

Indonesia

IAEA Member State since August 1957

Selected achievements

2022: Indonesia's national food safety laboratory successfully attains international accreditation ISO/IEC 17025 for testing and calibration, thereby validating its capacity to detect and monitor food contaminants.

2018: The IAEA, UNIDO and the FAO launch a joint project to improve the productivity of the tempeh soybean, a common foodstuff.

2018: Indonesia's Ministry of Research, Technology and Higher Education signs Practical Arrangements with the IAEA to strengthen South-South cooperation.



Researchers at Indonesia's National Nuclear Energy Agency (now part of BRIN) use irradiation to induce genetic alteration in crops and then select plants with new and useful traits. (Photo: Yustantiana/BRIN)

National priorities

- Food and agriculture
- Human health
- Water and the environment
- Mining industry
- Radiation and nuclear safety, nuclear security

Main areas of IAEA support

- Plant breeding
- Food and agriculture

Project successes

Livestock production

With IAEA guidance on feeding and reproduction, Indonesia enhanced its food security and sustainability by increasing cattle productivity.

Scientists from IPB University developed skills through fellowships focused on molecular genetic characterization and the evaluation of animal vaccines.

These efforts have benefited smallholder beef farmers, allowing them to improve livestock health and increase economic returns.

Long term, these efforts will result in sustained food security and economic prosperity for small-scale cattle farmers in Indonesia.

Plant breeding

Since 1997, the IAEA has helped Indonesia to develop disease-resistant banana plants and high-yield, climate-resilient soybean and rice varieties using plant breeding techniques.

This has helped Indonesia towards its goal of producing enough rice to feed 20 million people. Twenty-three newly developed rice varieties now yield 150 per cent more rice than the regular local varieties and in a shorter time.

Indonesia's National Research and Innovation Agency – BRIN – received state-of-the-art equipment, extensive specialist training and support from IAEA experts.

These efforts have helped increase incomes and cement the country's commitment to sustainable agricultural production.

Non-destructive testing and evaluation

The IAEA has been helping Indonesia to upgrade laboratory capabilities in advanced non-destructive evaluation and nuclear analytical techniques thereby elevating the standards of environmental management.

This enabled the country to better address metal contamination in the environment and provided a platform for a collaborative research initiative between the Institutes of Technology in Bandung and Surabaya. The project also assessed the impact of the industrial sector on air, soil and vegetation.

Presently, 19 local environmental protection agencies benefit from the laboratory's analytical services.

Participation in the major initiatives

- NUTEC Plastics
- Rays of Hope
- ZODIAC



Many of the varieties of soybeans, rice and other crops bred using nuclear techniques are now in commercial use across the country. (Photo: Yustantiana/BRIN)

Date of imPACT Review(s)

2024, 2018, 2010

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

