

## Key achievements in Bahrain

- 2018: Five fixed and one mobile emergency radiation early warning stations are established throughout the country, and staff are trained.
- 2018: Capacity to use a stable isotope technique to study the causes of childhood and adolescent obesity is established.
- 2016: An advanced laboratory to detect toxins in agricultural produce and seafood is established at the Public Health Laboratory in Manama, Bahrain.

## Atoms for peace and development

Widely known as the world's 'Atoms for Peace and Development' organization within the United Nations family, the IAEA is the international centre for cooperation in the nuclear field. The Agency works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.

The IAEA's technical cooperation (TC) programme helps countries to use nuclear science and technology to address key development priorities in areas 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.



H.E. Shaikh Khalid Bin Ahmed Bin Mohammed Al Khalifa (front, centre) and United Nations Resident Coordinator Amin El Sharkawi (sixth from left) with Bahraini and UN officials following the signing of a Strategic Partnership Framework. The IAEA will provide assistance in health and human development, food security and nutrition, water quality and sustainability, and emergency preparedness. (Photo: UN Photographer in Bahrain.)

## Recent project successes

### Human health and nutrition

In an effort to address Bahrain's estimated 30 per cent obese population, the IAEA worked with the World Health Organization to build the country's capacity to use stable isotopes to study how children and adolescents burn energy and to make meal planning more effective.

This included enhancing the laboratory's capacity and training staff in using the 'doubly labelled' water technique to track energy consumption.



A delegation from Bahrain visited the Seibersdorf Laboratories in Austria, to become more acquainted with the broad scope of research activities and technologies which can support the country and its development goals for human health, food and agriculture, and water resource management. (Photo: IAEA)

### Nuclear safety and security

Five radiation early warning stations were established around the country as well as one mobile emergency radiation station. The IAEA procured radiation monitoring equipment and supported the development of emergency response mechanisms and specialist training. These measures enable Bahrain to respond more effectively to potential radiation and radiological emergencies, both locally and outside the country.

### Human health

Bahrain received support to upgrade the nuclear medicine department at the Salmaniya Medical Complex in Manama. The IAEA provided the specialist training needed to enhance staff operational and diagnostic skills, and helped develop a quality assurance system to ensure accurate and safe doses of radiation are provided for patients' treatment. The newly trained personnel will form the basis for future national train-the-trainers programmes.

## Active national projects

- Establishing a High Resolution Material Characterization Laboratory Using Nuclear Analytical Techniques (BAH1001)
- Establishing a National Quality Control Standard for Foodstuffs and Fishery Products (BAH5002)
- Enhancing Analytical Capabilities for Improved Environmental Monitoring (BAH7001)
- Strengthening Occupational Radiation Protection Systems (BAH9007)
- Improving the Regulatory Infrastructure for Radiation and Nuclear Safety (BAH9008)
- Building National Capabilities in Naturally Occurring Radioactive Material Policies and Regulations, Control and Waste Management (BAH9009)
- Ensuring the Sustainability of National Capabilities in Preparedness and Response to Radiation Emergencies (BAH9010)

Bahrain also participates in 18 regional and 2 interregional projects, mostly in the area of radiation protection and nuclear safety.

## Previous IAEA support to Bahrain

In recent years, support to Bahrain focused on protecting human health and ensuring the safe supply of quality food in the country. State-of-the-art health equipment was introduced with safety training which led to notable improvements in national clinical nuclear medicine and radionuclide therapy procedures. Initiatives have also focused on strengthening national capacity to measure environmental radionuclide concentration levels in the air, seawater and drinking water, and have enhanced national capabilities to prepare and respond to radiation emergencies.



A workshop to enhance the quality of nuclear medicine practice took place in Manama and was attended by 40 participants from national hospitals and Bahrain's Ministry of Health. (Photo: IAEA)

## IAEA support to Bahrain, 2009–2019



69

trained  
(including 17 women)

56

international  
experts  
provided

22

attended specialist  
meetings  
(including 3 women)

## Priority areas of support

- Improving food productivity
- Supporting nutrition and human health
- Enhancing the management of groundwater resources
- Supporting energy development planning
- Ensuring a cleaner and safer environment

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

8

training course  
participants



expert and lecturer  
assignment provided  
by Bahrain

Based on data available as of April 2020

## Strategic documents supported

- United Nations Strategic Partnership Framework (2018–2022), signed October 2017
- Country Programme Framework 2018–2023, signed in May 2018

[www.iaea.org/technicalcooperation](http://www.iaea.org/technicalcooperation)

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