China

IAEA Member State since January 1984

Selected achievements

2022: A new Nuclear Energy Management (NEM) School series is launched in China, to be held annually in support of newcomer countries.

2021: The Chinese Academy of Agriculture Sciences is recognized for its outstanding achievements in the area of wheat mutation breeding and receives an award from IAEA Director General Rafael Mariano Grossi.

2019: China finalizes plans for its first underground research laboratory and deep geological disposal site for high level radioactive waste at Beishan in Xinjiang province, north-west China.

2019: The China Atomic Energy Authority is designated as an IAEA Collaborating Centre to help regulate the safe and secure operation of its nuclear power plants.

National priorities

- Nuclear fuel cycle
- Nuclear and radiation safety
- Food and agriculture
- Industrial sector
- Water resources and the environment
- Human health
- Nuclear security

Main areas of IAEA support

- Nuclear energy development
- Fuel cycle
- Safety and emergency preparedness
- Response capabilities strengthening
- Food and agriculture

Turbine hall of Qinshan Nuclear Power Plant Phase 2 in China, June 2004. (Photo: P. Pavlicek/IAEA)

Project successes

Energy planning and nuclear power

In September 2018, the China Atomic Energy Authority signed practical arrangements with the IAEA to partner on education and training in nuclear energy, nuclear safety and security, and nuclear science and applications. This included supporting PhD and MSc degrees in Nuclear Engineering for more than 20 professionals from developing countries annually.

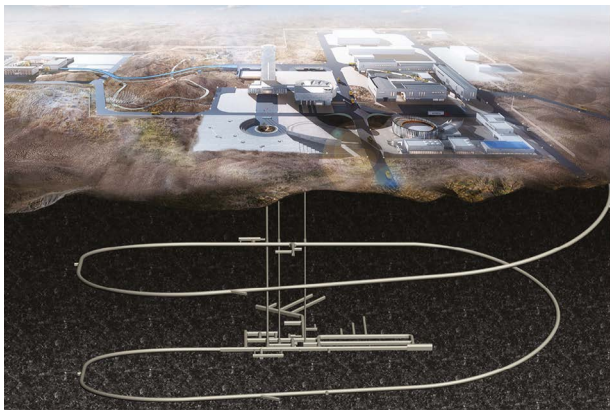
China operates over 50 nuclear reactors with more under construction. The country continues to strengthen its national nuclear safety and security, its emergency preparedness and response infrastructures.

In 2019, the China Atomic Energy Authority was designated as an IAEA Collaborating Centre enabling China to provide research, development, testing and training on nuclear security detection and physical protection technologies to IAEA Member States.

Radioactive waste and safety management

With support from the IAEA, China has strengthened its radioactive waste management infrastructure and capabilities. The collaboration led to the construction of China's first research laboratory for deep geological disposal of high-level radioactive waste, 400 meters below the Beishan underground research laboratory.

For more than 20 years, China has been developing its institutional infrastructure, human capacity and technical capabilities for the geological disposal of high-level radioactive waste. During this time, the country has benefited from IAEA support for planning, site selection, characterization, on-site tests and staff training. In the long term, these efforts will have made an important contribution to the global development of high-level waste repositories.



The Underground Research Laboratory will allow Chinese scientists to fully characterize the site's geology and determine its suitability for HLW repository. (Photo: BRIUG)

Food safety

China has significantly advanced its dairy industry by developing and implementing an integrated approach to utilizing local protein feed resources effectively. Production efficiency was enhanced by uncovering the mechanisms underpinning nitrogen conversion in dairy cattle.

The IAEA's support for this initiative has helped resolve key technical problems faced by dairy producers elsewhere in the world, and contributed to the sustainable development of the dairy industry in China and beyond.

Participation in the major initiatives

- NUTEC Plastics
- ZODIAC

IAEA support received in the 21st century

84
national TC projects implemented

775 (139 women)
fellows and scientific visits

853 (254 women)
training participants

1526 (306 women)
meeting participants

705 (53 women)
expert missions received

Contributions to South-South and triangular cooperation

572 (105 women)
fellows and scientific visits hosted

1365 (463 women)
meeting participants hosted

429 (47 women)
expert missions supported

RCA