

Joint Standing Committee on Treaties

Inquiry into Nuclear Non-proliferation and Disarmament

Introduction:

Australia has long been an active proponent of nuclear non-proliferation and disarmament. Australia is a party to a number of international treaties which confirm Australia's commitment to nuclear non-proliferation, disarmament and the peaceful, safe and secure use of nuclear technology.

Treaties specifically addressing nuclear non-proliferation and disarmament are discussed in the joint submission by the Department of Foreign Affairs and Trade and the Australian Safeguards and Non-Proliferation Office. ANSTO has played, and continues to play, a significant role in the practical implementation of those treaties. For example, in the 1990s ANSTO's facilities were used as a proving ground for many of the techniques subsequently included in the International Atomic Energy Agency's (IAEA) Model Additional Protocol, and ANSTO's facilities are currently used to analyse samples taken by IAEA inspectors at nuclear sites around the world.

As noted in the joint submission by the Department of Foreign Affairs and Trade and the Australian Safeguards and Non-Proliferation Office, cooperation in the peaceful uses of nuclear energy¹ is a central component of the non-proliferation "bargain". Australia is a party to a number of treaties that promote and govern the peaceful use of nuclear energy. The relevance of those treaties to the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) has been stressed by successive NPT Review Conferences². This submission discusses those treaties.

Cooperation in the peaceful use of nuclear energy

Statute of the International Atomic Energy Agency

The 1956 Statute of the IAEA promotes the peaceful use of nuclear energy. Article II of the Statute provides that the objective of the IAEA is to 'accelerate and enlarge the contribution of atomic energy to peace, health and prosperity.' This principle is further expanded in Article III of the Statute, which notes that the IAEA's functions include:

1. To encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world...
2. To make provision, in accordance with this Statute, for materials, services, equipment, and facilities to meet the needs of research on, and development and practical application of, atomic energy for peaceful purposes, including the production of electric power, with due consideration for the needs of the under-developed areas of the world;
3. To foster the exchange of scientific and technical information on peaceful uses of atomic energy;
4. To encourage the exchange of training of scientists and experts in the field of peaceful uses of atomic energy;

¹ In this sense, "nuclear energy" refers to all civilian uses of nuclear technology, not just nuclear power.

² See, for example, the conclusions of the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, <http://www.un.org/disarmament/WMD/Nuclear/2000-NPT/pdf/FD-Part1and2.pdf>

5. To establish and administer safeguards...; and
6. To establish or adopt... standards of safety for protection of health and minimization of danger to life and property...

Australia was a founding member of the Agency. It has been a designated member of the IAEA Board of Governors since it first met in 1957. It is the only designated member of the Board without a nuclear power program, and that membership is largely reliant on ANSTO's facilities and expertise.

Treaty on the Non-Proliferation of Nuclear Weapons

Article IV of the NPT promotes and preserves the right of states to research, produce and use nuclear energy for peaceful means:

Article IV

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty.
2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organisations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.³

The IAEA is the primary mechanism by which this provision is implemented. The IAEA promotes information exchange, cooperation and technology transfer on a range of applications of nuclear energy⁴. In particular, it conducts a technical cooperation program⁵ funded by voluntary donations from Member States. The technical cooperation program disburses more than \$100 million worth of equipment, services, and training per year in approximately 100 countries and territories. Australia has a strong record in paying its contributions to the Technical Cooperation Fund and in contributing to cooperative research projects⁶ conducted by the IAEA. Within Australia, ANSTO has prime responsibility for interacting with the IAEA on the implementation of the program. *Some numbers on fellows, CRPs etc.*

As part of their technical cooperation programme, the IAEA provides funding through awards of scientific visits or fellowships to enable personnel from developing countries to receive specialised training at appropriate institutes around the world. This can be linked to a specific project, or may be on an individual basis as a direct contribution to the manpower development of atomic energy applications for peaceful purposes in their own countries⁷. Under an MOU with the IAEA, ANSTO coordinates and facilitates the placement of all IAEA

³ Australian Treaty Series 1973 No 3.

⁴ <http://www.iaea.org/OurWork/ST/index.html>

⁵ <http://www-tc.iaea.org/tcweb/default.asp>

⁶ <http://www-crp.iaea.org/html/about-us.html>

⁷ <http://www-tc.iaea.org/tcweb/participation/asfelloworvisitor/default.asp>

fellowships and scientific visits in Australia⁸. Between 2001 and 2008, under this arrangement over 240 IAEA fellows and scientific visitors from 38 different countries received training at various laboratories, hospitals, universities and institutes around Australia⁹.

Regional Co-Operative Agreement for Research, Development and Training Related to Nuclear Science and Technology

A regional cooperative agreement is an agreement by IAEA members of a particular region, in Australia's case, the Asia-Pacific region, to cooperate in matters of research, development and training related to nuclear science and technology. The 1987 Regional Co-Operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) has been continually extended due to its usefulness in providing a regional framework for initiating cooperative projects and coordinated research programming between the 17 IAEA member states in the Asia-Pacific region. The third extension of the RCA expired on 11 June 2007. Australia is a signatory to the 4th extension, and ratification is currently being considered by the Governor-General in Council.

The RCA provides a platform by which Australia meets its obligations and commitments under Article IV of the NPT, and also provides a platform to promote Australia's nuclear science and technology capabilities at the regional level. Australia's participation in and contribution to the RCA regional programme and other international collaborative projects provides tangible evidence of this country's status as "most advanced in the technology of atomic energy" in the South East Asia and the Pacific region, underpinning our designated seat on the IAEA Board of Governors as well as maintaining and extending a national capacity in cutting-edge nuclear technologies. Participation in the RCA facilitates Australian scientific, technical and political cooperation in nuclear science and technology with 16 major regional countries, which in turn contributes to maintaining and improving Australia's relationships in the Asia-Pacific region as well as providing a valuable window on nuclear related developments at the national level.

Australia has led (and funded) 7 extrabudgetary projects under the RCA in areas such as health care, safety, radiation protection, industry and the environment. The last extrabudgetary project was completed at the end of 2006/07. Australia's high standing and influence in the running of the RCA program is a direct result of the long-term extrabudgetary support given to the program, backed by high quality scientific, technological and organisational contributions. Australia's ability to continue to maintain a high regional profile and influence nuclear developments in the region will rest on the maintenance of this multiple donor role.

Treaties governing the use of nuclear energy

This class of treaties can be divided into three sub-classes:

- The Convention on the Physical Protection of Nuclear Material;
- Treaties on nuclear and radiation safety; and
- Treaties on nuclear liability.

⁸ Memorandum of Understanding between IAEA and ANSTO (1995)

⁹ International Atomic Energy Agency, Department of Technical Cooperation, *Fellowship Pyramid Report By Host Country, Australia*, 5 January 2009

The Convention on the Physical Protection of Nuclear Material has been discussed in the joint submission by the Department of Foreign Affairs and Trade and the Australian Safeguards and Non-Proliferation Office. This submission discusses treaties on nuclear and radiation safety, and on nuclear liability.

Safety Conventions

Following the 1986 Chernobyl accident, a number of conventions covering nuclear and radiation safety were negotiated. In more recent years, there has been a move towards the negotiation of Codes of Conduct; however, as these are not treaties they fall outside the terms of reference of the inquiry and are not discussed in this submission.

Convention on Early Notification of a Nuclear Accident

Australia ratified this and the following Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency on 22 September 1987, shortly after their adoption by the IAEA in 1986. This convention¹⁰ institutes an international notification scheme for reporting nuclear accidents that have, or may have, transboundary consequences. Consequently, the Convention commits Australia, and other states that have ratified it, to the mandatory reporting of any nuclear accident involving facilities or activities specified in Article 1¹¹ if the “release of radioactive material occurs or is likely to occur and which has resulted or may result in an international transboundary release that could be of radiological safety significance for another State”.¹² Such notification must be provided to the affected State(s) directly or through the IAEA, and also to the IAEA itself. It should be noted that the five nuclear weapon states have “all declared their intent to report accidents involving nuclear weapons and nuclear weapons tests”¹³ in accordance with Article 3 of the Convention.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

This convention¹⁴ establishes an international scheme, with the aim of strengthening global cooperation¹⁵ in relation to the provision of assistance and support in the case of a nuclear or radiological accident¹⁶. States Parties, in accordance with Article 2(4), must notify the IAEA of “experts, equipment and materials which could be made available for the provision of assistance to other States Parties in the event of a nuclear accident or radiological emergency as well as the terms, especially financial, under which such assistance could be provided.” Should a nuclear accident or radiological emergency be reported to the IAEA, the IAEA is responsible for providing any resources available, making requests to other states, which have expertise in the required field, for assistance and can coordinate the assistance,

¹⁰ Australian Treaty Series 1987 No 14;

<http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc335.shtml>

¹¹ (a) any nuclear reactor wherever located; (b) any nuclear fuel cycle facility; (c) any radioactive waste management facility; (d) the transport and storage of nuclear fuels or radioactive wastes; (e) the manufacture, use, storage, disposal and transport of radioisotopes for agricultural, industrial, medical and related scientific and research purposes; and (f) the use of radioisotopes for power generation in space objects.

¹² Article I.

¹³ <http://www.iaea.org/Publications/Documents/Conventions/cenna.html>

¹⁴ Australian Treaty Series 1987 No 15;

<http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc336.shtml>

¹⁵ Introduction, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

¹⁶ <http://www.iaea.org/Publications/Documents/Conventions/cacnare.html>

on an international level, if requested by the affected state¹⁷. Assistance has been provided under the Convention in a small number of radiological emergencies. ANSTO has advised the IAEA that it has a number of teams of trained people able to be deployed overseas in the event of a nuclear or radiological accident.

Convention on Nuclear Safety (CNS)

Australia became a party to the CNS¹⁸ in December 1996, following its adoption by the IAEA in 1994. The underlying purpose of the CNS is the enhancement of the safety of land-based nuclear powerplants. Specifically, the CNS obliges state parties to adhere to principles regarding, *inter alia*, design, construction, operation, safety and emergency preparedness. Further, the Convention commits each State Party to submit a report regarding the implementation of the Convention in their state for peer review at triennial review meetings.¹⁹ Australia's national reports under the CNS can be found at the ARPANSA web site.²⁰ Australia's membership of this convention enables it to benchmark its regulatory practices against those of countries using nuclear power, and to monitor the safety of nuclear powerplants which use Australian uranium.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management²¹ was adopted in 1997. Australia ratified the Convention in 2003. The Joint Convention covers, *inter alia*, the siting, construction, design, operation and safety of facilities for the management of spent fuel²² and of radioactive waste²³. The convention addresses spent fuel and radioactive waste from all sources, and is therefore directly applicable to Australia. The Joint Convention has a peer review mechanism similar to that in place under the CNS²⁴. Australia's national reports under the Joint Convention can be found at the ARPANSA web site²⁵. Australia's membership of this convention also enables it to monitor the safety of spent fuel management and radioactive waste management in countries which use Australian uranium.

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter

Adopted in 1972 under the auspices of the International Maritime Organisation, this convention²⁶ prohibits the dumping or deliberate disposal of hazardous waste, including "High-level radioactive wastes or other high-level radioactive matter [declared]... by... the International Atomic Energy Agency as unsuitable for dumping at sea. The Convention entered into force for Australia on 20 September 1985. This convention will eventually be superseded by the more stringent 1996 Protocol, which entered into force generally and for

¹⁷ Article 2

¹⁸ Australian Treaty Series 1997 No 5;
<http://www.iaea.org/Publications/Documents/Infcircs/Others/inf449.shtml>

¹⁹ Article 5.

²⁰ <http://www.arpansa.gov.au/Regulation/Collaborations/nucsafety.cfm>

²¹ Australian Treaty Series 2003 No. 21

²² Chapter 2

²³ Chapter 3

²⁴ Article 32

²⁵ <http://www.arpansa.gov.au/Regulation/Collaborations/jointconv.cfm>

²⁶ Australian Treaty Series 1985 No 16.

Australia on 24 March 2006. The Protocol prohibits the maritime dumping of all but certain specified materials.

Liability Conventions

In the early 1960s, two multilateral conventions on nuclear liability were adopted; the 1960 Paris Convention on Nuclear Third Party Liability²⁷ (adopted under the auspices of the OECD, and covering Western European states only) and the 1963 Vienna Convention on Civil Liability for Nuclear Damage²⁸ (adopted under the auspices of the IAEA, and global in character). Those conventions were based on the same principles, but benefits under one convention did not extend to parties under the other convention. Australia is not a party to either Convention. Following the Chernobyl accident (the USSR was not a party to either convention), a comprehensive revision process was undertaken. That process resulted in agreement on amendments to the Paris Convention²⁹ and the Vienna Convention³⁰, and the adoption of the Convention on Supplementary Compensation for Nuclear Damage. Widespread adherence to those instruments would create a truly global nuclear liability regime.

Convention on Supplementary Compensation for Nuclear Damage

This Convention³¹ creates a “worldwide liability regime to supplement and enhance”³² the Vienna and Paris Conventions, thereby ensuring the availability of compensation for victims of a nuclear accident at an international level. The convention increases the amount of compensation available for nuclear damage. Australia signed the Convention in 1997, but has not yet ratified.

²⁷ http://www.nea.fr/html/law/nlparis_conv.html

²⁸ <http://www.iaea.org/Publications/Documents/Infcircs/1996/inf500.shtml>

²⁹ http://www.nea.fr/html/law/paris_convention.pdf

³⁰ <http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc566.shtml>

³¹ <http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc567.pdf>

³² Introduction to the Convention;
<http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc567.pdf>