

National Progress Report: Finland

March 31, 2016

Since the 2014 Nuclear Security Summit, Finland has strengthened nuclear security implementation and built up the global nuclear security architecture by...

...Strengthening Nuclear and Other Radioactive Material Security

- Finland has a well established and strong nuclear security regulatory framework. Finland has extensive legislation in place concerning criminal acts in the field of nuclear security, including the authority to prosecute cases of illicit nuclear trafficking and nuclear terrorism. The National Counter Terrorism Strategy and Cyber Security Strategy include elements relevant to nuclear security.
- The responsibility for nuclear safety, radiation safety and nuclear security regulatory control, as well as the accounting for and control of nuclear material in Finland, have been vested in the Finnish Radiation and Nuclear Safety Authority (STUK), which is effectively independent in its decision making. Having nuclear security, safety and safeguards issues within the same regulatory authority is considered beneficial for the synergy of these three areas.
- The role and independency of STUK was further strengthened by its new mandate to issue binding regulations, which are positioned between legislation and the regulatory guides in the regulatory framework. Hence the former Governmental decree on the security in the use of nuclear energy was replaced by STUK regulation on security in the use of nuclear energy, which entered into force in 2016.
- The nuclear security regulatory requirements are periodically reviewed, and in 2013 STUK has completed a comprehensive revision of its regulatory guides governing the use of nuclear energy (nuclear facilities, nuclear material, nuclear technology, and transports). The framework of international references was taken into account, including the latest developments of IAEA recommendations and experiences from the Fukushima Daiichi accident. A new regulatory guide on information security (including cyber security) entered into force in 2013 as part of the comprehensive revision of STUK guides, covering information security management (including cyber security) in nuclear facilities in Finland. A new regulatory guide on the security of radioactive sources entered into force in 2013, and STUK has, accordingly, developed further its inspection practices for the use of radiation in health care, industry and research.

- The results of an IAEA-coordinated national DBT workshop and the IAEA Implementing Guide on the Development, Use and Maintenance of the Design Basis Threat were made use of in the national DBT process. The new DBT entered into force in 2013. The DBT includes physical and information security/cyber security threats. A DBT revision is being initiated in 2016. The related threat assessment is maintained by the responsible authorities through regular reviews.
- STUK has identified synergies between nuclear safety, security and safeguards, and shares its experiences internationally. STUK takes into account the aspects of safety, security and safeguards when licensing the final disposal facility for spent nuclear fuel, the first of its kind in the world. STUK plans its safeguards control activities together with international inspectorates in such a way that supports also the objectives of nuclear security.
- Together with the IAEA and Finnish nuclear facility operators, STUK hosted two workshops in Helsinki and the Olkiluoto NPP site in 2012 and in 2014 for states pursuing nuclear power programmes. The theme was the relationship and roles between a nuclear facility operator and the regulator in the areas of safety, security, safeguards, emergency preparedness, and public communication. The third workshop in the series is planned for June 2016.
- STUK is coordinating an informal information security working group with other national authorities with a role in information security and the Finnish nuclear facility operators, the aim of which is to improve information exchange on cyber security threats and incidents, to develop training and testing and to strengthen response.
- In support of the STUK regulatory control activities on nuclear security, a Standing Nuclear Security Committee, composed of senior experts from various government bodies and main nuclear industry operators, has been established by the Finnish Nuclear Energy Act. Its main functions are the provision of support in threat assessment and promotion of coordination and cooperation in nuclear security issues.
- STUK participates in the national counter terrorism expert group, to follow up the implementation of the counter-terrorism strategy and to exchange information related to the current threat assessment.
- *While Finland scored well in the NTI Nuclear Security Index 2016, it is clear that continuous improvement of the state nuclear security regime must prevail to address the present and changing threat.*

...Minimizing Nuclear and other Radioactive Materials

- There are no significant amounts of weapons grade nuclear materials in Finland. The research reactor is in permanent shutdown and entering the decommissioning phase.
- Replacement of radioactive material in certain applications (e.g. blood irradiators) with alternative technologies has been encouraged.

...Countering Nuclear Smuggling

- The Finnish Customs and Radiation and Nuclear Safety Authority run an ongoing joint programme to update, enhance, and maintain the radiation monitoring system at the borders and the related operational procedures.
- The Finnish authorities - the Radiation and Nuclear Safety Authority, the police and other first responders - are operating a concept, based on mobile units, for in-field radionuclide detection, identification, on-line data transmission, and expert support (reach-back).
- Finnish authorities have also jointly developed a concept for national nuclear security detection architecture for nuclear and other radioactive materials out of regulatory control.
- The Radiation and Nuclear Safety Authority is developing novel methods for crime scene management of alpha radiation sources in a European Union FP7-GIFT project (2014-2017).
- *See commitments of the first section.*

...Supporting Multilateral Instruments

- Finland ratified the International Convention for the Suppression of Acts of Nuclear Terrorism in December 2009.
- Finland is Party to the Convention on the Physical Protection of Nuclear Material. Finland has also completed the amendments to its legislation as required by the Amendment to the CPPNM and has deposited its ratification instrument in June 2011.
- *Pending the entry into force of the Amendment to the CPPNM, Finland is acting in accordance with its object and purpose.*
- Finland has supported the Henry L. Stimson Center project promoting the implementation of Resolution 1540 in developing countries since 2006 and continues to do so. The Finnish-funded Stimson Center initiative works in close cooperation with the 1540 Committee in promoting universal adherence to the Resolution.

- *Finland stands ready to provide assistance, as appropriate, in response to specific requests, to the States lacking the legal and regulatory infrastructure, implementation experience and/or resources for fulfilling the provisions of Security Council resolution 1540.*
- *Finland is committed to full implementation of the Security Council Resolution 1540 and has fulfilled national reporting obligations in this regard.*

...Collaborating with International Organizations

- Finland continues to provide financial and in-kind support to the IAEA's Nuclear Security Programme. In addition to the collective EU contribution, Finland has over many years provided a national contribution to the Nuclear Security Fund. Finland has also actively participated in the process of developing documents in the IAEA's Nuclear Security Series, inter alia, by participating in the Nuclear Security Guidance Committee (NSGC). Finland is participating in the IAEA Incident and Trafficking Database (ITDB) Programme.
- Finland has successfully made use of the IAEA advisory and peer review services. At request of the Government of Finland, IAEA team of experts conducted an IPPAS mission in Finland in 2009. A follow-up IPPAS mission was conducted in 2012. Its final report was issued in 2013. In addition, Finland has provided experts for IPPAS missions in other Member States.
- Finland is actively cooperating with the IAEA in the information security/cyber security domain. Finland hosted in 2012 an IAEA Consultancy Meeting on the development of a guidance document in Industrial Control System (ICS) Security. Finland supports and participates in the development of IAEA guidance on Computer Security.
- Finnish experts have participated in the development and conduct of IAEA training courses on nuclear security, for example in the topic of preventive and protective measures against insider threat. Such an international insider training course was conducted in Finland in 2015, in cooperation with the IAEA for Member States worldwide.
- A national Nuclear Security Culture Workshop was conducted in Finland in 2011, in cooperation with the IAEA, for top management of relevant stakeholders, including the nuclear operators. Finland hosted an IAEA International Workshop on Nuclear Security Culture in 2013. Within its inspection and evaluation programmes, STUK has started to address how the processes of nuclear security (physical and information/cyber security) are linked to the integrated management system of nuclear facilities and how security issues are included in their organizational culture, together with safety issues. As a reflection of such

linkage and inclusion, nuclear facility operators have adopted a concept of site-walks to collect observations on physical security, information security, safety, and safeguards, which contributes to situational awareness and management of anomalies.

- Finland provides assistance also through the G-8 Global Partnership Program, to which it joined in 2003. Nuclear safety and security projects have been implemented in the Russian Federation together with the Russian authorities and since 2009 Finland has contributed to the US State Department's Nuclear Smuggling Outreach Initiative (NSOI), which has implemented border security related projects in Eastern European and Central Asian countries. Finland intends to continue its support to the Global Partnership Program also in the future.
- Finland hosted a GICNT Nuclear Detection Working Group (NDWG) Workshop and Tabletop Exercise "Northern Lights" in January and a Plenary and Implementation and Assessment Group (IAG) Meeting in June 2015. In January 2016 Finland hosted a NDWG experts meeting in Helsinki.
- *Finland stays committed to international cooperation in nuclear security with the aim to enhance nuclear security globally and continues to contribute to IAEA's nuclear security activities, including the development of the guidance in the Nuclear Security Series.*

...Partnering with External Stakeholders

- Some of the activities with external stakeholders are included in the first section, Strengthening Nuclear and Other Radioactive Material Security, such as the information security working group and the counter-terrorism expert group.
- *See commitments of the first section.*