

CHENAB RAIL BRIDGE

The Indian Railway conducted a successful trial run on the newly-constructed world's highest railway bridge, Chenab Rail Bridge, in Jammu and Kashmir.



- **Location:** It is located between Bakkal and Kauri in the Reasi district of **Jammu and Kashmir (J&K)**.
- The 1.3-km-long bridge is located 359 metres above the Chenab riverbed.
- It is the **highest single-arch railway bridge in the world**.
- It is part of the Udhampur-Srinagar-Baramulla Rail Link project.
- The construction of the Chenab bridge has been a collaborative effort, involving various international organizations and renowned Indian institutions, including the Indian Institutes of Technology (IITs), the Defence Research and Development Organisation (DRDO), and the **Geological Survey of India**.

Features:

- It consists of 17 spans, with the main arch spanning an impressive 467 metres, making it the longest of its kind.
- The arch consists of steel boxes. Concrete has been filled in the boxes to improve stability.
- The bridge consists of 93 deck segments, each weighing approximately 85 tonnes.
- The bridge has been designed with a life span of 120 years.
- It has been designed to withstand high wind speeds of up to 266 Kmph.
- It is built to be 'blast-proof' and is capable of withstanding the nation's maximum intensity **zone-V earthquake forces**.

Key Facts about Chenab River:

- It is a major river of India and Pakistan.

- It is a **tributary of the Indus river.**
 - **Course:**
 - **Origin:** It is formed by the confluence of two streams, Chandra and Bhaga, at Tandi in the upper Himalayas in the Lahaul and Spiti Districts of Himachal Pradesh.
 - In its upper reaches, it is also known as the **Chandrabhaga.**
 - It flows west through Jammu and Kashmir union territory, between the steep cliffs of the Siwalik Range (south) and the Lesser Himalayas (north).
 - Turning southwest, it continues into Pakistan, descending from the uplands into the broad alluvial lowlands of Punjab province.
 - After receiving the Jhelum River near Trimmu, the Chenab empties into the Sutlej River, a tributary of the Indus River.
 - Its total length is about 605 miles (974 km), and it feeds several irrigation canals.
 - Tributaries: The tributaries of the Chenab River include Miyar Nalla, Sohal, Thiroth, Bhut Nalla, Marusudar and Lidrari.
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WHAT IS A LIVING WILL?



The Bombay High Court recently pulled up the Maharashtra government for not having a proper and sufficient mechanism including a proper medical board in place for enforcing living wills.

- A Living Will or Advance Medical Directive, is a document prescribing a person's wishes regarding the medical treatment the person would want if he/she was unable to share his/her wishes or **not in a position to make an informed decision by reason of being unconscious or in a coma.**
- **Legality** of Living Will in India:
 - It was **not legally** viable in India until 2018.
 - However, the Supreme Court in **Common Cause vs. Union of India (2018)**, recognised that a terminally ill patient or a person in a persistent

vegetative state can execute an “advance medical directive” or a “living will ” to refuse medical treatment, and gave sanction to passive euthanasia and living will/advance directives.

- The court also laid down principles relating to the procedure for execution of a living will.
- **Who can draw up an Advance Medical Directive/Living Will?**
 - An adult who is of a sound and healthy mind and in a position to communicate, relate, and comprehend the purpose and consequences of executing the document.
 - It **must be voluntary**.
- **Elements of a Living will:**
 - It **should be in writing** and clearly state when medical treatment may be withdrawn or if specific medical treatment that will have the effect of delaying the process of death should be given.
 - Instructions must be absolutely clear and unambiguous.
 - It should mention whether the patient may revoke the instructions/authority at any time.
 - It should **specify the name of a guardian** or close relative who, in the event of the patient becoming incapable of taking decision at the relevant time, will be authorized to give consent to refuse or withdraw medical treatment.
- How is living will recorded?
 - It should be **signed by the patient** in the presence of two witnesses, preferably independent, and countersigned by a jurisdictional Judicial Magistrate First Class (JMFC), so designated by the concerned district judge.
 - The JMFC is under an obligation to supply the requisite copies of the Living Will to the concerned authorities and to inform the immediate family members of the Executor.
- **When and by whom can it be given effect to?**
 - When the person becomes terminally ill and is undergoing prolonged medical treatment with no hope of recovery and cure of the ailment, the treating physician,

when made aware about the Advance Directive, has to ascertain the genuineness and authenticity of the document from the jurisdictional **JMFC before acting upon the same.**

- The Chairman of the Medical Board shall convey the decision of the Board to the jurisdictional JMFC.
- Thereafter, the **JMFC shall visit the patient** and, after examining all aspects, authorise the implementation of the decision of the Board.
- However, if there is a difference of opinion between the Board and the Executor or his family members, the parties can prefer a writ petition in the concerned High Court. The decision of the High Court in this regard shall be final and binding.

WHO IS A PRO-TEM SPEAKER?



The President has appointed Bhartruhari Mahtab, a seven-term MP from Cuttack, as the pro tem Speaker of the 18th Lok Sabha.

- **Pro-tem** is a Latin phrase which **translates to 'for the time being'** in English, and so the pro-tem speaker is a temporary speaker appointed for a limited period of time to conduct the work in Lok Sabha or in state legislatures.
- A Pro-tem speaker is chosen for the conduct of the house **when the Lok Sabha and legislative assemblies have been elected** and the vote for the speaker and deputy speaker has not taken place.
- The **Constitution does not expressly use the term 'Pro-tem Speaker'**.
- The office of the pro tem speaker ceases to exist after the new Speaker of the House is chosen.

Who selects the pro-tem speaker?

- The Speaker Pro-tem is appointed by the President of India/Governor.
- The President/Governor administers the oath of office to the pro-tem Speaker.

- As per convention, a senior most member will be appointed as the pro tem speaker with the agreement of assembly members, who then carry on the activities until the permanent speaker is chosen.
 - **Duties:**
 - Presiding over the first sitting of the Lok Sabha/ State Legislative Assemblies.
 - Administering the oath of office to the newly elected MPs/MLAs.
 - Conducting the floor test to prove the government's majority.
 - Holding the vote to elect the speaker and deputy speaker.
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WHAT IS HOOCH?

Recently, at least 34 people have died, and around 100 others have been hospitalised after consuming hojoch, or spurious liquor, in Tamil Nadu's Kallakurichi.



- It is a commonly used term for **poor quality alcohol**, derived from Hoochينو, a native Alaskan tribe that was known to produce very strong liquor.
 - Unlike branded liquor which is produced in factories with sophisticated equipment and rigorous quality control, hooch is made in much **more crude settings**.

How is hooch produced?

- All alcohol is produced using two basic processes: **fermentation and distillation**.
 - **Fermentation:** When **heated, yeast reacts with sugar** (from grain, fruits, sugarcane, etc.) to ferment and produce a mixture containing alcohol. This is an age-old process, used to create beverages like beer or wine.
 - **Limitation:** As fermentation continues, and alcohol levels rise, conditions in the mixture become toxic for the yeast. Eventually, no more fermentation can take place. Thus, to make anything stronger (above 14-18% ABC), beverages need to be distilled.

- **Distillation:** This is the process of **physically separating alcohol** from a fermented mixture using **evaporation and condensation**.
- Since different parts of the **mixture have different boiling points**, heating it up to the correct temperature makes it possible to separate only the alcohol from the water and other remnants. Distilled beverages, or spirits, are far more potent than any fermented beverage.

Why can hooch be dangerous?

- The fermented mixture which is distilled contains more than just consumable alcohol (ethanol). It also contains methanol, an **industrial alcohol** which is highly toxic for human beings.
- Non-distilled alcoholic beverages like wine contain relatively harmless trace amounts of methanol. But during the **distillation, both ethanol and methanol are concentrated**. Thus, if done incorrectly, distillation can lead to an end product which contains high quantities of toxic methanol.

What are the effects of spurious liquor?

- Methanol or methyl alcohol can cause **impaired vision**, high toxicity and metabolic acidosis, a condition in which the body produces excessive acid that **cannot be flushed out by kidneys**.
- The treatment for this is to intravenously administer Fomepizole and ethanol. However, fomepizole can be expensive and unavailable in many parts of India.
- In such cases, doctors administer a mixture of ethanol and water (1:1 ratio).
- Ethanol inhibits methanol's conversion into toxins and helps in flushing it out of the body either naturally or through dialysis.

INDIA – BANGLADESH BILATERAL RELATIONSHIP

- India and Bangladesh share bonds of history, language, culture, and multitude of other commonalities.

- **Historical Ties:**

- India's relationship with Bangladesh dates back to the 1971 Bangladesh Liberation War when India provided crucial military and material assistance to help Bangladesh gain independence from Pakistan.
- However, the relationship deteriorated in the mid-1970s due to boundary disputes, insurgency, and water-sharing issues, especially after military regimes took control in Bangladesh.
- Stability in bilateral relations was restored when Sheikh Hasina became Prime Minister in 1996, leading to the signing of the **Ganga Water Sharing Treaty**.
- Since then, India and Bangladesh have strengthened their cooperation in various sectors, including trade, energy, infrastructure, connectivity, and defense.

- **Economic and Commercial Ties:**

- Bangladesh is India's largest trade partner in South Asia, with bilateral trade reaching USD 15.9 billion in FY 2022-23.
- Bangladesh exports approximately USD 2 billion to India annually.
- In 2022, both countries completed a joint feasibility study on a **Comprehensive Economic Partnership Agreement (CEPA)**.
- This agreement is crucial as Bangladesh will lose its Least Developed Country (LDC) status after 2026, which will impact its duty-free and quota-free access to Indian markets.
- Consequently, Bangladesh aims to finalize a Free Trade Agreement (FTA) with India.

- **Power and Energy:**

- **Bangladesh imports 1160 MW of power from India.**
- Projects like the **Maitree Super Thermal Power Plant** and **India-Bangladesh Friendship Pipeline** are key initiatives.
- India supports Bangladesh's energy sector through various partnerships.

- **Development Partnership:**

- India has extended four Lines of Credit to Bangladesh amounting to USD 8 billion for infrastructure development.
- High Impact Community Development Projects (HICDPs) are a significant part of India's assistance, focusing on human resource development and capacity building.
- **Cultural Cooperation:**
 - Cultural exchanges are facilitated through the **Indira Gandhi Cultural Centre and Indian Cultural Centre in Dhaka.**
 - Programs in arts, dance, and language promote people-to-people contacts.
 - The Bangladesh Youth Delegation program attracts young talent to visit India.

PM Sheikh Hasina's visit to India:

- Bangladesh's Prime Minister Sheikh Hasina is on a two-day visit to India.
- This will be the first incoming bilateral State visit by a foreign leader after the formation of the new government following the Lok Sabha elections.
- Sheikh Hasina was among the seven leaders from India's neighborhood who attended the swearing-in ceremony at the Rashtrapati Bhavan on June 9.
- During the bilateral meeting of Prime Minister Narendra Modi and Sheikh Hasina, Teesta water dispute is expected to be discussed.

Controversy on the Teesta Water Dispute:

- **Background:**
 - The Teesta River originates in the Pauhunri mountain of Sikkim, flows through West Bengal, and enters Bangladesh, joining the Brahmaputra.
 - It is the second largest river in West Bengal after the Ganga, making it crucial for both West Bengal and Bangladesh.
- **Historical Context:**
 - India and Bangladesh have been negotiating the sharing of Teesta waters since the early 1980s.

- A water-sharing agreement was almost signed in 2011 during Prime Minister Manmohan Singh's visit to Bangladesh. However, it was halted due to last-minute objections by West Bengal's Chief Minister Mamata Banerjee.
 - **Recent Developments:**
 - In 2015, Prime Minister Narendra Modi visited Dhaka, accompanied by Mamata Banerjee, and expressed confidence in finding a fair solution.
 - Despite efforts, the issue remains unresolved. In a recent interview, Prime Minister Hasina emphasized the need for India to be more accommodating to resolve the dispute.
 - **Current Status:**
 - Bangladesh seeks an equitable share of the Teesta waters to ensure sufficient water flow during the dry season.
 - India's internal political dynamics, particularly the stance of the West Bengal government, play a significant role in the negotiations.
 - **Importance of Teesta Waters:**
 - The Teesta River is vital for irrigation and water supply in both countries.
 - Sheikh Hasina recently urged India to show greater flexibility to resolve the issue.
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