

THE TENTH REVIEW CONFERENCE OF THE PARTIES TO THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS

The International Atomic Energy Agency

The International Atomic Energy Agency (IAEA) serves as the world's intergovernmental forum for scientific and technical cooperation in the peaceful use of nuclear science and technology. Established in 1957 as an autonomous international organization within the United Nations system, the IAEA carries out programmes to maximize the contribution of nuclear science and technology to humankind while verifying its peaceful use. Since December 2019, the IAEA Secretariat is led by Director General Rafael Mariano Grossi.

The IAEA works with its 173 Member States and multiple partners worldwide to assist with the research, development and use of practical applications of nuclear science and promote the safe, secure, and peaceful use of nuclear technologies. Through technical cooperation programmes and coordinated research projects, the IAEA promotes the exchange of scientific and technical information and their application. The IAEA sets the framework for cooperative efforts to build and strengthen nuclear safety and security globally and verifies States' fulfilment of their non-proliferation undertakings under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

The IAEA, with a staff of 2500 from over 100 countries, is headquartered in Vienna, Austria. The IAEA has two Liaison Offices, in New York and Geneva, and two Regional Safeguards Offices, in Tokyo and Toronto. The IAEA runs scientific laboratories in Vienna and Seibersdorf (Austria), as well as Monaco.

The IAEA and the NPT

The IAEA is not a party to the NPT but is entrusted with the key verification role under it. Under Articles III, the IAEA has a specific role as the international safeguards inspectorate.

NPT Article III: The IAEA concludes safeguards agreements with non-nuclear weapon States party to the NPT to verify the fulfilment of their non-proliferation commitments "with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapon or other nuclear explosive devices."

The IAEA serves also as a multilateral channel for transferring peaceful applications of nuclear technology, under Article IV.

NPT Article IV: The IAEA facilitates and provides a channel for endeavours aimed at "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."

IAEA Safeguards

Under Article III of the NPT, each non-nuclear-weapon State party undertakes the obligation to conclude a comprehensive safeguards agreement with the IAEA. Under such an agreement, the IAEA has the right and obligation to ensure that safeguards are applied on all nuclear material in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere,

for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.

As of the end of November 2021, safeguards were applied for 185 States^{1,2} with safeguards agreements in force with the IAEA. These States³ include the five nuclear-weapon-States party to the NPT with voluntary offer agreements in force for which safeguards are applied to declared nuclear material in selected facilities or parts thereof. Eight non-nuclear-weapon States party to the NPT had not yet brought comprehensive safeguards agreements into force as required by Article III of the NPT.⁴

Although the IAEA has the authority under a comprehensive safeguards agreement to verify the peaceful use of all nuclear material in a State (i.e. the correctness and completeness of the State's declarations), the tools available to the IAEA under such an agreement are limited – as they do not provide for the detection of *undeclared* nuclear material and activities. Therefore, additional protocols concluded based on the 1997 Model Additional Protocol equip the IAEA with supplementary tools which provide the IAEA with broader access to information and locations. The measures provided for under an additional protocol significantly increase the IAEA's ability to verify the peaceful use of *all* nuclear material in a State with a comprehensive safeguards agreement. As of the end of November 2021, 138 States had brought additional protocols into force.

At the end of 2021, the IAEA was implementing safeguards in over 1300 facilities and safeguarding nuclear material equivalent to over 225 000 significant quantities⁵. The implementation of safeguards involves activities carried out both in the field and at the IAEA's headquarters. The latter activities include the evaluation of States' nuclear material accounting reports and other information required under comprehensive safeguards agreements and additional protocols and the evaluation of other safeguards relevant information. The Secretariat annually carries out approximately 3000 in-field verification activities, including inspections, and staff cumulatively spends around 13 000 days in the field for verification.

Since 16 January 2016, at the request of the United Nations Security Council and upon authorization by the IAEA's Board of Governors, the IAEA has been submitting regular reports to the Board of Governors and, in parallel, to the UN Security Council, on Iran's implementation of its nuclear-related commitments in accordance with the modalities set out in the Joint Comprehensive Plan of Action (JCPOA).

Since the 2015 Review Conference, the IAEA has continued its effort to resolve outstanding safeguards implementation issues in two States.⁶

¹ These States do not include the Democratic People's Republic of Korea (DPRK), where the IAEA did not implement safeguards and, therefore, could not draw any conclusion.

² And Taiwan, China.

³ These States also include those States that are not party to the NPT for which the IAEA applies safeguards pursuant to item-specific safeguards agreements to nuclear material, non-nuclear material, facilities and other items subject to such safeguards agreements.

⁴ A summary of the status of States' safeguards agreements is available at: <https://www.iaea.org/sites/default/files/20/01/sg-agreements-comprehensive-status.pdf>

⁵ A *significant quantity* of nuclear material is the approximate amount of nuclear material for which the possibility of manufacturing a nuclear explosive device cannot be excluded. Provisional figure as of 20 December 2021.

⁶ For further details on the safeguards implementation issues see Section 3 of the background document to the Tenth NPT Review Conference prepared by the IAEA Secretariat on *Activities of the International Atomic Energy Agency relevant to article III of the Treaty on the Non-Proliferation of Nuclear Weapons* (NPT/CONF.2020/3).

Peaceful Applications of Nuclear Technology

Consistent with its statutory mandate “to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world”, the IAEA’s activities include: developing and transferring nuclear technologies for peaceful purposes to its Member States; contributing to the strengthening of the global nuclear and radiation safety framework and strengthening the security of nuclear and radioactive material and facilities.

The IAEA, through its technical cooperation (TC) programme, supports tangible socio-economic development by promoting the use of nuclear science and technology in addressing development priorities of Member States. The programme concentrates on six thematic areas — human health, agricultural productivity and food security, water resources management, environmental protection, physical and chemical applications and sustainable energy development, together with a cross cutting thematic area — safety and security — and supports Member States in the achievement of the 17 Sustainable Development Goals (SDGs), with a direct contribution to the targets of 9 of the goals.⁷

Since taking office at the end of 2019, Director General Rafael Mariano Grossi has launched initiatives that cut across different fields of peaceful uses of nuclear science and technology. Among other initiatives, the Zoonotic Disease Integrated Action (ZODIAC) project was initiated in the early days of the COVID-19 pandemic. ZODIAC is designed to build capacities globally of national laboratories in Member States to safely use nuclear and related techniques for the early, rapid, and accurate detection of transboundary animal and zoonotic diseases, and to carry out targeted research at the national, regional and/or international levels. Another important project is the Nuclear Technology for Controlling Plastic Pollution (NUTEC) programme, which assists Member States integrating nuclear techniques into their efforts to address plastic pollution. The programme consolidates and builds on the IAEA portfolio around plastic recycling using radiation technology and the marine monitoring of microplastics using isotopic tracing techniques.

In 2020, Director General Rafael Mariano Grossi established the goal of achieving gender parity in the professional and higher categories by 2025 at the IAEA Secretariat. In addition, in order to increase the number of women in the nuclear field, supporting an inclusive workforce and contributing to and driving global scientific and technological innovation, the IAEA launched in the same year the Marie Skłodowska-Curie Fellowship Programme (MSCFP). The MSCFP provides scholarships for master’s programmes at accredited universities focused on nuclear science and technology, nuclear safety and security, and non-proliferation studies; and an opportunity to pursue internships facilitated by the IAEA for up to 12 months.

The responsibility for nuclear safety and security within a State rests entirely with that State in accordance with its respective national and international obligations. However, the recognition of far reaching and transboundary consequences of any nuclear or radiological incident or emergency has led to the recognition of the central role of the IAEA in facilitating and coordinating international cooperation to strengthen nuclear safety and security, in providing expertise and advice in this field and in promoting nuclear safety and security culture worldwide. The IAEA continues to help develop and strengthen the global nuclear safety and security framework based on strong national infrastructures, international legal instruments, safety standards and security guidance. The IAEA assists Member States

⁷ For further details on the IAEA TC programme, promotion of peaceful nuclear cooperation and the IAEA Peaceful Uses Initiative and other matters see the background paper to the Tenth NPT Review Conference prepared by the IAEA Secretariat on *Activities of the International Atomic Energy Agency relevant to article IV of the Treaty on the Non-Proliferation of Nuclear Weapons* (NPT/CONF.2020/4).

in these areas, upon their request, through peer reviews, advisory services, knowledge networks and other capacity building activities.⁸

⁸ For further details on nuclear safety and nuclear security see Section 4 of the background paper to the Tenth NPT Review Conference prepared by the IAEA Secretariat on *Activities of the International Atomic Energy Agency relevant to article IV of the Treaty on the Non-Proliferation of Nuclear Weapons* (NPT/CONF.2020/4).