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. Bhaba 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, Bhaba 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.

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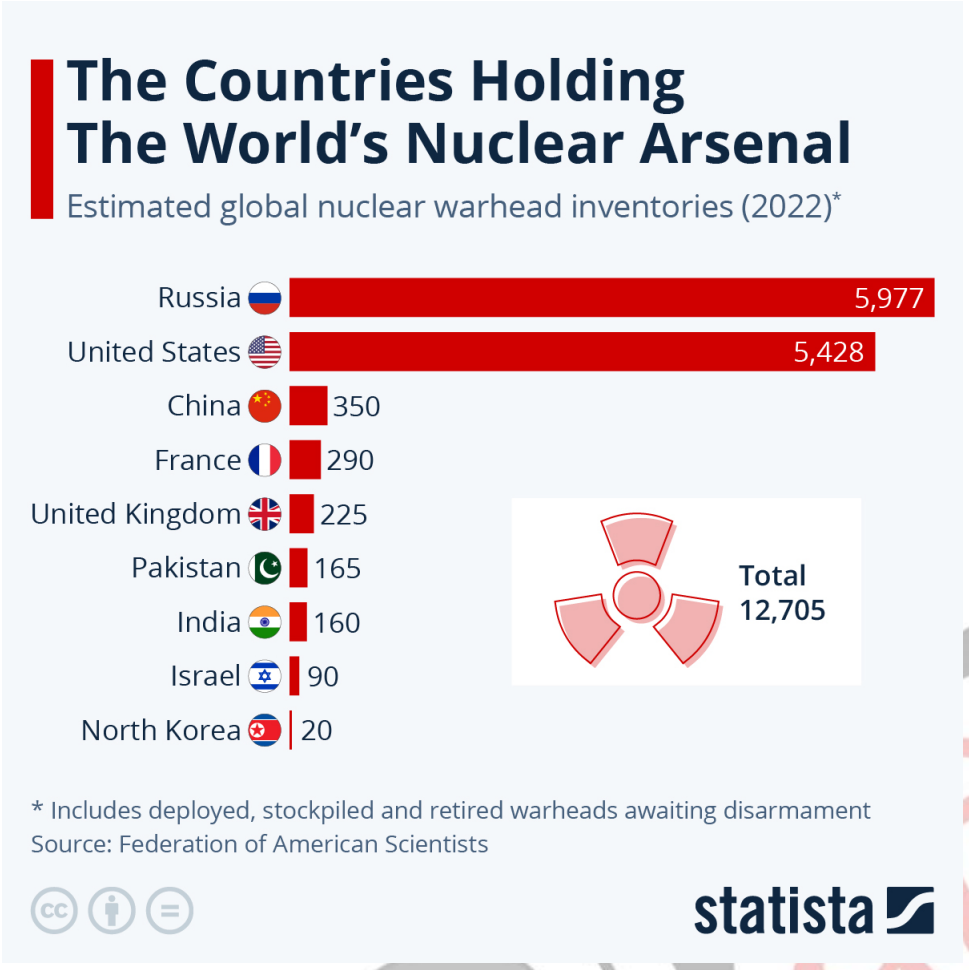

What is India's Status on Various International Treaties about Nuclear Weapons?

- **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