

# National Progress Report: Republic of Korea

March 31, 2016

Since the 2014 Nuclear Security Summit, the Republic of Korea (ROK) has strengthened nuclear security and built up the global nuclear security architecture by:

## 1. Supporting Multilateral Instruments

### Accomplishments

- Korea 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 (ICSANT) in May 2014, after incorporating both conventions into the national legislations. Korea has also incorporated IAEA INFCIRC/225/Rev.5 into its national regulations.
- Korea has established the legal and administrative framework for the security of Category 1 and 2 radioactive sources as provided in the IAEA Code of Conduct on the Safety and Security of Radioactive Sources and the revised supplementary Guidance on the Import and Export of Radioactive Sources.
- Together with 35 countries, Korea participated in the joint effort to share, through IAEA INFCIRC/869, the Joint Statement on Strengthening Nuclear Security Implementation with the IAEA Member States. Its intention is to incorporate the broader community of states outside the NSS process by giving them a chance to subscribe to the Statement.

### Commitments

- *Korea will continue its support for multilateral legal instruments and work with the international community to achieve full implementation and universalization of the relevant legal instruments.*

## 2. Strengthening the National Nuclear and Other Radioactive Material Security System

### Accomplishments

- Korea received an IAEA International Physical Protection Advisory Service (IPPAS) mission in 2014 to review its national nuclear security architecture and reflected the recommendations for the improvement of its physical protection system.
- Korea carries out regular inspection of its nuclear facilities and periodic force-on-force physical protection exercises, which is mandatory under domestic law. These exercises are designed to detect and respond to mock adversaries, and use state-of-the-art devices and systems.

### **Commitments**

- *Korea will continue to review and update its legislative framework for nuclear security with a particular focus on areas such as consolidating transport security of nuclear materials taking a graded approach in sabotage response, introducing a licensing system for physical protection for the front-end life cycle of the nuclear power plant mitigating insider threats, and identifying vital areas at nuclear facilities.*

### **3. Collaborating with International Organizations**

#### **Accomplishments**

- **(IAEA)** Korea has been an active supporter of IAEA nuclear security activities, providing expertise and financial support. Since 2012, Korea has been contributing 1 million US dollars annually to the IAEA Nuclear Security Fund (NSF) and its experts have been participating in the development of the IAEA's nuclear security guidance, training courses, and research projects.
- **(UN)** As the Chair of the United Nations Security Council (UNSC) 1540 Committee for the 2013-2014 term, Korea played a leading role in the international efforts to promote full implementation of UNSC Resolution 1540 (2004), such as providing financial support of 1 million US dollars and presiding over the Security Council open debate on Resolution 1540 in May 2014 at which the Presidential Statement (PRST) was adopted by consensus.
- **(GICNT)** Korea served as the Coordinator for the Global Initiative to Combat Nuclear Terrorism (GICNT) Implementation and Assessment Group (IAG) from 2013 to 2015. In this capacity, Korea hosted the annual IAG Meeting in July 2014 at which the development of the future strategy was discussed.

- **(GP)** Korea has made contributions to multiple nuclear security-related projects under the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP). Those projects include securing high activity radioactive sources, establishing mobile radiological detection system, building remote monitoring center for nuclear facilities in various regions around the world.

### **Commitments**

- *Korea will serve as the Chair for the Ministerial Segment of the 2016 IAEA International Conference on Nuclear Security to be held in Vienna in December 2016, as part of the efforts to contribute to maintaining the political momentum created in the Nuclear Security Summit process.*
- *Korea will hold in September 2016 a regional outreach event to promote implementation of UNSC Resolution 1540 amongst relevant stakeholders in industry and academia.*
- *Korea will continue to strengthen its capabilities in the field of nuclear security through close technical cooperation with relevant international organizations and continue to render technical, financial, and political support.*

## **4. Enhancing Cyber Security in Nuclear Facilities**

### **Accomplishments**

- Korea revised its national laws and regulations to add cyber security requirements at nuclear facilities. In accordance with these laws and regulations, Korea has been conducting regular inspections and reviews of cyber security at nuclear facilities since 2015. In addition, Korea has included cyber threats as one of the elements in the Design Basis Threat (DBT) of nuclear facilities.
- Korea hosted the IAEA-ROK Regional Workshop on Computer Security for Nuclear Facilities in November 2014 and participated in the IAEA International Conference on Computer Security in a Nuclear World in June 2015 sharing its experience of an attempted cyber attack against nuclear facilities.

### **Commitments**

- *At the national level, Korea will further strengthen its legislative and regulatory framework for cyber security at nuclear facilities through the development of cyber security regulation procedures, review of cyber security training programs, and building up of capabilities in responding to cyber incidents.*
- *At the international level, Korea will continue to cooperate with the IAEA to strengthen cyber security at nuclear facilities. The planned activities include collaborating on a Coordinated Research Program on the development of evaluation methods for cyber incident response, participating in the review process of the Nuclear Security Series publications to reflect cyber security considerations, and hosting the IAEA Regional Training Course (RTC) in 2016, and the IAEA International Training Course (ITC) in 2017.*

## **5. Promoting Nuclear Security Education and Training**

### **Accomplishments**

- Since its inauguration in February 2014, the International Nuclear Non-proliferation and Security Academy (INSA) has trained more than 3,200 experts, operators, and officials through domestic and international training programs on nuclear security, safeguards, and strategic trade controls. It has run 12 international nuclear security training courses inviting experts from 23 countries, including those from emerging nuclear power States.

### **Commitments**

- *Korea will continue to provide nuclear security training, especially for regulators and officials in emerging nuclear power countries.*
- *Korea will continue its efforts to enhance regional cooperation between Centers of Excellence (COEs), building on the Asia Regional Network (ARN) within the IAEA International Network for Nuclear Security Training and Support Centers (NSSC Network), with a view to strengthening measures for nuclear security in nuclear facilities and building confidence among the countries in the region.*

## **6. Minimizing the Use of HEU**

### **Accomplishments**

- Korea is working with Belgium, France, Germany and the United States on a joint project to develop and qualify new high-density low-enriched uranium (LEU) fuels for research reactors. As committed to in the 2014 Joint Statement, Korea has provided 100 kg of atomized U-Mo powder for use in the fabrication of LEU test fuels and has committed to produce and provide any additional powder needed for further research and qualification.

### **Commitments**

- *Korea will continue to render technical and political support to achieve the goal of converting the remaining HEU-fueled research reactors.*

## **7. Countering Nuclear Smuggling**

### **Accomplishments**

- Korea supports active information sharing to combat nuclear smuggling, including reporting through the IAEA Incident and Trafficking Database (ITDB).
- Korea is operating the domestic Radiation Source Location Tracking (RADLOT) system for the prevention of loss or trafficking of radiological materials. It has also been working with the IAEA and Vietnam on the pilot project for the establishment of the RADLOT system in Vietnam.
- Korea has also started developing a national nuclear forensics system, including a national response plan, and nuclear forensics library.

### **Commitments**

- *Korea will continue to enhance its capacity to counter nuclear smuggling, especially by strengthening nuclear detection activities at borders, including at airports and ports, and working with relevant international organizations.*