

NSS 2014 – UK NATIONAL PROGRESS REPORT

March 2014

1. Support for the Convention on the Physical Protection of Nuclear Material and the International Convention for the Suppression of Acts of Nuclear Terrorism

The UK deposited its instruments of ratification of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material (aCPPNM) in 2010. Although the 2005 Amendment has not yet entered into force, the UK has adopted domestic implementing legislation. In 2013 the UK submitted a second implementation report under Article 14.1 of the aCPPNM.

During its 2013 G8 Presidency, the UK co-ordinated demarches of those states yet to ratify the aCPPNM. As Chair of the Global Partnership against the Spread of Weapons and Materials of Mass Destruction (Global Partnership), the UK held an outreach event to share its legislative experience of ratifying the amendment. The UK also funded the United Nations Office on Drugs and Crime to deliver regional workshops raising awareness of the aCPPNM in Dakar, Senegal and Nairobi, Kenya.

The UK deposited its instruments of ratification of the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) in 2009, and is funding Vertic (an NGO) to provide legislative assistance with regards to ratification of aCPPNM and ICSANT.

2. Strengthened National Nuclear and Radiological Material Security System

The UK nuclear security regime is based on and in alignment with IAEA guidance, in particular the Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities INFCIRC/225/Rev.5.

The independent regulator, the Office for Nuclear Regulation (ONR), regulates the security of the civil nuclear industry under the Nuclear Industries Security Regulations 2003 (as amended). In 2013 the Regulations were extended to cover sites under construction. ONR's National Objectives, Requirements and Model Standards (NORMS) describe security standards and offer approaches by which the required security outcomes might be met by industry. ONR assesses industry's security plans to ensure that they address the requirements of NORMS and conducts a programme of planned and no-notice inspections to ensure compliance with the approved arrangements.

In the UK, the Design Basis Threat on which security planning in the civil nuclear sector is based is known as the Nuclear Industries Malicious Capabilities (Planning) Assumptions. This is underpinned by an annual Threat Assessment.

The UK adheres to the IAEA Code of Conduct on the Safety and Security of Radioactive Sources and the associated Guidance on the Import and Export of Radioactive Sources. A statutory regime for the security of radioactive sources has been in place for seven years. During this time, the UK has strengthened measures, going beyond the requirements of the Code of Conduct.

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3. Contribution to the IAEA's Nuclear Security-Related Activities

The UK supports the IAEA in all areas of its work, including through the provision of expertise in nuclear safeguards, nuclear security and nuclear safety.

The UK continues to be a major contributor, on an extra budgetary basis, to the IAEA Nuclear Security Fund. Since 2011, the UK has contributed £9,000,000 to the Nuclear Security Fund, and its contribution for 2014 will be £3,400,000.

The UK participates in the Nuclear Security Guidance Committee and is committed to contributing to the development of the Nuclear Security Series as a whole.

The UK has hosted, on behalf of the IAEA, workshops on the Fundamentals of Nuclear Security, and has also assisted the IAEA in developing and delivering a workshop on responses to a nuclear security incident.

As the 2013 Chair of the Global Partnership, the UK co-ordinated the expertise and resources of its 27 members to support the IAEA and its members' implementation of their Integrated Nuclear Security Support Plans.

The UK welcomed an International Physical Protection Advisory Service (IPPAS) mission in October 2011, the first nuclear weapons state to do so. The Mission Team visited the Sellafield civil nuclear site and Barrow port, and concluded that the state of civil nuclear security is robust. The team identified many examples of good practice within the civil nuclear security regime and made valuable recommendations. In March 2014 the UK Government invited the IAEA to send a follow up IPPAS Mission to the UK.

The UK provides security experts who participate in a number of outward IPPAS Missions.

This reflects a broader UK role in providing nuclear expertise worldwide. Examples include sending experts to a series of wider peer review missions overseas, and Dr. Mike Weightman's report following the Fukushima incident, providing an important contribution to nuclear safety and emergency preparedness arrangements.

UK industry and regulators have worked with IAEA experts to develop and test the security guidance developed with Members States on nuclear material accountancy and control to enable a practical roll out of this worldwide where States would find this beneficial.

4. Support for Nuclear Security-Related International Initiatives

Under the UK's chairmanship of the Global Partnership, a working group focussing on radiological and nuclear security was established to share information on security projects. During the course of the year more than 100 project ideas were brought to Global Partnership meetings, and many of those are now being implemented. The Global Partnership has been working for more than 10 years to reduce stocks of nuclear and radiological material, and to secure sites holding such material. Its members continue to dedicate their resources and expertise to this area. The UK's Global Threat Reduction Programme continues to support radiological and nuclear security projects internationally which have been proposed through the GP including projects to secure radioactive sources in

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Ukraine, where the UK is constructing a secure storage facility due to complete in 2014, and security improvements at nuclear facilities in the Philippines.

The UK actively contributes to the Global Initiative to Combat Nuclear Terrorism (GICNT). In November 2012, the UK hosted GICNT's 2nd Symposium on Enhanced Detection of Special Nuclear Material, and in January 2014 hosted a Nuclear Forensics workshop. The workshop incorporated a tabletop exercise "Blue Beagle". The material from Blue Beagle has been collated as an "Exercise in a Box" and shared with GICNT partner nations to enable them run their own exercises.

The UK co-ordinated demarches under its G8 Presidency to those states yet to fulfil their reporting obligations under UNSCR 1540. As President of the Global Partnership, the UK hosted an outreach event from a 1540 Committee Expert to London-based representatives of non-reporting states. The UK funded the United Office on Drugs and Crime to deliver regional workshops raising awareness of UNSCR 1540 in Senegal and Kenya as well as funding a former 1540 Committee expert to provide guidance on 1540 implementation measures to non-reporting states. In December 2013, the UK submitted its fourth National Implementation Report and first National Action Plan to the UN 1540 Committee.

The UK sponsored the 2012 Multilateral Statement on Nuclear Information Security. Additionally, the UK has supported 9 gift baskets: The National Legislation Implementation Kit on Nuclear Security, Indonesia; Transport Security, Japan; The statement of activity and cooperation to counter Nuclear Smuggling, Jordan; Promoting Full and Universal Implementation of United Nations Security Council Resolution 1540 (2004), Canada, Republic of Korea; Radiological Sources, USA; Nuclear Forensics, The Netherlands; Strengthening Nuclear Security Implementation, The Netherlands, Republic of Korea and the USA; Enhancing the security of the Maritime Supply Chain, USA; Nuclear Security Training and Support Centres / Centres of Excellence, Italy.

5. Contribution to Minimisation of HEU

Internationally the UK's Global Threat Reduction Programme has supported projects to minimise Highly Enriched Uranium (HEU), including, recently, agreeing to support an IAEA and US project to repatriate HEU from and decommission the "FOTON" research reactor in Tashkent, Uzbekistan. Domestically, work is continuing to defuel and decommission the UK's only remaining civil HEU reactor in 2014.

6. Establishment of a Centre of Excellence

The UK is engaged with the EU CBRN Centres of Excellence initiative and encourages co-ordination with international organisations through multilateral fora such as the GP Centres of Excellence Sub Working Group.

UK Universities are involved in the IAEA International Nuclear Security Education Network (INSEN) network, which works to increase international capacity and capability to deliver nuclear security education and training.

Supported by the UK Government, King's College London is working with INSEN to develop nuclear security training courses that can be delivered according to the specific requirements of different States.

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The UK's National Skills Academy for Nuclear (NSAN) is working closely with the IAEA to develop a cadre of highly trained and well qualified nuclear security personnel. NSAN has developed online training on core concepts of nuclear security and with the aim of enhancing understanding of these issues throughout the global nuclear industry. The training materials will be made available to all, for free.

There have been developments within the UK to increase the number of under-graduate and post-graduate training opportunities including the training of Radioactive Waste Advisers in radioactive sources security, and a new MSc in Nuclear Security Management.

7. Enhanced Efforts in Combating Illicit Trafficking in Nuclear and Radiological Materials

The UK maintains a national 24/7 radiological and nuclear border detection system and other specialist capabilities to mitigate the risks from illicit trafficking and nuclear terrorism and draws on this expertise in international initiatives.

Through bilateral and multilateral initiatives the UK shares information on illicit trafficking of nuclear materials.

The UK contributes expertise to the IAEA, including in nuclear security, nuclear forensics and nuclear detection, and has participated in many of its consultancies and conferences.

The UK is supportive of the work of the Nuclear Forensics International Technical Working Group (ITWG). The United Kingdom has hosted two ITWG conferences. Experts from the UK's Atomic Weapons Establishment are members of the ITWG Executive and Co-chair the Exercise Task Group.

The UK's Global Threat Reduction Programme has supported projects internationally to secure sensitive nuclear sites and highly active radioactive sources and prevent the illicit trafficking of nuclear and radiological material across vulnerable borders. Projects supported include a contribution of £500,000 to Interpol's Operation Fail Safe to track the transnational movements of individuals involved in the illicit trafficking of radioactive or nuclear material, co-funding, with Norway and Sweden, a conference on "Illicit Trafficking Issues in the Black Sea Region" in Chisinau, Moldova in November 2013 and contributing \$2.1M to the US Second Line of Defence programme in 2013 to improve border monitoring measures in Ukraine and Kazakhstan.

The UK participated in the 2012 and 2014 atomic table-top exercises hosted by the Netherlands.

8. Strengthened cooperation between government and nuclear industry

In 2013 representatives from the UK nuclear industry, the regulator and government worked together to publish a guidance document on how to achieve excellence in nuclear security culture.

Every six months the UK Government hosts a Civil Nuclear Security Industry Forum which discusses key issues on civil nuclear security and facilitates progress on key issues. Senior government officials also attend regular meetings of the nuclear industry Safety Directors Forum where key safety and security issues are taken forward.

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The UK is committed to securing nuclear-related knowledge and expertise, and promoting a strong security culture in nuclear organisations both in the UK and internationally. This is essential to ensuring the sustainability of projects, and creating a culture which actively promotes nuclear safety and security in all countries with nuclear power. The security of nuclear sites relies on the engagement and participation of every employee, and a supportive management system. The UK is focused on working with nuclear industry, academia and international partners to support this.

The UK is working with the World Institute for Nuclear Security (WINS) to support the establishment of the WINS Academy, and the UK's Global Threat Reduction Programme has assisted in the development of teaching modules for the Academy, and contributed £300,000 towards its establishment which will provide accredited training in nuclear security for professionals within the industry. Accessible and targeted training is vital to support the continuous professionalization of the nuclear industry on security issues.

9. Information Security

At the 2012 NSS in Seoul the UK sponsored a gift basket on Information Security. The initiative recognised the fundamental need to protect sensitive nuclear information, technology and expertise necessary to acquire or use nuclear materials for malicious purposes, or to disrupt information technology based control systems at nuclear facilities. 35 States have supported the Multinational Statement on Nuclear Information Security.^[1] The UK's statement on Nuclear Information Security provides further detail.

In support of this initiative the UK has undertaken actions including: hosting discussion meetings in partnership with Kings College London, the Royal United Services Institute and Dutch Embassy (November 2013); presenting on the issue at a meeting of the GP (October 2013); delivering a conference paper at the IAEA International Nuclear Security Conference; experts contributing to IAEA nuclear security guidance (July 2013); depositing a UNSCR1540 National Action Implementation Plan highlighting measures to protect sensitive information (December 2013); supporting WINS developing a Best Practice Guide for nuclear operators (March 2014); working with academia to develop a Code of Conduct on Information Security; and, hosting a workshop in collaboration with the US National Nuclear Security Administration and other international partners to identify best practices for securing sensitive nuclear-related knowledge and expertise (March 2014).

^[1] Algeria, Australia, Belgium, Canada, Chile, Czech Republic, Finland, France, Georgia, Germany, Hungary, Indonesia, Israel, Italy, Japan, Kazakhstan, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Philippines, Poland, Republic of Korea, Romania, Spain, Sweden, Switzerland, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States of America and Viet Nam.

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