



JAPANESE G7 PRESIDENCY 2023 REPORT NUCLEAR SAFETY AND SECURITY GROUP (NSSG)

December 1st, 2023

INTRODUCTION

1. The Nuclear Safety and Security Group (NSSG), established at the Kananaskis Summit in 2002 and responsible to Leaders, through Sherpas, will provide technically informed strategic policy advice in the areas of nuclear safety and security in the peaceful use of nuclear energy, in close cooperation with multilateral organizations and avoiding duplication of tasks or responsibilities that are being addressed adequately by existing organizations or entities.
2. This report provides the overview of the NSSG meetings under the Japanese G7 Presidency in 2023.

CHERNOBYL PROJECTS

3. The European Bank for Reconstruction and Development (EBRD) provided an update on the Interim Storage Facility-2 (ISF-2) and other Chernobyl projects funded through the EBRD-managed Nuclear Safety Account (NSA) and the International Chernobyl Cooperation Account (ICCA).
4. The NSSG noted the progress of the commercial dispute between Holtec and the Chernobyl NPP on the ISF-2 project, that an amendment to the grant agreement had been approved to allocate funds for legal fees for the arbitration, that Ukraine had agreed to initiate the arbitration process, and that an initial decision would be issued within 6-12 months of the first hearing to establish an arbitration tribunal and rule on the disputed points in the contract. In view of the situation, the NSSG also stressed that an accelerated processing is desirable in order to avoid prolongation of the NSA.
5. The NSSG welcomes the steady progress of projects under the ICCA, as the EBRD has outlined the status and priorities for projects in the Chornobyl Exclusion Zone, including infrastructure, nuclear safety at facilities such as the Spent Fuel Storage Facilities. The EBRD estimates the financial needs to be in excess of EUR 100 million, well above current contributions. Outside of Chernobyl power grid

improvements and safety measures related to long term operation of existing unit and the issue of dependence on Russia for equipment and fuel will be priorities.

IAEA SUPPORT FOR UKRAINE

6. The comprehensive presentation of the IAEA covered the current activities in Ukraine, which are reported daily by the IAEA staff in Ukraine, explaining that their assistance has continued since the beginning of Russia's illegal war of aggression. During the presentation, the importance of the IAEA's continued presence in Ukraine and the need for support from IAEA Member States to help accomplish the tasks they are facing is emphasized. Some of the tasks include IAEA support and assistance missions at all Ukrainian NPPs to monitor, document, and assess the impact of the military conflict on nuclear safety and security; medical missions to provide medical support for staff operating Ukrainian NPPs; and providing timely updates on the situation, they also expressed concern that staff are working long hours, sometimes in double shifts. The IAEA mentioned maintenance and spare parts for NPPs as a significant issue. Maintenance staff at Zaporizhzhia Nuclear Power Plant has been cut to 1/3. The IAEA also plays a central role in coordinating international nuclear safety and security assistance to Ukraine, including the provision of equipment.
7. The NSSG welcomes the IAEA's effort to maintain the nuclear safety and security in Ukraine expressing its continued support to the IAEA, while, reaffirming our G7 leaders' commitment to stand together against Russia's illegal, unjustifiable, and unprovoked war of aggression against Ukraine. The NSSG condemns, in the strongest terms, Russia's manifest violation of the Charter of the United Nations (UN) and the impact of Russia's war on the rest of the world.

PROTECTION OF NUCLEAR FACILITIES IN ARMED CONFLICT

8. In view of the situation in Ukraine, the NSSG discussed the nuclear safety and security during the Russia's illegal war of aggression particularly from the regulatory perspective.
9. The NSSG exchanged information and lessons learned on domestic regulatory requirements for external hazards and emergency responses.
10. The NSSG confirms the importance of ensuring safety and security of nuclear facilities in all circumstances and therefore acknowledges and underscores that, military attacks against nuclear electric generating installations can have very harmful effects.

11. In this context, the NSSG reiterated support for the IAEA Director General's initiatives, including the seven indispensable pillars for nuclear safety and security, and the five concrete principles for the safety and security of the Zaporizhzhya Nuclear Power Plant.

DECOMISSIONING IN FUKUSHIMA DAIICHI NUCLEAR POWER STATION

12. Japan presented the steady progress of the decommissioning of the Fukushima Daiichi Nuclear Power Station for these 12 years after the accident on March 11, 2011. This year marked the big step for Fukushima as on August 22, the Japanese government decided to start discharging ALPS treated water into the sea, which is essential for the decommissioning of the site and the reconstruction of Fukushima. The discharge itself starting on August 24.
13. In its comprehensive report issued in July, the IAEA concluded that the radiological impact on humans and the environment will be negligible. In addition, the IAEA has confirmed that the approach is consistent with relevant international safety standards. The IAEA also explained during the meeting that the level of tritium in the discharge water is far below international standards and emphasized its continuous presence in Fukushima until the "last drop" of ALPS-treated water is discharged.
14. The NSSG welcomes the independent review by the IAEA and recognizes that political external communication not based on scientific evidence will cause reputational damage and anxiety to people around the world.
15. The NSSG also welcomes Japan's efforts in transparency and to ensuring the discharges is in accordance with international safety standards, and with the continued involvement of the IAEA, including its ongoing monitoring and assessments.

REGULATORY RESEARCH

16. The NSSG exchanged information on regulatory research performed in each country.
17. The NSSG confirms that Regulatory Research is important and necessary to regulatory activities such as decision making, verification, or creating new regulation for advanced technology. In addition, Regulatory Research contributes capacity building of younger generation.
18. The NSSG also confirms that it is extremely difficult to recover once research facility is lost. In this context, continuing investment is vital.
19. Importance of international cooperation is also noted. Joint research platform set by

an international organization is recognized as one of the preferable approaches to facilitate Regulatory Research.

IAEA INTERNATIONAL CONFERENCE ON NUCLEAR SECURITY (ICONS)

20. The priorities and overviews of ICONS for each member were shared during the meeting. The discussion included working together to promote universalization of the Convention on the Physical Protection of Nuclear Material and its Amendment (A/CPPNM) and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), transportation security, new technologies, cyber security, Ukraine, and new types of reactors such as SMRs. It was found that the G7 had common interest towards ICONS.
21. The US proposed an informal sub-group to be established within interested G7 countries to facilitate collaboration leading up to ICONS, to coordinate on priorities, deliverables, outreach, text proposals for the Ministerial Declaration, and supporting Ukraine. This initiative to establish a sub-group in ICONS is very similar to the UK's coordination of the 8th and 9th Joint Review Meetings of the Convention on Nuclear Safety (CNS), which the NSSG discussed at its first meeting in February, as the Joint Statement for CNS and the Ministerial Declaration for ICONS are both agreed by consensus.
22. The NSSG recognizes the importance of a successful outcome to the Conference, given the increase in the number of nuclear facilities being built, the development and expansion of nuclear science and technology for peaceful applications, and evolving advancements in technology requires more focus on strengthening the nuclear security framework to address contemporary challenges.

REGULATION OF NEW REACTORS

23. In view of the situation that various countries are developing new types of reactors and recognizing that the IAEA is actively involved in this process. The NSSG found it useful to share awareness of emerging issues and problems and to exchange views on possible cooperation as G7 countries, as well as on the progress made to date by the IAEA.
24. The NSSG notes the IAEA's Nuclear Harmonization and Standards Initiative (NHSI) to effectively develop harmonized regulatory approaches among national regulators that would enable the effective global deployment of safe and secure advanced nuclear reactors.
25. The NSSG recognizes the potential safety performance opportunities that SMR

technologies could offer and the important role of regulators in ensuring that these technologies are deployed safely, securely and in accordance with robust nonproliferation requirements.

26. The NSSG also notes the differences among G7 countries in their positions on this issue and the state of development but welcomes further cooperation in this area.

NUCLEAR CONTAMINATION IN CENTRAL ASIA

27. The EBRD provided an overview of the remediation projects to address the uranium mining legacy in Central Asia by former Soviet uranium mining, which threatens the region's water supply. A UN resolution on cooperation with Central Asia was a milestone that led to a number of research projects. A strategic master plan has been developed that integrates the findings of many partners and will be updated in 2024. EBRD reported the next step was to pool scarce resources through the implementation of a multilateral program. Many countries in Central Asia face the effects of pollution from uranium mining, but the focus is on the Ferghana Basin area. The EBRD is trying to identify financial support to cover remaining costs to finish work in this area. The overall cost for this initiative is EUR 85million . There are seven more sites to remediate and the EBRD is looking for an additional EUR 47 million. The EBRD is coordinating this work with the IAEA which maintains the overall action plan for this multilateral effort.
28. The NSSG continues to follow the progress of the projects and welcomes the completion of the projects in Kyrgyzstan and Uzbekistan for the environmental remediation of uranium legacy sites in Central Asia.