Morocco

IAEA Member State since September 1957

IAEA Technical Cooperation Programme

Key achievements in Morocco

- AFRA Regional Designated Centres for Clinical Radiotherapy and Medical Physics, Environmental Isotope Hydrology, Stable Isotope Techniques in Human Nutrition, Non-Destructive Testing in Industrial Applications, and Training and Education in Radiation Protection
- 2016: New national regulatory authority established: Moroccan Agency for Nuclear and Radiological Safety and Security.
- 2010: Atlas of Isotope Hydrology, Morocco, showing national water resources, published.

Atoms for peace and development

The International Atomic Energy Agency is the world's central intergovernmental forum for scientific and technical cooperation in the nuclear field. It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security.

The IAEA's technical cooperation programme helps countries to use nuclear science and technology to address key development priorities, including health, agriculture, water, the environment and industry. The programme also helps countries to identify and meet future energy needs. It supports greater radiation safety and nuclear security, and provides legislative assistance.

The IAEA helped Morocco to analyse groundwater using isotope tools to better understand its interaction with surface water. (Photo: Acil Ghassan/CNESTEN)

Recent project successes

Food safety and animal health

Under the National Office for Food Safety and with IAEA support, the capacity of Morocco's network of national veterinary laboratories to detect drug residues was greatly enhanced. Abilities for early detection and response to disease outbreaks, such as avian influenza and rabies, were also significantly strengthened, as were quality assurance and quality control in molecular biology analysis.

The number of accredited drug residue and animal disease detection methods used in Morocco has more than doubled since 2012. In 2016, IAEA-trained analysts participated in the diagnosis of the first outbreak of the H9N2 avian influenza virus in Morocco.

Health and nutrition

The National Fortification Alliance was formed to combat Morocco's significant iron or micronutrient deficiency public health problem. In 2002, it was decided to fortify wheat flour with elemental iron. In 2016, the Government changed the type of iron to NaFeEDTA, as IAEA-supported research had found this to be less affected by dietary iron inhibitors and more easily absorbed by the body.

Human health (radiotherapy)

Around 17 500[1] cancer patients require radiotherapy each year in Morocco, and demand for services is growing. In partnership with the Ministry of Health and with support from the Lalla Salma Foundation, the IAEA is working to improve the quality of radiotherapy in Morocco. This includes providing training to increase the skills of radiation oncologists, medical physicists and radiation therapists from eight major teaching hospitals to utilize high-precision techniques at Government cancer therapy institutions. The project also supports increased use of advanced 3D techniques for treatment planning and therapy.

Isotope Hydrology

The IAEA has assisted Morocco to analyse the groundwater in the Sebou Basin, which covers approximately 40 000 km^2 – 6 percent of the surface area of Morocco and home to 6.2 million people.

[1] IAEA 2018

SUSTAINABLE DEVELOPMENT GOALS

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With IAEA assistance, national capacity to use isotope tools to better understand the interaction of surface and groundwater was enhanced. Data from these studies will contribute to Government efforts to improve the management and sustainable use of groundwater.

Active national projects

- Developing the Triga Mark II Reactor Facility for Applications in Socioeconomic Sectors (MOR1011)
- Building a National Nuclear Power Infrastructure (MOR2009)
- Implementing the Sterile Insect Technique in the Souss Valley (MOR5035)
- Enhancing Control of Chemical Food and Feed Contaminants, Animal Disease Diagnosis and Trade in Fresh Fruits (MOR5037)
- Enhancing Hybrid Imaging in Oncology, Cardiology and Neurology (MOR6024)
- Characterising Thermal waters Using Isotopic and Nuclear Techniques (MOR7007)
- Strengthening National Infrastructure for Radiation Safety and Security (MOR9018)

Morocco also participates in 53 regional and 9 interregional projects, mostly in the area of food and agriculture.

Previous IAEA support to Morocco

Morocco's current IAEA support is focused on human health, agriculture, nuclear technology, water resource management and radiation protection.

The potential use of nuclear power in a future energy mix will continue to be investigated according to an integrated work plan. This was developed in September 2016, in response to recommendations made by the Integrated Nuclear Infrastructure Review mission held in late 2015.

The considerable expertise developed for the management of water resources using isotopic techniques will be further expanded to characterize thermal waters for their potential exploitation.

IAEA support to Morocco, 2009–2019

702 trained (including 232 women)

86 international experts provided

176 attended specialist meetings (including 52 women)

Priority areas of support

- Improving nuclear and radiation safety
- Enhancing food and agriculture sectors
- Strengthening human health
- Assessing water and the environment
- Building energy and industrial sectors

Morocco's contribution to South-South and triangular cooperation, 2009–2019

319 expert and lecturer assignments provided by Morocco

1174 training course participants

636 fellows or scientific visitors hosted

Based on data available as of April 2020

Strategic documents supported

- United Nations Development Assistance Framework (2017–2021)
- Country Programme Framework (2018–2023), signed in September 2018
- An Integrated Workplan was developed in September 2016, responding to recommendations of the Integrated Nuclear Infrastructure Review mission in 2015
- IAEA Practical Arrangement signed in September 2017 with CNESTEN of Morocco, establishing a framework for non-exclusive cooperation to enhance technical cooperation among developing countries for the effective delivery of the IAEA technical cooperation programme to Member States.

www.iaea.org/technicalcooperation

The IAEA collaborates with National Liaison Officers and Permanent Missions to deliver its TC programme.