# Country Report of Japan

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Your Excellencies, Distinguished delegates, and Ladies and gentlemen! It is a great pleasure for me to present you the current status of nuclear energy uses in Japan.

My talk consists of three parts. The first section comments on the current status of the off-site and on-site activities for decommissioning and remediation after the severe accident at the Fukushima Daiichi nuclear power station. The second section comments on the current status of nuclear energy policy deliberation in Japan, and the third section offers Japan's expectation for the future of the FNCA.

At the Fukushima Daiichi, airborne radioactive contamination has been virtually suppressed, and damaged reactor cores have been maintained at sufficiently low temperature by injecting water at a rate of 400 tons per day. The water is pumped up from the Turbine Buildings and decontaminated before injection. As we found the groundwater around the Turbine Buildings had been contaminated in the early days after the accident, we have reduced the permeability of the soil in the embankment region of the port in front of units 1- 4 so as to reduce the contaminated groundwater flowing into the port. We are also making every effort to reduce the intrusion of the groundwater into contaminated regions on the one hand, and to decontaminate the water recovered from the contaminated areas and store it, on the other.

I would like to point out that the radioactivity level outside the port remains below the limit of WHO's guideline for drinking water quality, and that Japan has adopted after the Fukushima Daiichi Accident the highest level of standard for food and water quality, in line with international guidelines, conducting strict radiation monitoring in the distribution channels of marine products.

As for the decommissioning of the damaged units, the Government and TEPCO are jointly promoting activities specified in the mid- and long-term roadmap established in the end of 2011 that defines a three-phase cleanup plan, including necessary R&D activities. We started to remove used and unused fuels from spent fuel pools at unit 4 November this year, which is the first major milestone of the roadmap.

The decommissioning work at the Fukushima Daiichi Nuclear Power Station and the work to resolve the contaminated water issue are unprecedented and involve difficult tasks. We established in August this year, the International Research Institute for Nuclear Decommissioning (IRID) with a view to bringing together technologies, expertise and wisdom for these works both at home and abroad, and promoting them in an internationally open manner. IRID would surely appreciate inputs from FNCA member countries on these works.

As for off-site situation, I would like to point out that some 80,000 people are still requested to be out of home in eleven municipalities surrounding the Fukushima Daiichi, and about the same number of people have chosen to leave home by themselves. In the areas located within a 20km radius from the Fukushima Daiichi NPS and where additional annual exposure was anticipated to be higher than 20mSv, the National Government has been promoting decontamination activities. The activities have been delayed in some municipalities, however, as it took a longer time for the Government to obtain consent of residents on the way to decontaminate their houses and the location of the site for storing the decontamination wastes. The government and the eleven municipalities are promoting both the decontamination and the restoration of living and social infrastructure simultaneously to expedite the return of the resident, taking into consideration of lessons learned from these experiences.

Let me move on to the current situation of nuclear energy uses in Japan. In July this year, the Nuclear Regulation Authority, a newly established independent body that solely exercises regulatory authority in the field of nuclear safety, security and safeguards in Japan, published a new set of regulatory rules for nuclear power plants in which the lessons learned from the Fukushima accident were reflected especially in the countermeasures against extreme natural hazards, loss of safety systems and severe accident management. Currently the NRA has been verifying compliance of the 14 reactors with the newly enacted regulations. At present there is no unit among 50 units or so that are in operation after refueling. The Government is in a position to support the restart of these idling plants as an important power source, when they comply with the NRA rules. Obviously, it is essential for the operators to sincerely communicate with the public about their preparation for the restart and their resolve to do what they should do at the right time in a right manner, recognizing their special responsibility to assure nuclear safety.

The Government is currently deliberating the future nuclear energy policy in Japan, paying due attention to the importance of assuring stable and economical supply of energy, and the public perception about nuclear energy that will evolve from the efforts of nuclear energy community for trustworthiness.

As for exports of nuclear power technologies, it is our country's responsibility to contribute to the strengthening of nuclear safety worldwide by sharing with the world the experience and lessons learned from the Fukushima Daiichi accident. Japan will support the infrastructure development in the emerging countries and offer technologies

with high standards of safety to the countries which plan to introduce or expand their own nuclear power programs.

I should also mention the current status of radioactivity and radiation applications in Japan. Obviously these application are playing important roles in both green innovation and life innovation, producing functional materials for high performance batteries, new plants that can absorb a larger amount of carbon dioxide than the existing ones, carbon neutral plastic and so on, making it possible to diagnose diseases and cure cancers in the medical field and providing versatile visualization tools for the promotion of basic sciences and productivity in various industries. Japan is making various radiation sources including a gigantic proton accelerator complex J-PARC available to academic and industrial researchers.

The final point I would like to touch upon is the future of the FNCA activities. Japan has been firmly behind the FNCA activity since its inception. Japan would like to do so in coming years, supporting the FNCA to take up challenging topics in the various fields such as radioactivity and radiation applications, nuclear infrastructure strengthening and the nuclear power generation.

Japan sincerely hopes that the FNCA will continue to formulate various cooperative research and development activities in the various nuclear fields like radioactivity and radiation applications among experts who want to devote to the development of the social economy and the welfare of the people in the region and will build lasting links among organization and peoples responsible for the research and development of such activities.

As you know well, many countries around the world have been seriously exploring the use of nuclear energy as a measure to achieve energy security and to prevent global warming since the start of the twenty-first century. Needless to say, any country that utilizes nuclear energy should pursue continuous improvement in all areas related to nuclear safety, security and nonproliferation, adhering to relevant international standard and obligations. In the spirit of prospering together, Japan has provided and will provide its assistance to those countries planning to introduce nuclear power generation to develop infrastructure needed, support for their efforts of capacity building and the establishment of a necessary legal framework, in particular.

Japan Nuclear Human Resource Development Network has been active in supporting foreign applicants who want to take nuclear training programs conducted in Japan. The Ministry of Foreign Affairs has been hosting the Asian senior-level Talks on Non-Proliferation (ASTOP) every year since 2003, which facilitates dialogue among the nations within the region and beyond on relevant non-proliferation issues and thus promoted common ground on the importance of transparency of nuclear activities and the commitments to the IAEA safeguards combined with its Additional Protocol and international export control regimes.

The Integrated Support Center for Nuclear Non-proliferation and Nuclear Security of Japan Atomic Energy Agency that was established in 2010 has been providing training courses on nuclear nonproliferation and nuclear security to support capacity building for regulators, mainly from Asian countries by using the Physical Protection System Exercise Field and the Virtual Reality System in cooperation with the IAEA. We believe it is important to coordinate and cooperate in this sort of activity among similar Centers of Excellence around the world.

Japan highly appreciates the initiative of the FNCA to convene a series of the Expert Panel for sharing information and best practices through dialogue among member countries towards deeper understanding of issues in the introduction of nuclear energy. Responding to the interest of the FNCA member countries seeking the use of nuclear energy, Japan will contribute to the success of this kind of Panel and other actions called for by the FNCA, believing that it is Japan's duty to share lessons learned from various good and bad experiences and contribute to the pursuance of the highest level of performance in the uses of nuclear energy in the region.

In conclusion, Japan will continue the safe use of nuclear energy, while pursuing a greener and healthier society. Japan will also continue to cooperate with the FNCA countries to advance the safe use of nuclear energy as well as the nuclear science and technology for social and economic development in each country, in the spirit of prospering together, saving a green Asia and protecting human lives.

I thank you for your kind attention.