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COMPREHENSIVE NUCLEAR TEST BAN TREATY (CTBT)

This article covers "Daily Current Affairs" and the topic details "Comprehensive Nuclear Test Ban Treaty (CTBT)". This topic has relevance in the International Relations section of the UPSC CSE exam.

For Prelims:

About CTBT?

For Mains:

GS 2: International Relations

Impact of the CTBT on Nuclear Testing?

Why in the news?

One day after suggesting the possibility of Russia withdrawing its ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT), President Vladimir Putin has clarified that Russia's intention is not to resume nuclear testing but rather to bring itself in line with the United States for the sake of parity.

About CTBT:

The Comprehensive Nuclear Test Ban Treaty (CTBT) is a significant international agreement aimed at prohibiting all nuclear explosions, whether conducted for military or peaceful purposes. The United Nations General Assembly endorsed and accepted it in the year 1996. However, despite its adoption, the treaty has not yet entered into force, primarily due to the requirement for specific countries to ratify it.

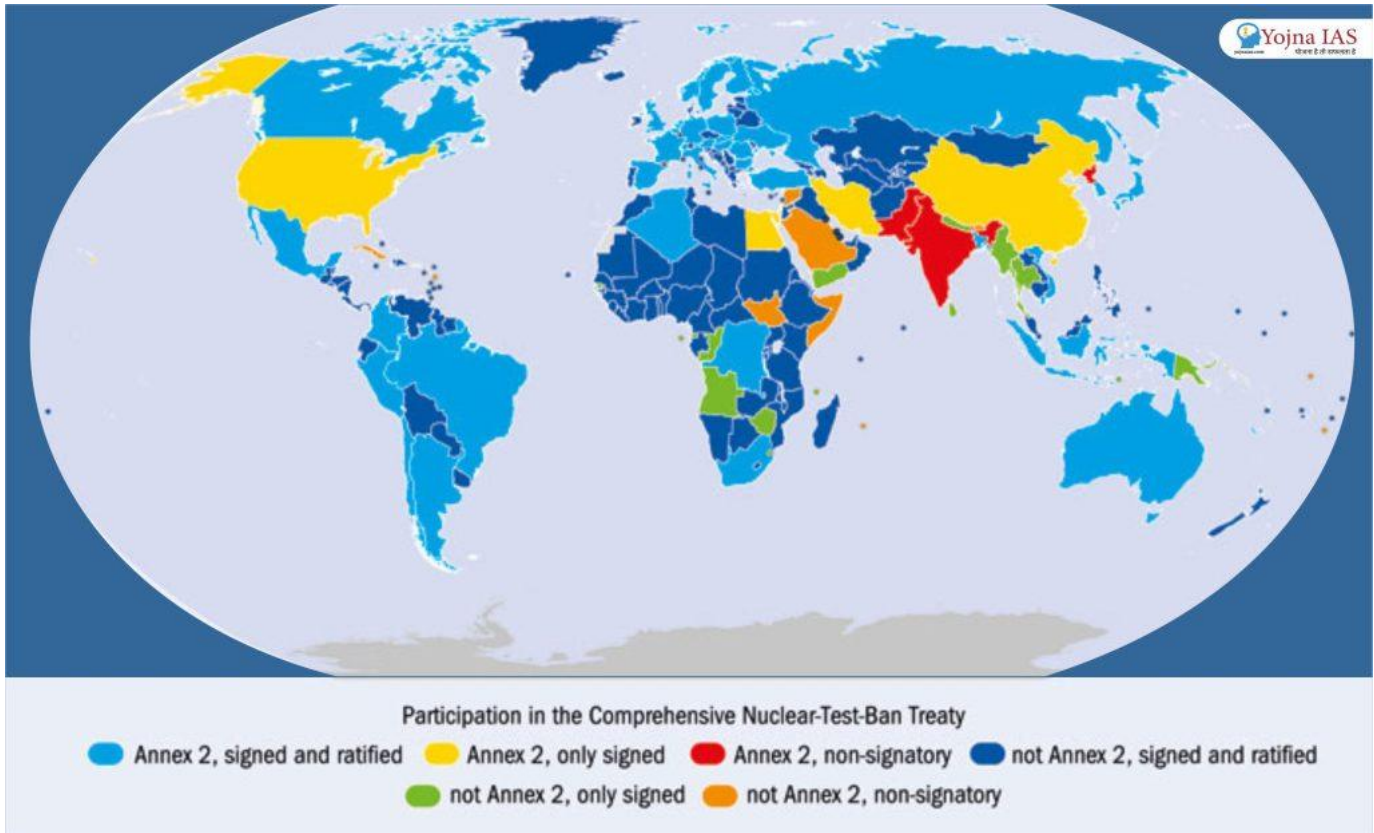
Ratification Status

While some countries, including Russia, have ratified the CTBT, others, such as the United States and India, have not done so. Ratification is the process through which a nation formally indicates its consent to be bound by a treaty.

Key Countries Yet to Ratify

The Treaty will become legally binding once all 44 States listed in Annex 2 to the Treaty have ratified it. These States possessed nuclear facilities when the Treaty was negotiated and adopted. Eight of these countries have not yet ratified the treaty. These key countries are India, China, Egypt, Iran, Israel, North Korea, Pakistan and the United States

The CTBT's effectiveness in curbing nuclear testing worldwide hinges on the participation and ratification of these key nations. Until they formally ratify the treaty, its comprehensive ban on nuclear explosions remains unenforceable.



The Origins and Evolution of the Comprehensive Nuclear Test Ban Treaty (CTBT)

The genesis of the Comprehensive Nuclear Test Ban Treaty (CTBT) can be traced back to the early years of the nuclear age and the subsequent global concerns regarding nuclear testing. Here's a chronological overview:

- **Emergence of Nuclear Testing (1940s):** The United States conducted the world's first successful nuclear weapons test in July 1945. Subsequently, the Soviet Union conducted its first nuclear test in 1949, sparking a prolonged arms race between the two superpowers.
- **Proliferation of Nuclear Tests (1945-1996):** Between 1945 and 1996, more than 2,000 nuclear tests were conducted worldwide. The United States conducted 1,032 tests, and the Soviet Union conducted 715. Other nuclear-armed nations, such as Britain (45 tests), France (210 tests), and China (45 tests), also contributed to this proliferation.
- **Concerns and Fallout (1950s-1960s):** The radioactive fallout from these nuclear tests raised global concerns and condemnation. In response, efforts were made to restrict nuclear testing:
 - **Limited Nuclear Test-Ban Treaty (LTBT) - 1963:** This treaty prohibited nuclear testing in the atmosphere, outer space, and underwater. However, underground tests were still permitted.
 - **Threshold Test Ban Treaty (TTBT) - Late 1960s:** The U.S. and Soviet Union signed TTBT, which established a "threshold" by banning tests that would produce a yield exceeding 150 kilotons (equivalent to 150,000 tons of TNT).
- **The CTBT (1990s):** Following the end of the Cold War around 1990 and the dissolution of the Soviet Union, geopolitical tensions decreased. Leveraging this change, the United Nations adopted the Comprehensive Nuclear Test Ban Treaty (CTBT).

- The CTBT aimed to curtail nuclear proliferation, prevent the development of new nuclear weapons, and contribute to disarmament efforts. However, its entry into force and full implementation have been contingent on the ratification by key nuclear-armed states, as mentioned earlier.

Impact of the CTBT on Nuclear Testing

While the Comprehensive Nuclear Test Ban Treaty (CTBT) was designed to halt nuclear testing globally, its effectiveness in achieving this goal has been limited. Despite the CTBT's adoption in 1996, a number of nuclear tests have occurred since then. Here is a summary:

Post-CTBT Nuclear Testing

- Since the CTBT's adoption:
 - India conducted two nuclear tests in 1998.
 - Pakistan also conducted two nuclear tests in 1998.
 - North Korea conducted nuclear tests in 2006, 2009, 2013, 2016 (twice), and 2017.
- In contrast, several nuclear-armed states refrained from conducting nuclear tests:
 - The United States last conducted a nuclear test in 1992.
 - China and France last conducted nuclear tests in 1996.
 - The Soviet Union conducted its last nuclear test in 1990, and its successor state, Russia, has not conducted a nuclear test.
- It's important to note that while these countries have refrained from conducting nuclear tests, the CTBT has not entered into force due to the non-ratification by key nuclear technology holder states, as previously mentioned. Consequently, the treaty's ability to completely eliminate nuclear testing remains unfulfilled, and the occurrence of some nuclear tests post-CTBT adoption underscores this challenge.

Source: [What is the the Comprehensive Nuclear Test Ban Treaty \(CTBT\)? \(indianexpress.com\)](https://www.indianexpress.com)

Q.1 Consider the following statements regarding the Comprehensive Nuclear Test Ban Treaty (CTBT):

1. The CTBT was adopted by the United Nations General Assembly in 1996.
2. It bans all forms of nuclear testing including for peaceful purposes

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

ANSWER: C

Q.2 Consider the following statements regarding the Comprehensive Nuclear Test Ban Treaty (CTBT):

1. The CTBT was negotiated and adopted during the Cold War era.
2. The CTBT has entered into force, and all nuclear-armed nations are signatories.
3. Key countries such as India and Pakistan have ratified the CTBT.

How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

ANSWER: D

Q.3 Analytically evaluate the role of the Comprehensive Nuclear Test Ban Treaty (CTBT) in preventing nuclear proliferation and promoting international security.

Rishabh



Yojna IAS
योजना है तो सफलता है