



## **International Atomic Energy Agency (IAEA)**

**Topic 2: Discussing the Risks of Proliferation from  
Emerging Nuclear Technologies in South Asia.**

**President: Jeeda Zalloum**



## President's Letter

Esteemed Delegates,

I'm honoured to welcome you all to this year's International Atomic Energy Agency!

For the past two years, MontessoriMUN has become an integral part of my MUN journey, from beginning as a delegate in the Human Rights Council, to serving as Chair of that very committee the following year, and now President of this year's International Atomic Energy Agency. I've had the opportunity to grow through and with this conference.

The International Atomic Energy Agency serves as the world's centre for cooperation in the nuclear field. It aims to promote safe, secure as well as peaceful use of nuclear energy for the benefit of all countries. The IAEA's work serves as a reminder that science, diplomacy, as well as responsibility must coexist in a time where global issues demand cooperation.

My name is Jeeda Zalloum, a Junior at Ahliyyah and Mutran, and I'm honored to serve as President of this year's International Atomic Energy Agency! I cannot wait to meet you all and can't wait to see you all debate passionately throughout the conference!

Wish you all the best of luck!

Best regards,

Jeeda Zalloum,

President of the International Atomic Energy Agency



## Introduction to the Committee

The International Atomic Energy Agency serves as the world's foremost intergovernmental forum for global cooperation in the nuclear field. It was founded on July 29, 1957, to promote the peaceful use of nuclear energy and prevent diversion for military purposes. It was established in response to the US President Eisenhower's "Atoms for Peace" initiative, which was made to ensure that nuclear technology would focus on contributing to scientific progress and human development rather than global destruction.

Today, the International Atomic Energy Agency plays a key role in monitoring nuclear programs, ensuring compliance with international safeguards, and assisting member states in areas such as nuclear safety, security, and medical applications of nuclear science. With around 180 member states, the agency continues to mediate technological advancement and international peace, working to realize the benefits of nuclear energy while reducing the risks of proliferation.



## Terminology

- **Nuclear Proliferation:** The spread of nuclear weapons (and the technology to produce them) to more countries or non-state actors.
- **Emerging and Disruptive Technologies (EDTs):** New or evolving technologies, such as AI, quantum, biotechnology, and space technologies, that have the potential to fundamentally change capabilities, strategies, and operations in various sectors, especially defense.
- **Dual-Use Technology:** Goods, software, and technology that have both civilian and military applications, such as drones, artificial intelligence, and some biotechnology.
- **Strategic Stability:** A condition where neither nuclear-armed state has an incentive to launch a pre-emptive strike, and the risk of war is minimized through mutual nuclear deterrence. EDTs are feared to undermine this stability by creating the illusion of a first-strike advantage.
- **Crisis Instability:** A heightened risk, during a conflict or crisis, that one or both states will be tempted to use nuclear weapons first out of fear of losing them, or a belief that delay will lead to a disadvantage. EDTs that compress decision times

(e.g., Hypersonics) significantly increase this risk.

- **No-First-Use (NFU):** A policy by which a nuclear-weapon state pledges not to use nuclear weapons first in a conflict, reserving their use only for retaliation against a nuclear attack.
- **Fissile Material:** Materials that can undergo the fission reaction. They are the key component of nuclear weapons or other nuclear explosive devices.
- **Cyber-warfare Capabilities:** Cyberattacks on critical infrastructure, like power grids and financial systems, to cause disruption and damage; espionage to steal classified information; propaganda to influence public opinion and sow discord; and sabotage, such as deploying AI-powered malware or ransomware to damage systems or demand payments.
- **Autonomous Weapons Systems (AWS):** A weapon system that, once activated, can select and engage targets without further intervention by a human operator.
- **Dual-Use Technology:** Goods, software, and technology that have both civilian and military applications.

- **Second-Strike Capability:** The ability of a nuclear-armed state to respond to an enemy nuclear strike with its own nuclear counterattack.



## History

Concern over nuclear proliferation has long been centered in South Asia. One of the most distinctive aspects of regional security is the nuclear rivalry between India and Pakistan, which began in the latter part of the 20th century.

In 1974, India carried out its first nuclear test, which was described as a peaceful nuclear explosion. This breakthrough signified the beginning of a nuclear arms race in the region. With help from covert networks and a strong emphasis on uranium enrichment technologies, Pakistan responded by speeding up its own nuclear weapons development in the 1970s and 1980s. Through a series of tests carried out in 1998, both nations had publicly displayed their nuclear capabilities by the late 1990s, formally designating South Asia as a nuclear-armed region.

Both India and Pakistan have since increased the size of their nuclear arsenals and relayed increasingly advanced delivery systems, including ballistic and cruise missiles. Numerous armed conflicts, like the 1999 Kargil War and ongoing military standoffs over Kashmir, have increased the dangers of escalation. Every crisis has sparked concerns that a traditional conflict might turn into a nuclear exchange.

Proliferation dangers in South Asia have increased in recent years due to the development of new nuclear technology. While Pakistan has attempted to own a diverse



nuclear arsenal with attack tactical nuclear weapons, India has pursued nuclear-powered weapons India has pursued nuclear-powered submarines as a part of its navy modernization. However, developments in artificial intelligence, missile defence, and cyber capabilities raise worries that destabilizing technologies could weaken deterrence and heighten the risk of miscalculation.

Outside of India and Pakistan, outside forces have influenced South Asia's nuclear development history. The 2008 US-India civil nuclear agreement and US sanctions, for instance, demonstrated how great power politics affect nuclear policy in the area. In a similar vein, worries about the potential for illegal networks to transfer nuclear technology or information from South Asia to other areas continue. This history demonstrates the evolution of South Asia's nuclear rivalry from its initial aspirations. International attempts to maintain stability and non-proliferation in the region are more difficult due to the advent of developing technologies, which have increased the risks of proliferation and errors.

## Current Situation

Asian countries have developed ambitious energy supply programs to expand their energy supply systems to meet the growing needs of their rapidly expanding economies. Most of their new electrical generation needs will be met by coal, oil and gas. However, the consideration of growing energy demand, energy security, environmental conservation, and technology enhancement is inducing more Asian countries toward the pursuit of nuclear power development.

At present, nuclear power provides about 30 % of electricity in Japan, and about 40% of electricity in Korea. These and other Asian countries are presumed to significantly increase their nuclear power generation capacities in coming years. Asian demand for energy is forecast to double between 1993 and 2010, raising the region's share of global energy consumption from under one-quarter to over thirty percent (see Table I). Such an increase would be driven by a combination of rising population and skyrocketing economic growth. The growth of energy consumption will be especially pronounced for the electricity sector. Over the next 15 years electricity generation in the Asian region is projected to increase by 130. The Asian region is likely to account for a large part of the total increase in nuclear capacity over the next few decades.

These countries are motivated by the desire to expand the power for upgrading the standard of living and for expediting national modernization as well as enhancing energy security, conserving the environment and benefiting from the technology spin offs.



## Parties involved

- **India:** A nuclear-armed state with a “No-First-Use” policy (currently under debate) and rapidly modernizing its arsenal, including indigenous development of EDTs like Hypersonics and AI-enabled systems.
- **Pakistan:** A nuclear-armed state with an ambiguous doctrine (no NFU, often emphasising “full spectrum deterrence”) which views its nuclear program and the adoption of new technologies as essential to offset Indian forces.
- **China:** A major nuclear power whose strategic competition with India is a primary driver for India’s nuclear modernization. China is a key supplier of technology (both traditional and emerging) to Pakistan, which intensifies the India-Pakistan security conflict.
- **The United States of America:** A global nuclear power that seeks to prevent the escalation of nuclear weapons use in South Asia and has growing strategic partnerships with India (in EDTs and defense) while managing a complex, decades-long relationship with Pakistan.
- **Russia:** A major nuclear power and historically a key defense supplier to India. Russia is a vital player in developing and fielding EDTs, including hypersonics,

pressure the technological environment in the region.

- **France and the United Kingdom:** As P5 members in the UN Security Council, and advanced military powers, they are globally involved in non-proliferation efforts and the debate over EDTs.





## Guiding questions

- What part should outside organizations (such as the UN, China, or the United States) play in lowering South Asian nuclear threats without compromising regional sovereignty?
- How might the stability of India-Pakistan nuclear deterrence be impacted by new technologies (AI, missile defense, cyber capabilities)?
- What factors are driving South Asian states to expand or modernize their nuclear capabilities using emerging technologies?
- What impact could an arms race in nuclear technology between South Asian countries have on regional and global security?
- What consequences could the spread of emerging nuclear technologies have on power dynamics in South Asia?

## Citations

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