

2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

15 December 2021

Original: English

New York, 4–28 January 2022

Peaceful uses of nuclear energy, science and technology

Working paper submitted by China, France, the Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America

1. The international community has a shared commitment to realize the benefits of nuclear energy and other applications of nuclear science and technology for peaceful purposes under article IV of the Treaty on the Non-Proliferation of Nuclear Weapons.
2. Our countries strongly support this goal and reiterate the inalienable right of States parties to the Non-Proliferation 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. We undertake to facilitate, and reaffirm the right of States parties to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy.
3. We remain committed to broadening the access of States parties to the Non-Proliferation Treaty to peaceful uses of nuclear energy and its applications and, for this purpose, will continue to cooperate among ourselves, with other States parties and relevant international organisations. We are also committed to respecting each country's choices and decisions in developing peaceful nuclear technology in line with international obligations and in a safe and secure manner.
4. The Non-Proliferation Treaty provides the framework for enhancing confidence in the peaceful use of nuclear applications by ensuring that international cooperation on the peaceful applications of nuclear energy, science and technology will be managed by States parties in a manner consistent with the relevant provisions of the Treaty.
5. A strong sign of the practical success of the Non-Proliferation Treaty since it entered into force 52 years ago is the significant growth in the peaceful uses of nuclear technology worldwide.
6. Among other things, we can see increased access to cancer treatment, the sterilization of insects to prevent the spread of disease and the provision of clean, sustainable energy. These are just some of the examples of how the peaceful uses of nuclear technology help change people's lives for the better every day and contribute to achieving the United Nations Sustainable Development Goals.



7. Within the Non-Proliferation Treaty framework, the central, unique and invaluable work of the International Atomic Energy Agency (IAEA), primarily through the Technical Cooperation Programme, delivers practical support to IAEA member States in achieving their development priorities. It improves socioeconomic development globally and contributes to the achievement of the Sustainable Development Goals in the fields of zero hunger (Goal 2); good health and well-being (Goal 3); clean water and sanitation (Goal 6); affordable and clean energy (Goal 7); industry, innovation and infrastructure (Goal 9); climate action (Goal 13); life below water (Goal 14); life on land (Goal 15); and partnerships for the Goals (Goal 17).

8. Our countries strongly believe that nuclear technology can and should be harnessed as part of the global response to the challenges facing our planet. For example, meeting the demand for low-emission power generation, reducing global emissions of greenhouse gases and mitigating and adapting to the impacts of climate change, energy access and energy security. At present, nuclear power provides 10 per cent of the world's electricity and one third of all low-carbon electricity. Global demand for electricity is set to increase further as economies develop, and nuclear power will play an essential part in responding to the challenges of climate change, expanding energy access and energy security.

9. Nuclear applications are also being utilized by Governments and communities to help them to mitigate, adapt to and monitor the effects of climate change. IAEA assists by helping to develop new and more resilient varieties of crops, for example new rice and green bean plants that are more tolerant to high temperatures in drought-prone areas. These "climate proof" crop varieties were developed to help countries to improve food security and adapt to changing climate conditions. IAEA has further helped member States to implement climate change mitigation and adaptation strategies through controlling soil erosion and land degradation and improving soil fertility. The Agency's laboratories in Monaco are also looking at the impact of climate change on sea life and the human food chain, and are developing tools to help policymakers decide on appropriate responses that mitigate the impact on the environment.

10. Cancer prevention, diagnosis and therapy is another example of the benefits of access to nuclear applications. Nuclear technology, such as X-rays and gamma rays can help in the diagnosis and treatment of cancer. Given the increase in cancer, the Agency's work to deliver support to member States through the Technical Cooperation Programme, the Programme of Action for Cancer Therapy and its joint work with the World Health Organization, as well as the assistance provided from donor countries through direct bilateral and regional engagement, are all invaluable channels for delivering and upgrading health services for people in developing countries.

11. In other areas, nuclear applications are used to identify and eradicate pests and diseases that threaten human and animal health and the economic livelihood of many countries. The joint partnership of IAEA and the Food and Agriculture Organization of the United Nations, established more than half a century ago, underlines the need for increased inter-agency cooperation in meeting these growing challenges.

(a) Nuclear applications have proven useful in combating the coronavirus disease (COVID-19) pandemic worldwide. Additionally, the most reliable and widely used method for detecting the virus that causes COVID-19 and variants of concern is real-time reverse transcription polymerase chain reaction. IAEA has been instrumental in providing COVID-19 testing equipment and training to over 120 countries. We call upon relevant international organizations (such as the World Health Organization, the Food and Agriculture Organization of the United Nations, the World Organization for Animal Health and IAEA) to coordinate efforts to support global zoonotic disease surveillance and outbreak response.

12. The Agency's application of the sterile insect technique has played an essential role in successfully combating tsetse flies, fruit flies and the diseases they transmit. Nuclear techniques are widely used in identification and assessment of the properties of materials, in measurement of the pollution levels, in sterilization and disinfection of the components, as well as in alteration of the chemical physical and biological properties of the materials in order to produce new types of materials.

13. In 1970, when the Non-Proliferation Treaty entered into force, there were 84 nuclear power reactors. In 2021, there are now nearly 442, with another 51 under construction and many additional countries considering embarking on nuclear programmes. Moreover, there are 220 research reactors in operation today in 54 countries. Eleven new ones are under construction in eight countries, while 10 countries are planning to build research reactors.

14. Our countries welcome this growth in nuclear power and we also recognize that nuclear energy fuels not only our power supply, but also local job growth, regional economic prosperity and global innovation.

15. This growth in economic prosperity demonstrates the success of the Non-Proliferation Treaty and is another compelling reason why our countries remain fully committed to supporting those States that wish to embark on a new civil nuclear programme in order to access the benefits of nuclear technology.

16. As noted, the IAEA Technical Cooperation Programme is a key delivery platform for the Non-Proliferation Treaty commitment to facilitating the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy, science, technology and applications. That is why our countries continue to pledge our full support to the work of IAEA and its Technical Cooperation Programme. This support is demonstrated by the contributions that our countries pay in full and on time to the IAEA Technical Cooperation Fund. In 2020, our countries paid 58.8 per cent of the €88.1 million – more than half of the overall target – to the Technical Cooperation Fund. This will go along with a wide range of extrabudgetary and in-kind contributions that our countries regularly make to further support the Programme.

17. We also underline the importance of current and strategic IAEA projects aimed at promoting peaceful uses of nuclear energy, such as on national nuclear infrastructure development and the International Project on Innovative Nuclear Reactors and Fuel Cycles.

18. We welcome the efforts of IAEA in establishing mechanisms to ensure access to nuclear fuel such as: the low enriched uranium reserve in Angarsk in the Russian Federation, the IAEA low enriched uranium bank in Kazakhstan and the United Kingdom Nuclear Fuel Assurance proposal, as well as national efforts such as the American Assured Fuel Supply.

19. We also note the importance of extrabudgetary and in-kind contributions to the Technical Cooperation Programme, including through the Peaceful Uses Initiative, launched at the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. These contributions provide IAEA with the flexibility to address unforeseen challenges at short notice, such as the Ebola, Zika and COVID-19 outbreaks, and the Fukushima nuclear accident.

20. Given its importance, our countries believe that the Technical Cooperation Programme and the use of extrabudgetary contributions, including the Peaceful Uses Initiative and in-kind contributions, should be as effective as possible. We therefore continue to support improvements in the governance of the Technical Cooperation Programme in order to ensure that the benefits of nuclear technology are accessible to all those who need it, particularly in those countries who are furthest behind, in

line with the United Nations “leaving no one behind” agenda. We will encourage IAEA to support the least developed countries in writing strong project proposals to apply for IAEA resources, with a view to ensuring that a higher percentage of the Technical Cooperation Fund can be accessed by least developed countries, which have the most pressing needs. Our countries will continue to fulfil our commitments and pay our shares to the Fund in full and on time and to regularly make extrabudgetary and in-kind contributions to the IAEA Technical Cooperation Programme.

21. Our countries believe that nuclear technologies will enjoy the public’s confidence if they are safe and secure. Nuclear safety and security are key elements in sustaining public confidence in the use of nuclear energy, science and technology for peaceful purposes. In this respect, IAEA plays a central role in promoting international cooperation and enhancing nuclear safety and security by developing nuclear safety standards and nuclear security guidance, and operates a global system of nuclear safeguards. It promotes the universalization of international instruments, such as the Amendment to the Convention on the Physical Protection of Nuclear Material, and assists in the establishment of effective national legislative and regulatory frameworks for nuclear safety and security in line with relevant safety standards and security guidance. It supports member States in doing so by providing advisory services, guidance, assistance and training. Our countries place great value on this work and will continue to cooperate with IAEA to help it strengthen its offer and engagement around the world.

22. President, I would like to reiterate again that our countries place great importance on the safe, secure and peaceful uses of nuclear energy and all its applications.

23. We will continue to support access to the peaceful uses of nuclear energy in a safeguarded manner, as provided for and made possible by the Non-Proliferation Treaty, in order to help ensure that, through the next 50 years, advances in nuclear science and technology will continue to further improve the lives of all people.
