



Report of the Nuclear Safety and Security Group

27 May 2016

Introduction

G7 Ise-Shima Summit will be held to coincide with the fifth anniversary of the Fukushima Daiichi accident and will be the first summit held under the Japanese Presidency since the accident. Noting that, the Group focused its discussions on nuclear safety in 2016.

The Group reaffirms the importance of achieving and maintaining high levels of nuclear safety worldwide. The members recognize the achievements that the international community has made on nuclear safety after the Fukushima Daiichi accident and appreciate the IAEA's role in this regard, and take this opportunity to reaffirm their commitment to continue to make efforts to ensure the highest nuclear safety worldwide including through support for the IAEA.

IAEA Action Plan on Nuclear Safety

In September 2011, the Action Plan on Nuclear Safety was unanimously endorsed by the Member States at the IAEA General Conference. The Action Plan continues to play a guiding role for the international community and the IAEA to identify and act upon lessons learned from the Fukushima Daiichi accident.

(1) G7 activity on the Action Plan

Each of G7 members made a brief summary on the achievements of their implementation of the Action Plan and findings and/or lessons learned during implementation. The outcome of the discussions on these summaries will be communicated to the IAEA. The Group is ready to contribute to identifying the relevant priorities on nuclear safety.

All the G7 members conducted safety assessments on their Nuclear Power Plants (NPPs) and reviews on their national regulatory frameworks after the Fukushima Daiichi accident. They have incorporated lessons learned from the accident into their policy and regulatory frameworks. G7 members have also made significant contributions to international efforts for strengthening global nuclear safety such as enhancing the international network on Emergency Preparedness and

Responses (EP&R) and revisions of IAEA safety standards, as well as promoting and using those standards during peer review missions (see Section 2 for details).

Nuclear safety is an ongoing process, and significant progress has been made in the last five years. Self-assessments on safety-related measures need to be continuously applied. EP&R mechanisms should be further developed. Legal frameworks require commitments of IAEA Member States towards increased participation and implementation. Protection of people and the environment from ionizing radiation, communication and Research and Development (R&D) continue to be important areas on which to work. Also, the Group believes it is now particularly important to ensure nuclear safety in states newly introducing NPPs and that assistance be provided for their capacity building and human resource development (HRD).

(2) IAEA peer review missions

While G7 members acknowledge the IAEA's important role, G7 members expect further enhancements in its activities, particularly the peer review missions offered by the Agency.

The Group strongly supports IAEA peer review missions, Integrated Regulatory Review Service (IRRS), Integrated Nuclear Infrastructure Review Mission (INIR), Site and External Events Design Review Services (SEED), Operational Safety Review Team (OSART), Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS), Emergency Preparedness Review Mission (EPREV) among others, as an effective way for Member States to self-assess and improve their respective nuclear safety. The Group acknowledges the states that have hosted or are interested in hosting relevant missions and encourage the others to do so. The Group encourages the G7 members to continue to make contributions by providing their expertise.

While the Group appreciates the IAEA's efforts for providing these review services, the Group encourages the Agency to further improve the effectiveness and efficiency of the missions. Strengthening IRRS missions shall remain a priority among others. In this respect, the Group took note and supports the goals envisioned in the letter issued by the International Nuclear Regulators Association (INRA) to the IAEA on May 20, 2015, of proposals to improve the effectiveness of the IAEA peer review services. The Group acknowledges that the IAEA has commenced activities regarding the review of Self-Assessment of the Regulatory Infrastructure for Safety (SARIS) and has recently established a peer review

committee. The Group, however, would like to see a formal response from the Agency on how they will address the goals raised in the INRA letter.

Enhancing Legal Frameworks

Multilateral legal frameworks provide the basis for establishing nuclear safety infrastructure in individual states and a platform for international cooperation. Increasing the number of Contracting Parties (CPs) to these conventions is an important issue. Recent increases in the number of countries newly introducing NPPs and the expansion in international nuclear cooperation require strengthening interaction within these legal international frameworks and in particular a clear commitment of all the states involved to efficiently implement relevant conventions.

(1) Convention on Nuclear Safety (CNS)

The CNS contains fundamental safety principles and provides a legal framework for safety of nuclear installations. The Review Meeting of the Convention gives an important opportunity for the CPs to enhance respective nuclear safety by conducting peer reviews among themselves and taking the findings back home to heighten respective nuclear safety. The Group realizes, however, that achieving “full-participation” in the review process of the CNS – that is, all the CPs attending the Review Meeting, fulfilling the obligations such as writing a national report, and actively participating in peer reviews – remains a challenge.

In this regard, the Group views the benefits of continuous efforts to strengthen the review process of the CNS as important. The members have agreed on the importance of initiating actions in view of the coming 7th CNS Review Meeting that is planned for March/April 2017. G7 members intend to provide support to the Canadian president of the Review Meeting for a successful outcome to the peer review process.

In this respect, effectiveness of the review process is a key area that the CPs should focus on enhancing. Systematic identification of challenges, and the promotion of solution-finding approaches and identification of good practices, are considered to be areas for possible enhancement. Additionally, the Group takes note of the need to ensure the continued robustness of the peer review process.

In addition, ratification of the relevant conventions, as well as participation and active involvement throughout the review process of the countries newly introducing NPPs, is essential and must be encouraged. Organizing demarches to

these states and providing assistance to them on the preparation for the CNS Review Meeting would be effective means in this regard. The Group welcomes a Canadian initiative for coordinated G7 demarches to advance the objectives of the CNS and enhance participation in the Review Meeting, while offering relevant training. The Group will provide support to the Canadian initiative as appropriate.

Finally, the Group supports sound implementation of the CNS as called for in the Vienna Declaration on Nuclear Safety adopted at the diplomatic conference of the CNS in February 2015. This represents an on-going international effort to strengthen nuclear safety in the wake of the Fukushima Daiichi accident. The G7 encourages the CNS CPs to adequately describe actions taken to support the implementation of the principles of the Vienna Declaration for the upcoming March/April 2017 Review Meeting.

(2) Joint Convention(JC) on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

As concluded at the last Review Meeting of the JC in May 2015, increasing the number of CPs of the Convention remains a priority. The Group notes that, for example, the JC has 17 fewer CPs than the CNS, although the CNS and the JC are both safety-focused Conventions and the JC covers not only nuclear installations but also all facilities and activities related to spent fuel and radioactive wastes. Also, there are two countries with NPPs in operation or that have a nuclear program in progress that are not CPs to either the CNS or to the JC.

The Group agreed that G7 members should take on individual, and possibly joint approaches, to invite states not party to the Convention to join the JC as relevant to the progress in their respective nuclear programs. Also, the Group calls upon the IAEA to continue its role in promoting understanding of the importance of the Convention, through activities such as regional workshops.

(3) Global Nuclear Liability Regime

The Group reconfirms the importance of establishing a global nuclear liability regime which addresses the concerns of all states that could be affected by a nuclear accident through providing appropriate compensation for nuclear damage. The Group finds it encouraging that G7 members are making progress in this respect as follows: efforts toward ratification of the Convention on Supplementary Compensation for Nuclear Damage (CSC) in Canada and outreach activities of the CSC by the U.S. and Japan; progress toward ratification of the 2004 protocols to amend the Paris Convention and the Brussels Supplementary Convention linked

to the Vienna Convention by the Joint Protocol. The Group encourages all states to join an international nuclear liability instrument as a step toward establishing such a global regime.

Capacity Building and Human Resource Development including Assistance to Developing Countries

The importance of capacity building and HRD, including raising awareness on the importance itself of capacity building and HRD as well as development of a safety culture, cannot be disregarded to maintain and strengthen nuclear safety. It is an issue for states at any stage of their nuclear power program, regardless of whether it is a state newly introducing NPPs, further developing its international nuclear cooperation, further extending its own nuclear power program or planning to phase out its nuclear power program; hence, G7 members are no exceptions.

Continuous efforts and involvement of industry, government and academic stakeholders are required to maintain and develop the necessary level of human capital support to safely run the nuclear programs. The Group encourages all states to continue investing in developing human capital resources to support activities related to capacity building and HRD.

In this regard, the Group appreciates diverse activities for capacity building that are being conducted not only at a national level but also in regional and international cooperation frameworks. The IAEA is also playing an essential role in supporting Member States through its HRD program and peer review missions. G7 members support programs provided by the Agency including such extra-budgetary contributions as the Peaceful Uses Initiative (PUI), while encouraging the Agency to play a coordinating role as well. Active discussions on the importance of HRD and initiatives for its promotion, such as the Capacity Building Initiative (CBI), are welcomed.

The establishment of a robust safety, security and non-proliferation infrastructure in the states considering introducing NPPs is a vital first step. The Group appreciates and further expects the IAEA's assistance in this area. At the same time, the G7 members should facilitate and support the development of such an infrastructure.

While the Group recognizes that it is a responsibility for those newcomer countries to ensure safety of their NPPs, the Group confirms that every stakeholder involved in international nuclear transfers and cooperation has a role to play in giving due

consideration to nuclear safety in a transparent manner.

The Group therefore urges all exporting states to take steps, in line with international best practice, to assure themselves that intended host states have a robust nuclear safety, security and non-proliferation infrastructure framework in place to safely manage nuclear power plants before exporting nuclear facilities and technology.

The Group encourages strengthening mutual cooperation between exporting and importing states under the international frameworks, such as the IAEA, Organization for Economic Co-operation and Development/Nuclear Energy Agency (OECD/NEA) and World Association of Nuclear Operators (WANO).

Decommissioning of Fukushima Daiichi Nuclear Power Station (NPS)

The Group welcomed the presentation by Ministry of Economy, Trade and Industry of Japan (METI) in the NSSG meeting in February on the situation at the Fukushima Daiichi NPS five years after the accident as well as the strategy and progress for plant decommissioning and management of contaminated water. Together with the site visit organized by the chair, the Group welcomes the steady progress in the decontamination, decommissioning and water management issues at the site over the past five years. The Group also recognizes that the decommissioning process of Fukushima Daiichi NPS is proceeding in an open and transparent manner in close communication with the international community. Furthermore, the Group affirms that importance of planning, implementation and communication of policies related to response and recovery from a nuclear accident are based on scientific evidences and data.

The Group recognizes that there are some challenges for the decommissioning process that are not only particular to the case of Fukushima Daiichi NPS, but also applicable to other cases of decommissioning. For example, the decommissioning process needs to be moved forward in close communication with local communities to gain public acceptance. Additionally, cross-cutting as well as new technologies are necessary; the decommissioning process needs to proceed in parallel with R&D and HRD.

In this regard, the Group acknowledges the achievements of international cooperation which facilitated the progress of the decommissioning at Fukushima Daiichi, including international cooperation in R&D and HRD. The Group emphasizes the importance of supporting further initiatives in international

cooperation, such as the International Forum on the Decommissioning of the Fukushima Daiichi NPS held in April 2016 in Iwaki City in Fukushima Prefecture and the International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes organized in May 2016 in Madrid by the IAEA, which provide appropriate fora to share good practices and implementation methods related to the above mentioned aspect of decommissioning.

Chernobyl Projects

On the occasion of the 30th anniversary of the Chernobyl nuclear accident, the Group welcomes the ongoing progress of projects at the Chernobyl site and reaffirms its commitment to undertake joint efforts with the government of Ukraine to convert the Chernobyl site into a stable and environmentally safe state, through the assistance of the Nuclear Safety Account (NSA) and the Chernobyl Shelter Fund (CSF).

Under the Japanese Presidency, the G7 NSSG -European Bank for Reconstruction and Development (EBRD) Chernobyl Contact Group has continued to follow the progress of the Chernobyl projects. In turn the G7 NSSG has received periodic updates of these projects from the EBRD.

The recently agreed working schedule provides for the New Safe Confinement (NSC) to be slid into its final position in November 2016 and its commissioning and delivery to be accomplished by November 2017. The Interim Spent Fuel Storage Facility -2 (ISF-2) is scheduled to be commissioned and start operation in 2017, while manufacturing of the spent fuel containing casks will continue until 2019.

The ISF-2 project, which received particular attention by the NSSG this year, is essential for the decommissioning of the Chernobyl nuclear power plant and the safety at the site by providing dry storage for the more than 20,000 spent fuel assemblies from the operation of the Chernobyl NPP.

Recognizing the urgent need for additional financial contributions, up to EUR 105 million, to the NSA for the completion of the ISF-2 project, the G7 countries and the European Commission announced that they are aiming to make additional contribution of approximately EUR 45 million at the Pledging Event held in Kiev on April 25, 2016. Contributions will be actively sought also from non-G7 countries.

The Group welcomes the decision of the EBRD to contribute EUR 40 million this

year for the ISF-2 project through its allocation of net income, as well as the resolution of the Bank to consider further net income allocations of up to EUR 20 million in 2017 or 2018 to the ISF-2 project in order to close any remaining funding gap.

While recognizing the complexity and the tight working schedule of the final stages of the Chernobyl projects, the NSSG counts on EBRD's continued commitment in providing an effective management and in engaging the contracting parties and the authorities in Ukraine to complete them within the agreed cost and schedule.

The Group also emphasizes the importance that the government of Ukraine takes the required institutional and financial provisions to ensure the efficient and successful implementation of the projects, commissioning and operation of the facilities.

Uranium Mines Legacy Sites in Central Asia

The Group welcomed the initiative by the European Commission to assist in addressing the legacy of Soviet era uranium mining activities in Central Asia (Kyrgyzstan, Tajikistan, Uzbekistan). This legacy is recognized as a serious hazard to the environment and population of the region as highlighted in UN resolution 68/218 adopted in December 2013. The Group took note of the ongoing work, in particular elaboration of the "Strategic Master Plan" by the Coordination Group for Uranium Legacy Sites under the auspices of the IAEA. To this end, a dedicated fund, the Environmental Remediation Account (ERA), was set up at the EBRD to pool donor funds for remediation projects; affected countries plan to call for a pledging conference towards the end of 2017. The Group agreed to follow developments with regard to this initiative.