



# AUSTRALIA AND THE IAEA



## Partners in Non-Proliferation and the Peaceful Uses of Nuclear Technology

*Australia is a designated Member of the IAEA's Board of Governors and has served as Chair of the Board on four occasions: 2001-2002; 1993-1994; 1969-1970; and 1960-1961.*

### Safeguards Partnership

Australia is currently the Chair of the Standing Advisory Group on Safeguards Implementation.

The University of Western Australia and the Australian Nuclear Science and Technology Organisation (ANSTO) cooperate with the IAEA on the analysis of environmental samples collected by safeguards inspectors. These analyses allow the Agency to draw conclusions on whether a State is complying with its safeguards obligations.

### Nuclear Safety, Security and Liability Partnership

**Nuclear Security:** Australia is the Agency's principal partner in implementing nuclear security work in South-East Asia. It has contributed over \$1 million to the Nuclear Security Fund and provides experts and hosts training events. As participants in the Nuclear Security Guidance Committee, Australian experts provide substantive guidance for the IAEA's Nuclear Security Series, as well as providing expertise on the IAEA Director General's Advisory Group on Nuclear Security.

**Nuclear Safety:** Australia closely collaborates with the IAEA on nuclear safety in developing nuclear safety standards for waste, transport and radiation safety, and Australian experts participate substantively in the respective committees.

**International Law:** Since 2003 Australia chairs the International Expert Group on Nuclear Liability, which held its 13th regular meeting in May 2013.

### Health Care Partnership

**Nuclear Medicine:** Australia hosts training in radiation medicine, provides experts for radiation medicine activities and develops online learning tools for medical professionals in oncology and radiation medicine.

**Radioisotopes:** The Australian research reactor based on low enriched uranium fuel, OPAL, began operation at ANSTO in 2007, producing radioisotopes for nuclear medicine treatment.

**Nutrition & Training:** The University of Queensland and the Mater Medical Research Institute support the IAEA's nutrition training by preparing educational and distance learning materials.

**Cancer Control:** Australia helps low and middle income countries strengthen their radiation medicine programmes, including support from the Cancer Council Australia and the Ingham Institute for Applied Medical Research to improve cancer control in developing countries.

Advanced nuclear forensic methodologies developed by Australia for the benefit of IAEA Member States.

Scientific experts from ANSTO analyse soil using nuclear technology to support the IAEA's research in many areas, including agriculture and climate change.

ANSTO's research reactor, OPAL, produces neutron beams that support scientific research. It also produces radioisotopes that benefit IAEA Member States in medical diagnosis and treatment.





Thai medical students receive online training provided by the Australian Distance Assisted Training course for nuclear medical professionals from the developing world. It is delivered under a regional cooperative agreement for research, development and training related to nuclear science and technology for Asia and the Pacific.



Using a beam of neutrons, the ANSTO-developed Rapid Visco Analyser can for the first time analyse the changes in starch structure resulting from cooking. This nutritional knowledge benefits all IAEA Member States.

## Sustainability Partnership

Australia is a member of the Standing Advisory Group on Nuclear Applications that advises the IAEA Director General on nuclear applications in food and agriculture, human health, water resources, the environment, radioisotope production and radiation technology.

**Climate Change:** Australia supports IAEA research in assessing the impact of climate change on sustainable marine ecosystem management and trains developing country scientists to monitor these effects on corals. The Australian Antarctic Climate & Ecosystems Cooperative Research Centre in Hobart supports the IAEA's Ocean Acidification International Coordination Centre.

**Energy Security:** Australia is represented in the NEA/IAEA Uranium Group and takes the lead with the IAEA of the Friends of Responsible Uranium Mining (FoRUM). Australia also hosts training in environmental and regulatory best practice in uranium mining.

**Radioactive Monitoring:** Australia is the lead country for the IAEA study on the possible marine impact of the Fukushima radioactive releases in the Asia-Pacific region.

## Food Security Partnership

**Marine Toxins:** The University of Queensland contributed to a study that led to innovations in detecting harmful algae toxins in shellfish, which the IAEA has helped Member States use in Africa, Asia and Latin America to protect consumers and support trade.

**Insect Pests:** Australian experts support the IAEA's Laboratories' insect pest management programmes that suppress insect pests with little or no chemical pesticides.

**Animal Diseases:** The Australian Animal Health Laboratory collaborates with the IAEA on the early diagnosis and control of transboundary animal diseases.

**Improving Soil, Water and Crop Management:** The Commonwealth Scientific and Industrial Research Organization helps IAEA Member States improve soil, water and crop management practices that can sustainably use salt affected soils and saline waters.

**Combating Wheat Rust:** The Department of Agriculture, Government of Western Australia, supports an IAEA project to combat wheat black stem rust, which can decimate wheat harvests in the developing world.

**Water Management:** Australia is helping the IAEA develop innovative techniques to improve agricultural water management, and provides technical expertise to Member States in water management.

## Research Partnership

Australia currently holds four IAEA research contracts and 33 IAEA research agreements.

**Physics:** Australia is represented in the Nuclear Structure and Decay Data Evaluators' Network. The IAEA collaborates with ANSTO on accelerator and research reactor projects, as does the Australian Fusion Community.

**Interlaboratory Comparisons & Proficiency Test:** The Sydney Water Corporation and the National Measurement Institute, Victoria, support interlaboratory comparisons and proficiency tests to improve the quality of analytical results.