

Background Guide
IAEA and Nuclear Security



IAEA Nuclear Security

I. Introduction to Committee

The International Atomic Energy Agency (IAEA) serves as the world's foremost intergovernmental forum for scientific and technical cooperation in the peaceful use of nuclear energy. Established in 1957 as an

autonomous international organization within the United Nations system, the IAEA maximizes the contribution of nuclear technology to society while verifying its peaceful use.¹ The IAEA Secretariat has been led by Director General Yukiya Amano since December 2009. The IAEA works with its 164 Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear energy. Through technical cooperation programs the IAEA assists its Member States and promotes the exchange of scientific and technical information between them. The IAEA's work also includes setting the framework for cooperative efforts to build and strengthen an international nuclear safety and security regime and verifying States' fulfilment of their non-proliferation undertakings under the Non-Proliferation of Nuclear Weapons Treaty (NPT).

The IAEA headquarters is at the Vienna International Centre in Vienna, Austria. Operational liaison and regional offices are located in Geneva, Switzerland; New York, USA; Toronto, Canada; and Tokyo, Japan. The IAEA runs scientific laboratories in Vienna and Seibersdorf, Austria and in Monaco. It also supports research centres, such as the one in Trieste, Italy. The IAEA Secretariat is a team of some 2500 multi-disciplinary professional and support staff from more than 100 countries.

The IAEA has a Nuclear Safety and Security Department who leads radioactive waste and spent fuel management among other tasks to ensure the safety of the people and surrounding environment. Their work involves following activities that are using radioisotopes in science, industry and medicine along with the decommissioning of nuclear facilities as both generate radioactive waste.

II. Statement of the Issues

The IAEA has the responsibility to ensure the safety of nuclear waste management in countries that host nuclear reactors. The global Nuclear Non-Proliferation Treaty (NPT) and other treaties against the spread of nuclear weapons have designated the IAEA as the nuclear inspectorate. Today, the IAEA has instituted safeguards for nuclear material and activities under agreements with more than 140 States, which include activities by which the IAEA can verify that a State is living up to its international commitments not to use nuclear programs for nuclear-weapons purposes. However, there are still cases of safeguards noncompliance and there is yet to be an official definition of what constitutes noncompliance. There is also more for issues avoiding influence from political considerations due to the Subsidiary Arrangements mentioned in Article 39 of the comprehensive safeguards agreements. These agreements are kept between the Agency and the State where they, "specify in detail...how the procedures laid down in the Agreement are to be applied."²

We are also seeing a continued arms race which stems from the Cold War. There were decades of arms control negotiations and treaties with years of weapon development. This created momentum for the proliferation of nuclear weapons technology, which has continued well into the 21st century as evidenced by the nuclear programs of Iran and the Democratic People's Republic of Korea (North Korea). Iran's nuclear program gained international attention during the negotiations involved in

¹ International Atomic Energy Agency. (1984). The international atomic energy agency. *Vacuum*, 34(5), 608. [https://doi.org/10.1016/0042-207x\(84\)90439-1](https://doi.org/10.1016/0042-207x(84)90439-1)

² "Agreement Between The United States of America and The International Atomic Energy Agency for the Application of Safeguards in the United States (and Protocol Thereto)". Opened for signature 18 November 1977. *BUREAU OF INTERNATIONAL SECURITY AND NONPROLIFERATION*

creating the Joint Comprehensive Plan of Action, while North Korea's last tested a nuclear device in 2017, marking the most recent test of any nuclear explosive.

Another matter of concern in regard to the global nuclear threat are terrorist attacks targeting nuclear sites. Nuclear terrorism has been a concern of the international community since the 1970s and continues to persist at the forefront of security concerns, especially as terrorist organizations such as al-Qaeda, ISIL, and North Caucasian groups target nuclear facilities and attempt to obtain fissile material. As of 2019, the International Atomic Energy Agency (IAEA) has reported a total of 3,686 incidents of "unauthorized activities and events involving nuclear and other radioactive material" since 1993, 189 of which took place in 2019. 290 of all incidents are categorized as "confirmed or likely 2 act of trafficking or malicious use."³ The continued existence of nuclear smuggling, the desire of violent non-state actors such as al-Qaeda to obtain weapons of mass destruction, and the continued proliferation of nuclear technologies to various states is of great concern to the international community. As such, the United Nations should address these issues in fulfillment of its obligations under Article 1 of the Charter of the United Nations.

III. History & Past IAEA & UN Actions

Humanity entered the nuclear age in 1944 with the first test of a nuclear weapon, the Trinity test. This power would quickly become a central point of the Cold War following the Soviet Union's first nuclear test in 1949. Nuclear proliferation was extremely prevalent during the Cold War, as in the following decades several more states would acquire nuclear weapons technology. The United Kingdom would test nuclear weapons in 1952, France would first test in 1960, and the People's Republic of China would carry out its first test in 1964. India and Pakistan would test nuclear weapons in the 1970s and 1980s, and North Korea would execute a test in 2006. Israel is also believed to have obtained nuclear weapons sometime in the 1960s, though this claim has yet to be comprehensively verified.

President Eisenhower expressed ideas in a 1953 speech, which helped shape the IAEA's Statute, which 81 nations unanimously approved in October 1956.⁴ The IAEA is strongly linked to nuclear technology and its controversial applications, either as a weapon or as a practical and useful tool. The Agency was set up as the world's "Atoms for Peace" organization within the United Nations family. From the beginning, it was given the mandate to work with its Member States and multiple partners worldwide to promote safe, secure, and peaceful nuclear technologies. The objectives of the IAEA's dual mission – to promote and control the atom are defined in Article II of the IAEA Statute.

The NPT also outlines certain rights member states have after under the Nuclear-Proliferation Treaty to secure access to nuclear energy for peaceful purposes. The treaty gives member states 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 and II of this Treaty."⁵ States are given the "right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy." The treaty also gives the member parties the right to co-operate in contributing alone or together with other States or

³ IAEA Incident and Tracking Database. "Incidents of Nuclear and Other Radioactive Material Out of Regulatory Control: 2020 Fact Sheet." International Atomic Energy Agency. p. 2.

⁴ IAEA. (2016, June 8). *History | IAEA*. [iaea.org. https://www.iaea.org/about/overview/history](https://www.iaea.org/about/overview/history)

⁵ "Treaty on the Non-Proliferation of Nuclear Weapons." Arts. I - IV.

international organizations if the state is in a position to do so. The goal is 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.”

IV. Latest Developments

In 2016, the Security Council passed Resolution 2325, emphasizing the nature of Resolution 1540 and encouraging all states to fulfill their obligations to create effective nuclear safety programs.⁶ The resolution serves a double purpose in that it both addresses proliferation in regard to non-state actors and to states who wish to develop nuclear weapons. However, it is clear that nuclear proliferation remains a clear and present danger to international security, as is evidenced by North Korea’s 2017 nuclear test. Likewise, the United States’ 2018 withdrawal from both the Joint Comprehensive Plan of Action and Intermediate-Range Nuclear Forces Treaty (INF) are serious setbacks in the campaign for the global campaign for the elimination of nuclear proliferation.

Since the passage of the NTC in 2005, little advancements have been made in combating the threat of nuclear terrorism, and there is still room for the international community to expand upon and cooperate in pursuit of this effort. Despite these impediments, in 2017 the United Nations General Assembly adopted the Treaty on the Prohibition of Nuclear Weapons (TPNW), the first legally-binding legal instrument aimed at the complete ban of nuclear weapons. The TPNW is an important agreement in the path towards total global nuclear disarmament, declaring that “each State Party that owns, possesses or controls nuclear weapons or other nuclear explosive devices shall immediately remove them from operational status, and destroy them as soon as possible.”⁷ In regards to non-nuclear states, the TPNW states that, “Each State Party undertakes never under any circumstances to... develop, test, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices.”⁸ However, the TPNW is currently not in force due to the fact that its conditions have not been fulfilled; a further fifteen states must ratify the treaty for it to become effective. Following the TPNW, the United Nations and the global community as a whole have not continued to address the threat of nuclear war or terrorism in a collective manner.

With Russia’s invasion of Ukraine, Russian forces had taken control of Ukraine’s nuclear site by March 2022, although Ukrainian staff continue to operate it. On September 5th, U.N. IAEA representative confirmed with the facility’s operator that Europe’s largest nuclear plant, the Zaporizhzhia nuclear power plant, was knocked off Ukraine’s electricity grid after its last transmission line was disconnected as a result of a fire caused by Russian shelling.⁹ The IAEA was informed by Ukrainian authorities that the reserve line was disconnected intentionally to avoid disaster as a fire erupted along the connection. The Russian military has accused Ukrainian forces of staging provocations at the plant, which pose a huge threat to combustion of the plant as they are in a warzone. In wartime, taking over a state’s power plant

⁶ United Nations. Security Council Resolution 2325.

⁷ “Treaty on the Prohibition of Nuclear Weapons.” Art. 4, §2.

⁸ “Ibid. Art. 1, §1(a)

⁹ Arhirova, Hanna. “Ukraine Says Nuclear Plant Offline after Russian Shelling.” *PBS NewsHour*, 5 Sept. 2022, www.pbs.org/newshour/world/ukraine-says-nuclear-plant-offline-after-russian-shelling. Accessed 24 Sept. 2022.

could wipe out a country's main form of energy supply like what might be at risk in Ukraine with the Russian invasion.

V. Problems that Delegate Research and Position Papers should Address

Delegates should be prepared to address the continuing proliferation of nuclear weapons technologies, as well as the existence of nuclear programs in the modern world. Delegate position papers may also consider laying the foundation for additional disarmament agreements, or for the expansion of the Nuclear Terrorism Convention if the Assembly deems these to be fit courses of action. Other topics to consider include: security measures and protocols in case of attacks and security of proper waste management.

Position paper should also include references to nuclear site management and the creation of regulations during wartime as well terrorist attacks. Nuclear power plants need to be kept running with qualified staff, have strict safety protocols, a high level of security and careful waste management practices no matter the circumstance to avoid disaster. These substantial energy sources could be held hostage and redirected, causing energy scarcity to a country or multiple countries depending how the reserve and connection lines are affected.

VI. Helpful Sources

- International Atomic Energy Agency: <https://www.iaea.org/>
- Nuclear Threat Initiative, list of treaties: <https://www.nti.org/learn/treaties-and-regimes/treaties/>
- World Institute for Nuclear Security: <https://wins.org/>

Endnotes

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— General Assembly Resolution 1653 (XVI), Declaration on the prohibition of the use of nuclear and thermo-nuclear weapons. A/RES/1653 (XVI), 24 November 1961.

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