remediation and long-term management of sites.

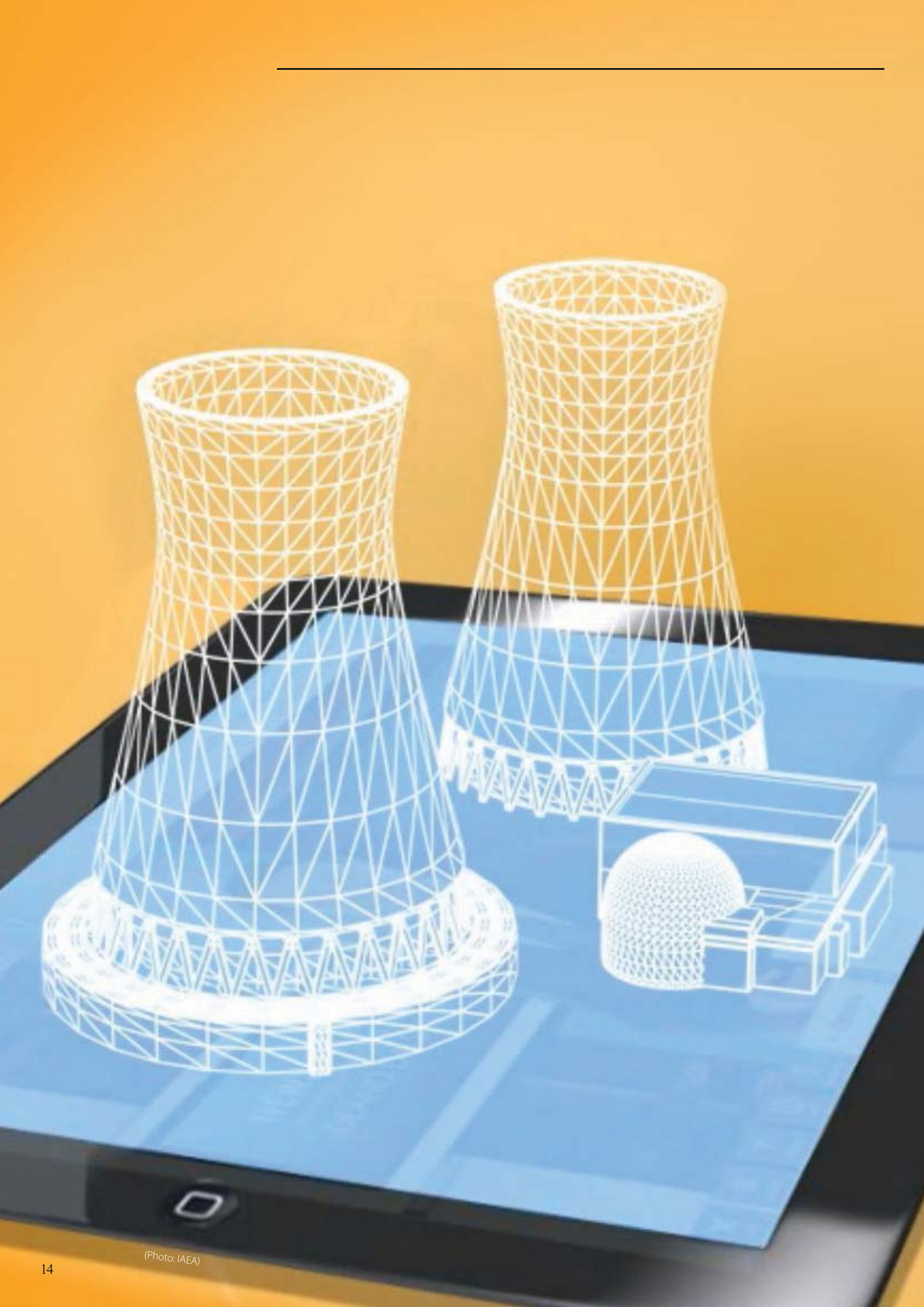
Maintaining a sustainable approach to uranium production and the use of nuclear energy also contributes to the Sustainable Development Goals, which were adopted by the United Nations in September 2015.

THE SCIENCE:
What is uranium and how is it used?

Uranium is a radioactive chemical element that naturally occurs in rock, soil and water. It is typically mined using open-pit technology when the ore is close to the surface, and using underground mining when it is deeper down. The ore typically contains from around a few hundred parts per million to up to 20 per cent uranium. Globally, close to 60 000 tonnes of uranium are produced annually.

Uranium has six naturally known isotopes, which are atoms that share the same number of protons as uranium, but have a different number of neutrons. Like all radioactive isotopes, uranium isotopes decay, releasing radiation in the process. This radiation can be harnessed for use in a nuclear power reactor for producing energy and in research reactors for scientific studies. It can also be used in, among others, photographic chemicals and certain types of specialized light bulbs, as well as in geology for dating the age of rocks and in the production of high-energy X-rays.

As uranium decays, it forms other chemical elements and isotopes, like plutonium-239. These also serve as sources of radiation that can be used in, among others, nuclear reactors, medicine, food and agriculture and industry.

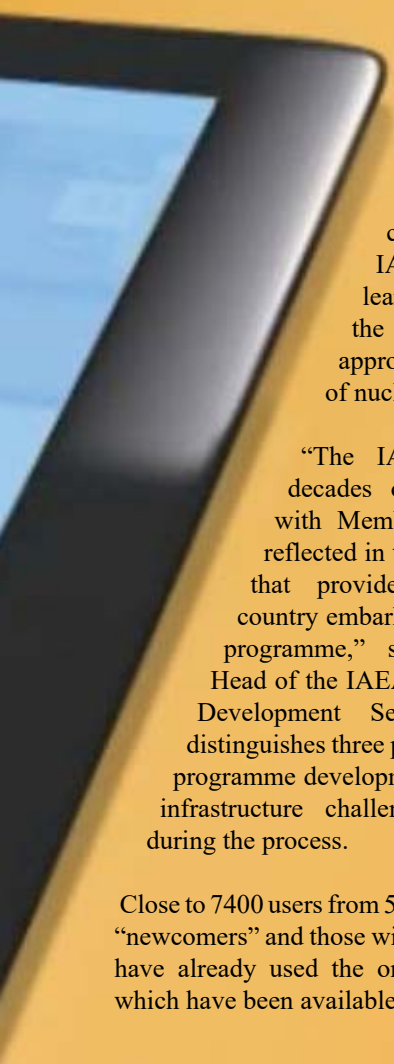


(Photo: IAEA)

Putting the 'E' in nucl-e-ar

IAEA develops online learning tools for Member States

Developing a nuclear programme is a major undertaking that requires careful planning, preparation and investment in time, institutions and human resources, and can take at least a decade. Fostering the efficient and safe use of nuclear energy and assisting countries to learn from each other's experience is among the key roles of the IAEA and the Peaceful Uses Initiative (PUI).



To help experts' and policymakers' ease into the complex process of starting and running a nuclear power programme, industry professionals can now access a series of IAEA-developed online learning modules based on the IAEA's "Milestones" approach to the introduction of nuclear power.

"The IAEA has accumulated decades of experience working with Member States, and this is reflected in the Milestones approach that provides guidance for any country embarking on a nuclear power programme," said Milko Kovachev, Head of the IAEA Nuclear Infrastructure Development Section. The approach distinguishes three phases for nuclear power programme development and 19 key nuclear infrastructure challenges to be addressed during the process.

Close to 7400 users from 50 countries, both nuclear "newcomers" and those with existing programmes, have already used the online learning modules, which have been available since 2013.

"I have been able to brief senior Government officials in my country on nuclear power using the online modules. The content is well presented and the language is easy to understand."

Emmanuel Wandera, Senior Corporate Affairs and Communication Officer, Kenya Nuclear Electricity Board, Kenya

"I have been able to brief senior Government officials in my country on nuclear power using the online modules," said Emmanuel Wandera, Senior Corporate Affairs and Communication Officer at the Kenya Nuclear Electricity Board. "The content is well presented and the language is easy to understand. For countries with slow internet, the downloading option has made it easier to access and share the modules."

The online portal includes 14 modules that comprehensively explore the ins and outs of nuclear power infrastructure development, covering areas ranging from human resources strategy, to construction management, to how to conduct a feasibility study. Each course begins with a high-level summary targeting decision makers followed by more detailed explanations.

The modules target a variety of stakeholders, including policymakers, advisers and senior government officials, regulatory bodies and operators. The modules can also help researchers, academics and students in the nuclear field better understand the "big picture" of developing nuclear power programmes.

As many of the same principles apply for the infrastructure development for any new nuclear power plant, those involved in expanding existing

(Photo: National Atomic Energy Agency (CENA))

nuclear power programmes may also find the learning programme to be a valuable resource, Kovachev said.

Going online to get hands-on

Taking interactive online learning to the next level, the IAEA-supported Internet Reactor Laboratory connects university classrooms in one part of the world to an operating research reactor in another via the Internet.

Using hardware and software installed in the host research reactor, real-time data is sent over the internet to the participating classroom, where students are able to see the live display of the reactor's control panel. Using a video conference link, students can conduct experiments by asking the reactor operators in the control room to change reactor settings and see real-time output. This practical experience enhances their education in nuclear engineering, physics and basic aspects of reactor operation.

Since the launch of the project in 2015, two host institutions and seven guest universities have been engaged.

Argentina's RA-6 research reactor is serving as the hub of the project in Latin America, conducting six experiments a year with guest universities in Ecuador, Colombia and Cuba, said Pablo Cantero of the Argentinean National Atomic Energy Commission (CNEA). France's CEA-ISIS research reactor is the hub for Europe and Africa, broadcasting five experiments a year to Belarus, Lithuania, Tanzania and Tunisia.

The IAEA will continue to enhance Member States' access to online tools and other educational resources. "We have created a single, unified web portal," said John de Grosbois, Head of the IAEA Nuclear Knowledge Management Section. "This one-stop-shop will make it easier for users to find and access all of the IAEA's e-learning material and other training resources."

THE SCIENCE:

Nuclear knowledge management

The nuclear industry is knowledge-based and depends on the skills and knowledge of its workforce. For countries operating a nuclear power programme, an ageing workforce coupled with a decline in student enrolment in science and engineering programmes in general and nuclear science in particular has led to a need to intensify efforts to ensure an adequate pool of experienced professionals. They need to be prepared to take on responsibility in senior technical roles and contribute to the management of the nuclear sector.

For newcomer countries that are considering or planning their first nuclear power plant, ensuring nuclear knowledge is built and can be maintained throughout the lifetime of a programme is essential. This knowledge includes governmental, legal, regulatory, managerial, technological, human resource, industrial and stakeholder aspects of developing a nuclear power programme. Ultimately, this specialized knowledge lays the foundation for developing and using nuclear facilities and materials in a safe, secure and peaceful way.

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60 Years

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