



Malaysia

IAEA Member State since January 1969



Technical Cooperation Programme

Key achievements in Malaysia

- 2019: The Nuklear Malaysia's designation as an IAEA Collaborating Centre in Radiation Processing, Advanced Non-Destructive Testing and Plant Mutation Breeding is extended until 2023.
- 2014: Malaysia receives an FAO-IAEA Achievement Award in recognition of its contribution to plant breeding, which saw a 40 per cent increase in rice yields.
- 2010: Nuklear Malaysia's designation as an IAEA Collaborating Centre for Radiation Processing of Natural Polymer and Nanomaterials is further endorsed for 2010-2014.

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.



Farmers in northern Malaysia have seen rice yields increase by as much as 40 per cent since adapting a package of agricultural goods and services developed by the Nuklear Malaysia and the IAEA. (Photo: Nuklear Malaysia)

Recent project successes

Industrial applications and non-destructive testing

Malaysia received IAEA support to establish an accredited training and certification system for non-destructive testing (NDT) technologies, and to promote it to users. National expertise was developed through training courses, fellowships and scientific visits, and the provision of equipment. Malaysia's training system and National NDT Certification Scheme have become a reference point for many countries in the region seeking to develop their own programme.

In 2015, the Nuklear Malaysia was designated as an IAEA Collaborating Centre for NDT. It maintained its designation for Advanced NDT in 2019 for a second period up to 2023. These designations recognized Nuklear Malaysia's significant achievements in non-destructive testing, including ISO 9712 and ISO 17024 accreditations, and its close cooperation with the IAEA in regional training, research and development activities.

Food and agriculture

The application of nuclear science and technology in bioscience and agriculture has expanded in tandem with national policies in the agricultural sector, focusing on increasing food production through plant breeding, and increasing the quality and safety of food through irradiation.

With support from the IAEA, a new facility for using a 'chronic irradiation' technique to produce plant varieties, while minimising radiation damage, was established. Known as Gamma Greenhouse, the facility was commissioned at the Nuklear Malaysia in 2009. It is the only one of its kind in the region conducting research and development in chronic irradiation for local and international institutions. In recognition of this achievement, the IAEA awarded Nuklear Malaysia with a FAO-IAEA Achievement Award in 2014.

In 2019, Nuklear Malaysia was designated as an IAEA Collaborating Centre for 2019-2023 in Plant Mutation Breeding using Chronic Gamma Irradiation.



Active national projects

- Strengthening Capability in the Application of Nuclear and Related Technology in Industry (MAL1016)
- Enhancing Capabilities in Nuclear and Related Technologies for Reliable and Sustainable Industries (MAL1017)
- Exploring the Potential of Thorium Resources for Possible Commercial By-product Extraction (MAL2007)
- Strengthening the Technical and Regulatory Capabilities and Infrastructure for the Nuclear Power Programme (MAL2009)
- Establishing an Environmentally Sustainable Food and Fodder Crop Production System (MAL5031)
- Strengthening National Capacity in Improving the Production of Rice and Fodder Crops and Authenticity of Local Honey Using Nuclear and Related Technologies (MAL5032)
- Strengthening National Capabilities in Advanced Radiological Techniques and Therapeutic Nuclear Medicine Technologies for Cancer Management (MAL6023)
- Improving Clinical Management of Cancer Patients through Targeted Radionuclide Therapy and Theranostic Applications (MAL6024)
- Strengthening Technical Capabilities for Assessing the Impact of Radioactive Waste Disposal Options on Sustainable Water Resources (MAL7006)
- Enhancing Radiochemical Analytical Capabilities for Sustainable Coastal and Terrestrial Environmental Monitoring (MAL7007)
- Strengthening the Regulatory Infrastructure for Radiation and Nuclear Safety (MAL9018)

Malaysia also participates in 48 regional and 11 interregional projects, mostly in the area of health and nutrition.

Previous IAEA support to Malaysia

Recent support to Malaysia includes strengthening nuclear regulatory infrastructure, nuclear medicines, food safety and radiation processing for industrial applications and non-destructive testing.

IAEA support to Malaysia, 2009–2019



1048 trained
(including 457 women)

194 international experts provided

266 attended specialist meetings
(including 125 women)

Priority areas of support

- Improving the human health infrastructure
- Supporting the food and agriculture sector
- Protecting water and the environment
- Enhancing energy and the industrial sector
- Strengthening nuclear safety and security
- Improving radioactive waste management

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



238 expert and lecturer assignments provided by Malaysia

894 training course participants

190 fellows or scientific visitors hosted

Based on data available as of April 2020

Cancer control **imPACT** Review conducted: September 2012

Strategic documents supported

- Country Programme Framework 2017–2021, signed May 2016

www.iaea.org/technicalcooperation

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

