



25th Anniversary of Pokhran-II

For Prelims: Pokhran-I, Pokhran-II, [Non-Proliferation Treaty \(NPT\)](#), [National Technology Day](#), [no first use policy](#)

For Mains: Significance of Pokhran-II in shaping India's nuclear capabilities, India's nuclear doctrine and its implications for national security.

Why in News?

India recently celebrated the **25th anniversary of Pokhran-II on 11th May 2023** marking the successful nuclear bomb test explosions which became a significant **milestone in its journey to become a nuclear power**.

- May 11 is also celebrated as the [National Technology Day](#) to honour Indian scientists, engineers and technologists, who worked for the country's scientific and technological advancement and **ensured the successful conduct of Pokhran tests**.

What is Pokhran-II and India's Journey as a Nuclear Power?

- **Origin:**
 - In 1945, renowned physicist Homi J. Bhabha lobbied for the establishment of the **Tata Institute of Fundamental Research (TIFR)** in Bombay, dedicated to nuclear physics research.
 - TIFR became India's **first research institution dedicated to the study of nuclear physics**.
 - Post-independence, Bhabha convinced the then PM Jawaharlal Nehru about the importance of nuclear energy and in 1954, the Department of Atomic Energy (DAE) was founded, with Bhabha as the director.
 - The **DAE operated autonomously, away from significant public scrutiny**.
- **Reasons for India's Pursuit of Nuclear Weapons:**
 - India's pursuit of nuclear weapons was motivated by concerns over its **sovereignty and security threats from China and Pakistan**.
 - The [1962 Sino-Indian War](#) and **China's nuclear test in 1964** heightened the need for India to safeguard its national security.
 - The **war with Pakistan in 1965**, with **Chinese support**, further emphasized the need for self-sufficiency in defense capabilities.
- **Pokhran- I:**
 - **About:**
 - By the 1970s, India was capable of conducting a nuclear bomb test.
 - Pokhran-I was **India's first nuclear bomb test** conducted on **May 18, 1974**, at the **Pokhran Test Range in Rajasthan**.
 - It was code-named **Smiling Buddha** and officially described as a "**peaceful nuclear explosion**" with "**few military implications**".
 - India became the **6th country in the world to possess nuclear weapons**

capability after the US, Soviet Union, Britain, France and China.

◦ **Implications of Test:**

- The tests faced near-universal condemnation and significant sanctions especially from US and Canada.
 - It hindered India's progress in nuclear technology and slowed down its nuclear journey.
- Domestic political instability, such as the **Emergency of 1975** and opposition to nuclear weapons also hindered progress.

◦ **After Pokhran-I:**

- The 1980s saw a resurgence of interest in nuclear weapons development due to Pakistan's progress.
- India increased funding for its missile program and **expanded its plutonium stockpiles.**

▪ **Pokhran-II:**

◦ **About:**

- Pokhran-II refers to a sequence of **five nuclear bomb test explosions conducted by India** on between 11-13th May 1998 at Rajasthan's Pokhran desert.
- Code name - Operation **Shakti**, this event marked **India's 2nd successful attempt.**

◦ **Significance:**

- Pokhran-II cemented **India's status as a nuclear power.**
- It demonstrated **India's ability to possess and deploy nuclear weapons**, thus enhancing its **deterrence capabilities.**
- The Indian government led by **Prime Minister Atal Bihari Vajpayee** officially declared itself as a state possessing nuclear weapons following Pokhran-II.

◦ **Implication:**

- While the tests in 1998 also invited sanctions from some countries (like the US), the **condemnation was far from universal like in 1974.**
- In context of India's fast-growing economy and market potential, India **was able to stand its ground** and thus cement its status as a dominant nation state.

▪ **India's Nuclear Doctrine:**

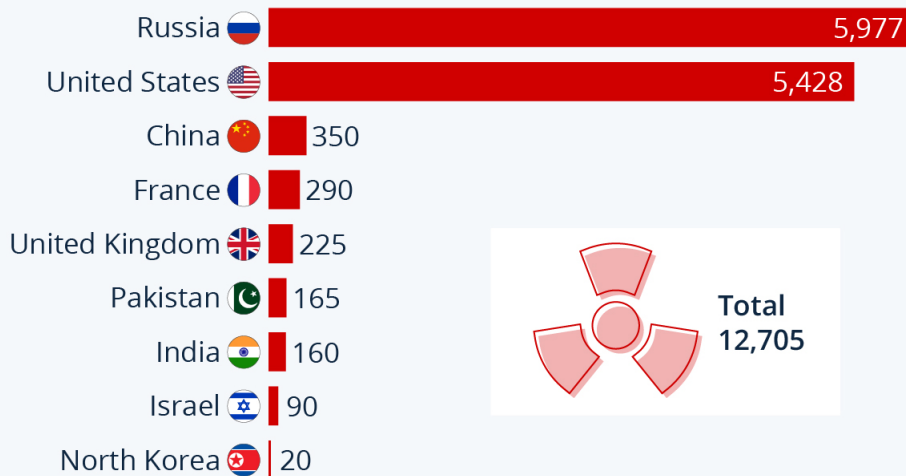
- India adopted a policy of **credible minimum deterrence**, stating that it would maintain a **sufficient nuclear arsenal for deterrence purposes but would not engage in an arms race.**
- In 2003, India officially came out with its nuclear doctrine that clearly elaborated on the **'no first use' policy.**

▪ **India's Current Nuclear Capability:**

- India currently possesses approximately **160 nuclear warheads, according to the Federation of American Scientists (FAS).**
- **India has achieved an operational nuclear triad capability, allowing for the launch of nuclear weapons from land, air, and sea.**
 - The triad delivery systems include **Agni, Prithvi, and K series ballistic missiles, fighter aircraft, and nuclear submarines.**

The Countries Holding The World's Nuclear Arsenal

Estimated global nuclear warhead inventories (2022)*



* Includes deployed, stockpiled and retired warheads awaiting disarmament
Source: Federation of American Scientists



statista

What is India's Status on Various International Treaties about Nuclear Weapons?

- **Non-Proliferation Treaty (NPT) 1968:**
 - **India is not a signatory; it declined to accede to the NPT**, citing concerns about the treaty's perceived discriminatory nature and lack of reciprocal obligations from nuclear weapons states.
- **Comprehensive Nuclear-Test-Ban Treaty (CTBT):**
 - India has **not signed the CTBT** as it is a **strong advocate for a time-bound disarmament commitment from nuclear weapon states (NWS)** and may use the lack of a commitment as a reason to refrain from signing the CTBT.
- The **Treaty on the Prohibition of Nuclear Weapons (TPNW):**
 - It entered into force on 22 January 2021 and **India is not a member of this treaty.**
- **Nuclear Suppliers Group (NSG):**
 - India is not a member of the NSG.
- **Wassenaar Arrangement:**
 - India joined the arrangement on December 2017 as its 42nd participating state.

UPSC Civil Services Examination Previous Year's Question (PYQs)

Prelims

Q1. Consider the following countries: (2015)

1. China.
2. France
3. India
4. Israel
5. Pakistan

Which among the above are Nuclear Weapons States as recognized by the Treaty on the Non-Proliferation of Nuclear Weapons, commonly known as Nuclear Non-Proliferation Treaty (NPT)?

- (a) 1 and 2 only
- (b) 1, 3, 4 and 5 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Ans: (a)

Q2. What is/are the consequence/consequences of a country becoming the member of the 'Nuclear Suppliers Group'? (2018)

1. It will have access to the latest and most efficient nuclear technologies.
2. It automatically becomes a member of "The Treaty on the Non-Proliferation of Nuclear Weapons (NPT)".

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (a)

Mains

Q. With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy. **(2018)**

Q. Give an account of the growth and development of nuclear science and technology in India. What is the advantage of fast breeder reactor programme in India? **(2017)**

Source: IE