

AUSTRALIAN NATIONAL PROGRESS REPORT 2016 WASHINGTON NUCLEAR SECURITY SUMMIT

1. Supporting multilateral instruments: Australia has ratified the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM) and the International Convention for the Suppression of Acts of Nuclear Terrorism. Australia has completed its UNSCR 1540 reporting requirements. Australia has supported IAEA workshops and conducted regional outreach in support of ratification of the CPPNM amendment. Australia has submitted to the IAEA updated information pursuant to Article 14.1 of the CPPNM to inform the depositary of its laws and regulations giving effect to the convention.

2. Strengthening Nuclear and Other Radiological Material Security: Australia has independent nuclear security regulators for nuclear material and radioactive material. Australia follows key IAEA guidance documents including Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (NSS-13), the Code of Conduct on the Safety and Security of Radioactive Sources, and the Guidance on the Import and Export of Radioactive Sources. Australia employs a Design Basis Threat (DBT) for its nuclear facilities, which includes a cyber-security component. Australia is a subscriber to the Joint Statement on Strengthening Nuclear Security Implementation, promulgated as INFCIRC/869 in the IAEA.

The security system at the Australian Nuclear Science and Technology Organisation is regularly tested and evaluated through an exercise program which includes multi-agency and force on force exercises that are designed to test a DBT scenario.

3. Contribution to and use of the IAEA's Nuclear Security-Related Activities and Services: Australia has contributed over AU\$2.4 million to the IAEA's Nuclear Security Fund since its inception, hosted regional training courses on nuclear security, and been heavily involved in the development of the IAEA's nuclear security series of guidance documents.

Australia hosted an IAEA International Physical Protection Advisory Service (IPPAS) mission in November 2013 and has requested the IAEA to conduct a follow-up mission in 2017.

4. Collaborating with International Organisations, Initiatives and Partnerships: Australia is a member of the Global Initiative to Combat Nuclear Terrorism (GICNT) and chairs its Nuclear Forensics Working Group. In May 2016, Australia will host a GICNT nuclear emergency planning and response workshop and exercise "Kangaroo Harbour" which will demonstrate best practices in issuing and responding to notifications and assistance requests to increase nuclear detection, nuclear forensics and emergency response involving the threat and use of radioactive materials in a terrorist attack. Australia has been a member of INTERPOL since 1948, and is a donor participant in the (G8) Global Partnership Against the Spread of Weapons and Materials of Mass Destruction.

5. Minimising Sensitive Nuclear Material: Australia has shut-down its HEU-based research reactor at the Australian Nuclear Science and Technology Organisation (ANSTO) in Sydney, repatriated all its spent fuel, and now uses only low-enriched uranium technology to fuel the research reactor and produce radiopharmaceuticals. Australia repatriated surplus stocks of HEU to USA in late 2012. Australia's total holdings of highly enriched uranium and separated plutonium are below 5 Kg.

6. Efforts to Combat Illicit Trafficking in Nuclear and Radiological Materials: Australia contributes to the IAEA's Illicit Trafficking Database and has contributed to an IAEA project to improve technical measures to detect and respond to Illicit trafficking of nuclear and other radioactive materials.

7. Strengthened cooperation between government and nuclear industry: The Australian Nuclear Science and Technology Organisation (ANSTO) is an active member of the World Institute of Nuclear Security (WINS) and is involved in the development of best practice guides on nuclear and radioactive source security.

Australian Nuclear Security Profile

1. International Legal Framework

| Instrument | Status | Date |
|---------------------------------------------------------------------------|------------------|------------|
| Convention on the Physical Protection of Nuclear Material | Ratified | 22/09/1987 |
| + 2005 Amendment | Ratified | 17/07/2008 |
| + Information pursuant to Article 14.1 | Submitted | 27/09/1991 |
| | Updated | 04/03/2014 |
| International Convention for the Suppression of Acts of Nuclear Terrorism | Ratified | 16/03/2012 |
| UNSCR 1540 Committee Approved Matrix | Report submitted | 30/12/2010 |
| UNSCR 1540 (S/AC.44/2004/(02)/53) | Report submitted | 28/10/2004 |
| UNSCR 1540 (S/AC.44/2004/(02)/53/Add.1) | Report approved | 09/11/2005 |
| UNSCR 1540 (S/AC.44/2004/(02)/53/Add.2) | Report approved | 23/12/2015 |

2. Nuclear Security related Initiatives, Partnerships and Groups

| Initiative, Partnership or Group | Status | Year Joined |
|-------------------------------------------------------|-----------------|-------------|
| Global Initiative to Combat Nuclear Terrorism (GICNT) | Founding Member | 2006 |
| Global Partnership | Participant | 2004 |
| Proliferation Security Initiative | Participant | 2003 |
| INTERPOL | Member | 1948 |

3. Domestic Nuclear Security

| Nuclear Regulatory Authorities | | Web-site |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Australian Safeguards and Non-Proliferation Office (Nuclear material and nuclear facility security) | | www.dfat.gov.au/asno |
| Australian Radiation Protection and Nuclear Safety Agency (Radioactive sources security and Commonwealth emergency response) | | www.arpsa.gov.au |
| Key Legislation (available on www.comlaw.gov.au) | | |
| <i>Nuclear Non-Proliferation (Safeguards) Act 1987</i> | | |
| <i>Australian Radiation Protection and Nuclear Safety Act 1998</i> | | |
| <i>Weapons of Mass Destruction Act 1995</i> | | |
| <i>Customs Act 1901</i> | | |
| Customs (Prohibited Imports) Regulations 1956 | | |
| Customs (Prohibited Exports) Regulations 1958 | | |
| Implementation | | |
| IAEA Recommendations | Implementation of INFCIRC/225/Rev.5 (NSS-13) is a licence requirement for all nuclear facilities. | |
| Design Basis Threat | Year of revisions: 2012, 2002, 1990. | |

4. Radioactive Sources

| Item | Status |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Support for Code of Conduct on the Safety and Security of Radioactive Sources | Australian support confirmed through political commitment pursuant to GC(47)/RES/7 |
| Supplementary Guidance on the | Australian support confirmed through political |

| | |
|------------------------------------------|-------------------------------------------------------------|
| Import and Export of Radioactive Sources | commitment pursuant to GC(48)/RES/10 |
| National Register | National sealed sources register: Category 1 and 2 sources. |

5. Peer review

| Type | Years |
|-------------------------------------------------------------------------------------|------------------------------------------|
| International Physical Protection Advisory Service (IPPAS) | November 2013 |
| US Bilateral Security Visits pursuant to Australia-US Nuclear Cooperation Agreement | 1976, 1987, 1991, 1997, 2003, 2005, 2013 |
| Integrated Regulatory Review Service (IRRS) | 2007, 2011 |

6. Nuclear Forensics and Detection:

| Type | Status | Years |
|----------------------------------------------------------------|-------------|----------------|
| GICNT Nuclear Forensics Working Group | Chair | 2010 – present |
| GICNT Response and Mitigation Working Group | Participant | 2011 – present |
| GICNT Nuclear Detection Working Group | Participant | 2010 – present |
| Nuclear Forensics International Technical Working Group (ITWG) | Participant | 2003 – present |

7. Major Support and Involvement with the IAEA

| Activity | Detail | Year(s) |
|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------|
| Advisory Group on Nuclear Security (AdSec) | Member | 2013 – present |
| Nuclear Security Guidance Committee (NSGC) | Member | 2012 – present |
| Emergency Preparedness and Response Expert Group | Member | 2012 – present |
| IAEA Coordinated Research Project on Identification of High Confidence Nuclear Forensic Signatures for the Development of Nuclear Forensic Libraries | Participant | 2012 – present |
| IAEA Radioactive Source Security Working Group | Member | 2012 – present |
| Code of Conduct on the Safety and Security of Radioactive Sources | Chairs experts group on information exchange | 2007 – present |
| Development and review of Nuclear Security Series documents | Expert consultant | 2003 – present |
| Incident & Trafficking Database | Member | 1995 – present |
| Analytical Laboratories for the Measurement of Environmental RadioActivity (ALMERA) | Member | 1995 – present |
| Nuclear Security Fund | Contributor | 2002, 2006, 2007, 2009, 2013, 2014 |
| International Physical Protection Advisory Service (IPPAS) Missions | Team members | 2002, 2003, 2005(2), 2013(2), 2014(2), 2015(2) |
| Regional IAEA Nuclear Security Training Courses and other courses led by IAEA Office of Nuclear | Expert Consultants and | Ongoing |

| Security | Presenters | |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------|
| Major Past Activities | | |
| IAEA Coordinated Research Project on Application of Nuclear Forensics in Illicit Trafficking of Nuclear and other Radioactive Material | Participant | 2008 – 2011 |
| Amendment to the Convention on Physical Protection of Nuclear Material | Chaired Committee of the Whole at the Diplomatic Conference | 2005 |
| Code of Conduct on the Safety and Security of Radioactive Sources | Chaired negotiation of Code and Export/Import Guidance | 2000 – 2004 |

8. Contributions to Outreach and Capacity Building

| Activity/Event | Date |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Events | |
| GICNT “Kangaroo Harbour” workshop and exercise, Sydney | May 2016 |
| Regional Training Course on Threat Assessment and a Risk Informed Approach for Nuclear Security Measures for Nuclear and Other Radioactive Material Out of Regulatory Control | December 2015 |
| National Workshop on IPPAS Missions – Kuala Lumpur, Malaysia | June 2015 |
| GICNT "Sugong Bagani: Envoy Warrior" workshop and exercise, Manila | April 2015 |
| Nuclear Security Summit Drafting Group Meeting on Action Plan for IAEA, Canberra | April 2015 |
| AISC Program: Nuclear Forensics: Enhancing nuclear security in Indonesia through knowledge sharing | December 2014 |
| 15th Ministerial Level Meeting of the Forum for Nuclear Cooperation in Asia (FNCA), Sydney | November 2014 |
| 4th Workshop on Nuclear Security and Safeguards Project, Forum for Nuclear Cooperation in Asia (FNCA), Daejeon, Korea | November 2014 |
| Regional Workshop on Integrated Nuclear Security Support Plans, Yogyakarta, Indonesia | August 2014 |
| National Workshop on IPPAS Missions – Jakarta, Indonesia | July 2014 |
| ANSTO/BATAN Information exchange on nuclear forensics | June 2014 |
| Fourth Regional Review Meeting on Radioactive Source Security, Thailand | February 2014 |
| GICNT Joint Working Group Activity “Tiger Reef” on Radiological Crime Scene Management, Malaysia | February 2014 |
| IAEA training course on Nuclear Forensics Methodologies | October 2013 |
| IAEA ANSN training course on <i>Preparation, Conduct and Evaluation</i> of exercises for nuclear safety and security events at nuclear facilities, Indonesia | September 2013 |
| 2 nd ASEAN Regional Forum Workshop on Nuclear Forensics | September 2013 |
| Technical Visit to Australia on the Implementation of Nuclear Security for the Uranium Industry | June 2013 |
| IAEA Regional Workshop on nuclear security for Pacific Island States, Fiji | April 2013 |

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|-----------------------------------------------------------------------------------------------------|------------------|
| IAEA regional workshop on the nuclear security in the transport of nuclear material, Sydney. | December 2012 |
| ASEAN Regional Forum Workshop on Nuclear Forensics | December 2012 |
| IAEA regional workshop on IPPAS missions, Sydney. | November 2012 |
| GICNT Nuclear Forensics workshop Iron Koala: Information Sharing during Nuclear Smuggling Events | May 2012 |
| IAEA Regional Workshop on Radiological Crime Scene Management and Introduction to Nuclear Forensics | March 2012 |
| GICNT activity Discex Hermes: Public Messaging | November 2011 |
| Programs | |
| Informal working group on nuclear security (Asia-Pacific Safeguards Network) | 2011 – present |
| Regional Security of Radioactive Sources Project | 2004-2013 |
| IAEA regional training courses on nuclear security of research facilities held in Australia | 2004, 2006, 2009 |
| IAEA regional training courses on nuclear forensics and radiological crime scene management | 2008 – present |