Promotion of the peaceful use of nuclear technology: a tool to achieve the Sustainable Development Goals

Working paper submitted by the members of the Non-Proliferation and Disarmament Initiative (Australia, Canada, Chile, Germany, Japan, Mexico, Netherlands, Nigeria, Philippines, Poland, Turkey and United Arab Emirates)

1. The Non-Proliferation and Disarmament Initiative States reaffirm their commitment to article IV of the Treaty on the Non-Proliferation of Nuclear Weapons, which stipulates that nothing in the Treaty shall be interpreted as affecting the inalienable right of all the parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II and III of the Treaty.

2. Under the same article, parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy, and to cooperate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States party to the Treaty, with due consideration for the needs of the developing areas of the world. We recognize that it is the prerogative of each State to establish its own national energy policy, including fuel cycle policies, in accordance with its national requirements and taking into account relevant international obligations.

3. In reviewing the operation of the Non-Proliferation Treaty, the States of the Non-Proliferation and Disarmament Initiative consider it imperative that each of the three pillars of the Treaty – non-proliferation, disarmament and the peaceful uses of nuclear technology – be accorded equal weight and be given equal consideration during the course of the review cycle. The three pillars have equal intrinsic value and each contributes in important ways to the Treaty’s overarching objective of averting nuclear conflict and safeguarding global security.

4. While important in their own right, each of the three pillars of the Non-Proliferation Treaty also reinforces objectives of the other pillars. In other words, we the States of the Non-Proliferation and Disarmament Initiative, consider the three pillars of the Non-Proliferation Treaty to be interdependent and mutually reinforcing.
5. It is essential, therefore, that the third pillar – the peaceful uses pillar – be accorded appropriate weight during the 2019 meetings of the Preparatory Committee of States parties, during any regional conferences organized in preparation for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, and when developing associated outcome documents.

6. Effective mitigation of future global challenges, including those associated with climate change and the rise in animal disease outbreak, elevates the importance of identifying innovative and effective solutions. The peaceful use of nuclear technology is an area of increasing potential in this regard.

7. We call on States parties to acknowledge the progress made and the future potential of the peaceful use and application of nuclear technology in advancing a wide variety of basic socioeconomic human development needs worldwide. This includes in areas pertaining to human and animal health, nutrition, food and agriculture, water resource management, environment, industry, materials and energy.

8. The peaceful use and application of nuclear science and technology can thus play an important role in accelerating progress towards achieving at least 9 of the 17 Sustainable Development Goals. To this end, the Non-Proliferation and Disarmament Initiative believes that access to the benefits from the peaceful uses of nuclear technology should be enlarged to the greatest extent practicable, including where possible or desirable through incorporation into national development plans. Furthermore, development partners need to work together to advance the recognition of nuclear science and technology as a tool for development within the development framework. Enhanced sharing of good practices between stakeholders, such as regulators, operators and policymakers, can provide an important impetus in this regard.

9. All States have accrued tangible benefits from the peaceful uses of nuclear technology, including through cooperation with the International Atomic Energy Agency (IAEA) – an impressive achievement underpinned by the Non-Proliferation Treaty.

10. The Non-Proliferation and Disarmament Initiative I is keen to ensure that benefits from the peaceful uses of nuclear technology are protected and continue to be available to States. We look forward to engaging constructively with all States parties during the course of this Preparatory Committee meeting to advance this objective and ensure the continued strengthening of the Non-Proliferation Treaty as the cornerstone of the non-proliferation and disarmament regime.

11. Ensuring effective communication to stakeholders and raising public awareness of the benefits of the peaceful uses of nuclear technology are essential to building the acceptance needed to enhance the application of the peaceful uses of nuclear technology.

**Cooperation with the International Atomic Energy Agency**

12. In promoting the peaceful uses of nuclear technology, the activities of IAEA under “Atoms for Peace and Development” are contributing in a crucial way to the implementation of the 2030 Agenda for Sustainable Development.

13. The Non-Proliferation and Disarmament Initiative urges the Agency to continue to raise awareness of its activities with key players in the development field and to strengthen partnerships with relevant organizations. Initiatives such as the International Ministerial Conference on Nuclear Power in the Twenty-first Century in 2017 and the Ministerial Conference on Nuclear Science, Technology: Addressing Current and Emerging Development Challenges in 2018 are relevant in this regard.
14. The Non-Proliferation and Disarmament Initiative welcomes the Ministerial Declaration adopted at the 2018 Ministerial Conference in which IAEA member States “recognize the important role of science, technology and innovation in addressing the current challenges and meeting the common goals of achieving sustainable development and protecting the environment in the context of the 2030 Agenda for Sustainable Development”.

15. In the same Ministerial Declaration, member States also recognized the growing need and demand for further utilization of nuclear applications worldwide; the importance of bilateral and multilateral cooperation in accelerating and enlarging the contribution of nuclear technology to peace, health and prosperity; the need for donors and recipients of nuclear technology to work together to bridge the gaps in nuclear science and technology among member States; and the importance of the IAEA Technical Cooperation Programme and coordinated research activities as major mechanisms to support member States in building, strengthening and maintaining capacity to use nuclear technology in a safe, secure and sustainable manner.

16. The Non-Proliferation and Disarmament Initiative encourages IAEA and its member States to help spread the benefits of the peaceful use of nuclear technology by making further efforts to enhance the efficiency, effectiveness, transparency and sustainability of its Technical Cooperation Programme. In particular, all member States need to take responsibility to pay their target share to the IAEA Technical Cooperation Fund, which is the most important mechanism for the implementation of the Technical Cooperation Programme, and to take practical steps to ensure higher rates of attainment for the Fund. Public-private partnerships should be strengthened with the objective of enhancing the Technical Cooperation Programme and its socioeconomic impact.

17. Utilization of regional cooperative arrangements such as those in Asia and the Pacific, Arab States in Asia, Latin America and the Caribbean, and Africa can be effective by providing assistance and facilitating technology transfer, complementing and enhancing the technical cooperation activities of IAEA in individual countries and promoting South-South and triangular cooperation.

18. The Non-Proliferation and Disarmament Initiative welcomes the increasing number of IAEA member States that have made voluntary contributions through the Peaceful Uses Initiative to IAEA activities aimed at applying nuclear technology to promote development objectives. Contributions have reached over 140 million euros to the benefit of more than 150 member States. This has enabled the Agency to be more flexible and responsive to unforeseen emergency needs, as demonstrated by swift responses to the Ebola virus disease, the outbreak of the Zika virus and responses to the H5N1 virus (avian/bird flu).

19. The Non-Proliferation and Disarmament Initiative welcomes the role of IAEA in supporting international development and the application of nuclear-derived techniques, including:

- To address needs related to the prevention, diagnosis and treatment of health conditions, in particular non-communicable diseases such as cancer and cardiovascular diseases; and malnutrition in all its forms
- To manage pest-borne disease and impacts on agriculture through a sterile insect technique which suppresses or eradicates pest populations, including mosquitoes, and the Mediterranean fruit fly
- To rapidly diagnose and control transboundary animal and zoonotic diseases
- To measure environmental radioactivity and radiation
• To enhance food security through the development of climate-smart crop varieties, including rice, adaptable to low nitrogen conditions; wheat varieties with high water-use efficiency; mung beans with early maturity; and barley adaptable to low phosphorous fields

• To manage water resources through tracking the global uptake of carbon dioxide by the oceans and the resulting acidification effects on marine ecosystems; and seawater desalination

• To ensure food traceability and authenticity and assess risks to food safety, including the presence of heavy metals, persistent organic pollutants, microplastics and biotoxins in seafood

• To characterize and preserve art and cultural heritage.

20. To maintain broad confidence in and facilitate and strengthen international cooperation in the application of peaceful uses of nuclear technology, the Non-Proliferation and Disarmament Initiative recognizes that the use of nuclear technology must be accompanied, at all its stages, by commitments to and ongoing implementation of the highest standards of safety and security, as well as effective safeguards with full transparency.

21. While cognizant of the distinctions between nuclear security and nuclear safety, the Non-Proliferation and Disarmament Initiative acknowledges the common objectives of and important synergies between these two related areas to ensure responsible production, storage, transfer, exchange, use and disposal of nuclear and other radioactive material.

22. The Non-Proliferation and Disarmament Initiative acknowledges that while responsibility for the nuclear safety and security of nuclear or radioactive material lies with the State with jurisdiction over that material, all stakeholders, including supplier States, have a role in promoting nuclear safety and security. All States should maintain, at all times, effective and comprehensive nuclear security and safety controls of all nuclear and other radioactive material in their possession and look to take any necessary action to mitigate the challenges posed by emerging threats to nuclear security - notably cyberthreats and threats posed by non-State actors.

23. The Non-Proliferation and Disarmament Initiative emphasizes the importance of the development, implementation and continuous improvement of appropriate regulatory infrastructure as well as efforts and investments in education, training and human resource development to strengthen nuclear safety and security.

24. The Non-Proliferation and Disarmament Initiative emphasizes that while using nuclear material for peaceful purposes, States parties need to comply with their non-proliferation obligations under article III of the Non-Proliferation Treaty to prevent the diversion of nuclear material from peaceful uses to nuclear weapons or other nuclear explosive devices. The Non-Proliferation and Disarmament Initiative recognizes the essential role of IAEA in safeguarding the non-diversion of nuclear material and considers the IAEA comprehensive safeguards agreement, in combination with an additional protocol, to be the current international verification standard. The Non-Proliferation and Disarmament Initiative calls on all States that have not yet done so to conclude and implement both a comprehensive safeguards agreement and additional protocol without delay.

25. The detailed proposals of the Non-Proliferation and Disarmament Initiative on the safeguards regime can be found in NPT/CONF.2020/PC.II/WP.29 (2018). The detailed proposals of the Non-Proliferation and Disarmament Initiative on safety and security in relation to peaceful uses can be found in NTP/CONF.2020/PC.I/WP.26 (2017).