



# NUCLEAR SECURITY SUMMIT 2014

## NATIONAL PROGRESS REPORT

### JAPAN

#### I. GENERAL STATEMENT

Japan will continue to do its best to enhance nuclear security domestically and internationally in order to globally promote nuclear non-proliferation and disarmament towards the total elimination of nuclear weapons. These efforts reflect Japan's policy of "Proactive Contribution to Peace" to contribute even more actively in securing world peace, stability and prosperity.

As a nation possessing advanced nuclear energy capabilities, Japan introduced at the G8 Hokkaido Toyako Summit the importance of ensuring the 3Ss, Safeguards, Safety and Security, for advancing the peaceful uses of nuclear energy, and has been striving for it. Restricting the uses of nuclear energy for solely peaceful purposes, Japan has an impeccable and long standing track record in establishing safeguards to ensure that nuclear material is not diverted to nuclear weapons or other arms. Since Japan underwent the accident at the Fukushima Daiichi Nuclear Power Station, it has been sharing the lessons learned, useful not only for Safety but also for Security in the context of counter-terrorism.

Japan has been strengthening measures to protect against nuclear terrorism at nuclear facilities, which is included in the Strategy to Make Japan "the Safest Country in the World" approved by the Cabinet in December 2013. In January 2014, Japan advocated "Three Preventions": (1) prevention of the emergence of new nuclear weapon states, (2) prevention of the proliferation of nuclear-weapons-related materials and technologies, and (3) prevention of nuclear terrorism. Japan believes that if many countries build and strengthen their capacity to counter nuclear terrorism, confidence building among nations will be promoted in the field of international security. To strengthen nuclear security systems, it is important to firmly establish the required rules and norms, and learn from each other's good practices. As the only country that has suffered from nuclear bombings at war, Japan believes that the Nuclear-Weapon States should promote nuclear disarmament and secure their stocks of HEU and separated plutonium for military purpose, including for nuclear weapons, and that these stocks are protected at least as well as civilian nuclear materials. Once a nuclear terrorism occurred, it might cause the same level of devastating humanitarian consequences as in case of the use of a nuclear weapon. In order that such a situation does not occur, security for all nuclear material must be strengthened.

Based on the above points, Japan has undertaken the following measures to strengthen nuclear security.

#### II. JAPAN'S ACTIONS TO STRENGTHEN NUCLEAR SECURITY

##### 1. REMOVAL AND DISPOSITION OF HIGHLY-ENRICHED URANIUM AND SEPARATED PLUTONIUM AT THE FAST CRITICAL ASSEMBLY

Japan, after talks with the United States, decided to remove all highly-enriched uranium (HEU) and separated plutonium from the Fast Critical Assembly (FCA) at the Japan Atomic Energy Agency (JAEA). At the same time, Japan and the United States decided to continue the cutting edge research, which was supposed to be carried out with the FCA fuel, with alternate fuel under the Japan-US cooperation. Also, the US would cooperate to continuous enhancement of basic nuclear research in Japan. By this cooperation, both countries can fulfill the needs to



strengthen the measures against nuclear terrorism as well as to enhance nuclear research and development. At The Hague Summit, both countries announced a joint statement on it. Additionally, Japan continues the feasibility study for converting the Kyoto University Reactors to the use of low-enriched uranium, and is working toward implementation of the down-blend of HEU from the Yayoi reactor of the University of Tokyo, which was permanently shut down in March 2011, and the National Institute of Advanced Industrial Science and Technology (AIST); and the shipment of HEU from JAEA's Japan Materials Testing Reactor Critical Assembly (JMTRC) to the United States for disposition.

## 2. PLUTONIUM MANAGEMENT

The use of nuclear power in Japan is, in compliance with the Atomic Energy Basic Act, restricted for solely peaceful purposes. Regarding plutonium, Japan will also firmly maintain our policy of "not possessing excess plutonium, in other words, plutonium reserves for which the purpose of utilization is unspecified". To really carry out the policy, Japan does pay due consideration to the balance between supply and demand of plutonium. In this regard, electric power companies and other operators publicly release their plutonium utilization plans. The appropriateness of the plans has been assessed by the Japan Atomic Energy Commission. Furthermore, Japan will continue to appropriately manage our plutonium reserves.

Japan has been conducting all nuclear activities, complying with the NPT (Treaty on Non-Proliferation of Nuclear Weapons), and obtaining a guarantee by the International Atomic Energy Agency (IAEA) that the peaceful nuclear activities in Japan are not diverted to military purposes accepting the IAEA's safeguards. On this basis, as for plutonium, in recognition of the importance of ensuring transparency with regard to plutonium management, and to obtain understanding both domestically and internationally, the Government of Japan publishes an annual report on "The Current Situation of Plutonium Management in Japan" since 1994. The latest report was as of the end of the year 2012, issued in September 2013.

## 3. CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL (CPPNM) AND ITS

Amendment Japan concluded the Convention on the Physical Protection of Nuclear Material (CPPNM) in October 1988 and, in accordance with Article 14 paragraph 1 of the Convention, informed the depositary, the Secretary General of the IAEA, of the laws and regulations in Japan which give effect to the Convention.

Regarding the Amendment of the CPPNM, it has not yet entered into force. As shown in the Seoul Communiqué and the relevant ministerial declaration and General Conference Resolution at the IAEA, strengthening of international efforts on physical protection of nuclear material and nuclear facilities through the early entry into force of the Amendment to the CPPNM is an urgent issue. Japan emphasizes the importance of early acceptance and early entry into force of the Amendment and a relevant implementing law, and from this perspective, the Government of Japan submitted the Amendment to the Diet in February.

Japan also concluded the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) in August 2007.

## 4. EFFORTS TO ENHANCE TRANSPORT SECURITY

At the Seoul Nuclear Security Summit in March 2012, Japan took the lead in the Gift Basket on transport security of nuclear and other radioactive materials, and issued a joint statement with France, the Republic of Korea, the United Kingdom, and the United States. In November 2013, Japan hosted a table-top exercise for Transport Security with participants from the above five countries, IAEA, and some observer countries in cooperation with the World Institute for Nuclear Security (WINS) and the World Nuclear Transport Institute (WNTI). At this Summit, the above five countries issued a joint statement and a TTX Report with some suggestions that might be useful for other countries in their efforts to strengthen their transport security.

Domestically, Japan established the Committee on Nuclear Security under the Nuclear Regulation Authority (NRA) and is accelerating the research and consultation regarding measures to strengthen transport security, such as implementation of transportation section of the INFCIRC/225/Rev.5.



Moreover, Japan jointly conducted a table-top exercise on transport security with the United States in March 2012 in Hawaii, the US.

## 5. COOPERATION WITH THE IAEA AND OTHER INTERNATIONAL INITIATIVES

Japan has made financial contributions worth a total of more than three million US dollars to the IAEA Nuclear Security Fund since its establishment in 2002. Japan recently decided to offer an additional 1.13 million Euro. Japan will continue its support for the IAEA.

Mr. Shunichi SUZUKI, Parliamentary Senior Vice-Minister for Foreign Affairs, attended the International Conference on Nuclear Security that was the first ministerial conference on this matter hosted by the IAEA. Japan continues to make technical contribution to the drafting of the IAEA Nuclear Security Series.

Japan has been actively participating the Global Initiative to Combat Nuclear Terrorism (GICNT) and the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP) since their creation phase. Japan submitted a report to the Security Council Committee established pursuant to resolution 1540 (2004) (1540 Committee) regarding the implementation of the resolution.

Japan also closely cooperates with other international NGOs such as the WINS and the WNTI.

## 6. RECEIVING AN IPPAS MISSION

Japan recognizes that an International Physical Protection Advisory Service (IPPAS) mission would be valuable to strengthen nuclear security in Japan. Japan officially requested the IAEA to dispatch a mission in January 2014 after hosting an IPPAS workshop in December 2013 in Tokyo. Japan will coordinate the schedule with the IAEA, assuming that the mission will be dispatched by spring 2015.

## 7. SUPPORT TO CAPACITY BUILDING THROUGH THE INTEGRATED SUPPORT CENTER FOR NUCLEAR NONPROLIFERATION AND NUCLEAR SECURITY (ISCN)

In order to contribute to strengthening international nuclear security, Japan established, in December 2010, the "Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN)" under the JAEA, as it had announced at the Nuclear Security Summit in Washington in April 2010. The ISCN has been providing training courses to support domestic and international capacity building for regulators, mainly from Asian countries, by using the "Physical Protection Exercise Field" and the "Virtual Reality System" in cooperation with the IAEA. In these three years since its establishment, the ISCN has provided seminars on peaceful uses of nuclear energy and training courses on physical protection to more than 1,500 experts from home and abroad. Japan will continue and strengthen this kind of contribution.

For this sort of activity, coordination and cooperation among the Centers of Excellence around the world are also important. Japan will continue to promote such coordination and cooperation through the IAEA and other international fora. In this regard, the JAEA and the IAEA formulated a Practical Arrangement (PA) in September 2013 in order to further the cooperation.

## 8. RESEARCH AND DEVELOPMENT FOR NUCLEAR FORENSICS AND NUCLEAR DETECTION

The JAEA engages in research and development activities involving leading-edge technologies including nuclear forensics and nuclear detection for strengthening nuclear security. Regarding nuclear forensics, Japan implements joint researches with the US including uranium age dating measurements, characterization of nuclear fuel for forensics purposes, and the establishment of a proto-type national nuclear forensics library at the JAEA. Regarding nuclear detection, an experimental device which uses gamma rays for the precise measurement of nuclear material will start operating soon. In January 2014, the JAEA held an international symposium entitled "Nuclear Physics and Gamma-ray Sources for Nuclear Security and Nonproliferation" at the ISCN. It was the first-ever symposium that focused on nondestructive measurement technology with gamma rays.

## 9. DEVELOPMENT OF A SECURITY-BY-DESIGN HANDBOOK

The JAEA and the Sandia National Laboratories (SNL) together developed a Security-by-Design Handbook for other countries as a joint research project to identify best practices for incorporating security considerations early into the design process of new nuclear facilities, and are exploring opportunities to reach out to other stakeholders in the international community.

## 10. JOINT EXERCISES TO COUNTER TERRORISM AGAINST NUCLEAR POWER PLANTS

Relevant authorities in Japan have steadily implemented joint exercises to counter terrorism against nuclear power plants and other nuclear related facilities. After the accident at TEPCO's Fukushima Daiichi Nuclear Power Station in March 2011, Japan decided to further enhance the collaboration among the relevant authorities in activities including implementing practical exercises. In 2013, the police and the Japan Coast Guard as well as operators jointly implemented thirty exercises and the police and the Japan Self Defense Forces (JSDF) jointly implemented two field training exercises (FTX) at eighteen nuclear power plants. Moreover, the police and the JSDF implemented thirty joint FTX assuming public security operations to counter terrorism against important facilities including nuclear power plants. Japan will continue such tangible countermeasures for nuclear security.

## 11. ESTABLISHMENT OF INDEPENDENT NUCLEAR REGULATORY AUTHORITY

In order to strengthen nuclear regulatory authority Japan established the Nuclear Regulation Authority (NRA) as an independent administrative body from agencies promoting the use of nuclear energy in September 2012. The NRA is responsible for the regulation of nuclear security, nuclear safety, and safeguards under one authority. In particular, the regulatory work and general coordination functions on nuclear security are integrated into the NRA, thus Japan's administrative system for nuclear security was fundamentally strengthened.

## 12. SYSTEM AGAINST INSIDER THREAT

At the Seoul Summit in March 2012, Japan announced that it would continue to examine its system to determine the trustworthiness of persons. Japan has the Committee on Nuclear Security under the NRA and is accelerating the research and consultation to establish such a system. Japan continues to thoroughly conduct the countermeasures against insider threat such as access control and the two-man rule.

## 13. STRENGTHENING SECURITY OF RADIOACTIVE SOURCES

Japan introduced the following system for security of radioactive isotopes (RI security):

- Developing the system to issue export certificates.  
Responding to "the Code of Conduct on the Safety and Security of Radioactive Sources" and "Guidance on the Import and Export of Radioactive Sources" of the IAEA, Japan developed the system to issue export certificates to export radioactive isotopes.
- Developing the registration system of radioactive sources.  
Responding to the Code of Conduct, Japan developed the registration system of specific isotopes for radioactive sources with high risk radiation impact on the human body.

Regarding RI security in Japan, the NRA considers RI security as one of the immediate priorities, and is working to grasp the current situation, to sort out problems, and to develop measures to be taken in Japan.