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HANGING AS A CONSTITUTIONAL MODE OF EXECUTION IN INDIA

Context

- Recently, the Supreme Court of India has **upheld the constitutional validity** of hanging as a mode of executing a death sentence, holding that the method **does not violate the right to dignity under Article 21**.

About 'Hanging as a Mode of Execution in India'

- Hanging has been the principal statutory method of execution in India since the **colonial-era Code of Criminal Procedure (CrPC)**.
- The present **Section 393(5) of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023** provides that a death sentence shall direct that the person **'be hanged by the neck till he is dead'**.
- The method generally uses a calculated **long drop**, intended to cause cervical fracture and rapid loss of consciousness.
- Its constitutional validity was upheld earlier in **Deena v. Union of India (1983)**.

Constitutional & Legal Aspects

- Article 21** guarantees the right to life and personal liberty and requires procedure established by law to be fair and non-arbitrary.
- In **Gian Kaur v. State of Punjab (1996)**, the Supreme Court recognised that the **right to life includes the idea of living** and, where relevant, dying with dignity.
- The constitutional question is therefore whether execution can be carried out with **decency, dignity and without unnecessary brutality**.
- The **Law Commission's 187th Report (2003)** recommended an alternative method of execution through lethal injection, while recognising the need for further consideration of execution practices.
- However, **Parliament retained hanging under the BNSS**, providing legislative continuity to the existing framework.

Recent Supreme Court Decision

- The Supreme Court of India found that the scientific material placed before it did not sufficiently displace the reasoning in *Deena* (1983).

- It noted that alternatives such as lethal injection, electrocution, lethal gas or shooting had not been demonstrated to provide a clear constitutional or humanitarian advantage.
- The Court did **not treat the issue as permanently closed** and recognised that constitutional interpretation and scientific knowledge can evolve and that fresh evidence could justify reconsideration.

Related Concerns & Issues

- Scientific Reliability:** Incorrect calculation of the drop may result in prolonged asphyxiation or, at the other extreme, severe physical injury
- Dignity Under Article 21:** The State's obligation to protect dignity does not end at the gallows.
- Psychological Suffering:** Death-row confinement and the anticipation of execution raise separate human-rights concerns.
- Colonial Legacy:** Retaining a method originating in colonial criminal law raises questions about whether contemporary constitutional values require reform.
- Alternative Methods:** The relative reliability, pain and dignity implications of lethal injection and other methods require independent empirical assessment.
- Death Penalty Itself:** The debate also intersects with concerns regarding arbitrariness, proportionality, wrongful convictions and the irreversible nature of capital punishment.

Global Examples of Hanging as a Mode of Execution

- Hanging has largely declined internationally. It has nevertheless remained legally available or historically used in some jurisdictions, including **Japan, Singapore and certain countries in the Middle East and Asia**.
- Several countries have **abolished capital punishment altogether**, reflecting a broader global movement towards restriction or abolition.

Way Forward

- Commission **updated medical and scientific studies** on execution methods.
- Establish transparent, evidence-based **protocols and safeguards** to minimise suffering.
- Examine the Law Commission's recommendations and internationally accepted human-rights standards.

- Periodically review the statutory method in light of **Article 21 and evolving constitutional morality**.
- Strengthen safeguards against wrongful execution and ensure that the death penalty remains subject to the strictest judicial scrutiny.

Source: IE

LEGALITY OF POLYGAMY IN INDIA

In News

- The Supreme Court is hearing a plea challenging the constitutional legality of polygamy under the Muslim Personal Law.

Polygamy

- It is the practice of having more than one married spouse — wife or husband.
- **Types:**
 - ♦ **Polygyny:** One man having multiple wives.
 - ♦ **Polyandry:** One woman having multiple husbands.
 - ♦ **Bigamy:** Marrying another person while the first valid marriage is still in force.
- In India, monogamy is **mandatory under the Hindu Marriage Act, 1955** and the **Special Marriage Act, 1954**. However, polygamy is not prohibited under Muslim personal law.
- According to **NFHS-5 (2019–21)**, polygamy was reported among different religious communities, with higher prevalence in some Northeastern and tribal-population areas.
 - ♦ The highest prevalence of polygamy was noticed in the Christian community.
 - ♦ The respective figures for the two communities were 2.1% for Christians and 1.9% for Muslims.
 - ♦ Only 1.3% of Hindu men have more than one wife.

Historical and Cultural Reasons of Polygamy

- **Economic reasons:** In rural or agricultural societies, more wives could mean more labour for household and agricultural chores.
- **Patriarchal traditions:** The importance placed on male heirs and lineage sometimes encouraged men to marry again if their first wife had no children or no sons.

- **Religious and customary traditions :** Personal laws of some religions and the customs of some tribes in some cases permitted polygynous marriages.
- **Social protection:** In some pre-industrial and conflict-affected countries, subsequent marriages may provide economic security and social protection for widows or vulnerable women.

Arguments Against Polygamy

- **Gender Inequality & Exploitation :** Polygamy continues patriarchal dominance by creating an uneven dynamic in marriage, where males are allowed to have multiple wives, but women are not.
- **Mental Health:** Co-wives usually suffer emotional agony, economic insecurity, marginalisation and marital discord in the family.
- **Economic Strain:** Maintaining multiple households often leads to diluted financial resources, impacting the care, nutrition, and education of children born into such unions.
- **Breach of Constitutional Principles :** Critics have argued that legalisation of polygamy would be against Article 14 (Right to Equality) and Article 21 (Right to Life and Personal Dignity) of the Indian Constitution.

Rules and Regulations

- Matters of marriage, divorce and succession are governed by personal laws based on religious identity because India does not have a Uniform Civil Code (UCC) applicable to the entire nation.
 - ♦ For the majority of the population, monogamy is the only legal form of marriage.
- **The Hindu Marriage Act, 1955** – which governs Hindus, Buddhists, Jains and Sikhs – prohibits bigamy.
 - ♦ If a person governed by the Hindu Marriage Act marries again while a spouse is living, the second marriage is considered invalid.
- **The Parsi Marriage and Divorce Act, 1936** expressly prohibits bigamy for Parsis.
- **The Indian Christian Marriage Act, 1872** prohibits the certification of marriages involving Christians if either of them is already married to someone else.

- **Section 82 of the BNS criminalises bigamy** and Bigamy can attract up to seven years' imprisonment and a fine when the second marriage is legally void because the first spouse is still living.
 - ♦ **The exception** to the rule lies in Muslim personal law. Governed by the Muslim Personal Law (Shariat) Application Act, 1937, Muslim men are legally permitted to have up to four wives.
 - ♦ Consequently, the penal provisions of the BNS regarding bigamy do not apply to Muslim men as their personal law sanctions the practice.
- ♦ Both judgements stressed that conversion could not be used to get around existing marriage laws.
- In 2015, the Supreme Court ruled that polygamy was not an essential practice of Islam and hence not protected under **Article 25 of the Constitution**.
 - ♦ The Court said, religious freedom protects faith but not behaviours that are against public order, health or morals

Source :TH

INDIA'S COCONUT SECTOR

Context

- India's coconut sector, deeply rooted in the country's agricultural economy and cultural traditions, is steadily evolving from a predominantly traditional farming activity into a diversified, export-oriented industry.

About Coconut

- It is often described as the "**Kalpavriksha**" or "**Tree of Life**" because almost every part of the plant has economic or practical uses.
- **Type of Plant:** Coconut is a perennial plantation crop and a **monocotyledonous palm** belonging to the family **Arecaceae**.
 - ♦ Coconut is native to the **Indo-Pacific region**, with its origin commonly traced to **Southeast Asia**.
- **Climatic Requirements:** Coconut requires a warm and humid tropical climate for optimal growth. It grows best in regions with temperatures ranging between **25°C and 30°C** and requires high and evenly distributed rainfall.
- **Soil Requirements:** Coconut thrives in **well-drained sandy loam, alluvial, laterite, and coastal soils**.

Economic and Livelihood Significance

- India holds a prominent place in the global coconut economy. The country ranks **first in production** and **third in cultivation area**, accounting for 31.24 percent and 17.90 percent of global totals, respectively.

State wise Regulations

- **Uttarakhand:** Its Uniform Civil Code (2024) prohibits bigamy for all residents.
- **Assam :** The Assam Prohibition of Polygamy Bill, 2025 allows for strong punishment including upto 7 years of imprisonment and 10 years imprisonment in case a previous marriage is disguised.
- **Tribal exemptions:** Both Assam and Uttarakhand give exemptions to the Scheduled Tribes and some protected tribal areas in the acknowledgement of their customary rules that are protected by the Constitution.
- **Goa:** Goa has been following a uniform civil code based on Portuguese civil code for over a century.
 - ♦ But Goa Civil Code allows a Hindu man to marry again in some limited situations like the woman being infertile or not being able to have a male child.
 - But the clause is considered to be virtually obsolete and is not said to have been used since 1910.

Supreme Court on Polygamy

- In **Sarla Mudgal v. Union of India (1995)** the Court held that a Hindu man cannot convert to Islam to marry again, while his first marriage is still valid. Such a second marriage is void.
- In **Lily Thomas v. Union of India (2000)** the Court reiterated its stand that a second marriage after fraudulent or sham conversion is illegal and punishable.



- The coconut sector supports the livelihoods of **nearly 30 million people in India, including around 10 million farmers.**
- **Export Potential:** India's coconut product exports reached ₹7,038.35 crore in 2025-26, registering a 62% increase over the previous year.



Government Initiatives

- **MSP for Copra:** Copra, the dried kernel of coconut, is among the 22 mandated agricultural crops covered under the Minimum Support Price regime.
- **Coconut Promotion Scheme:** In order to address pest outbreaks, root wilt disease, and aging plantations, the Coconut Promotion Scheme was announced in the Union Budget 2026-27. The scheme seeks to enhance coconut production and productivity.
- **Coconut Development Board (CDB):** Established in **1981** under the **Ministry of Agriculture and Farmers Welfare**, the CDB provides institutional support for the integrated

development of coconut cultivation and the coconut industry. It operates across 22 States and Union Territories.

- **Other schemes supporting the production of quality planting material include:**
 - ♦ **Establishment of Nucleus Coconut Seed Garden:** Supports the establishment of coconut seed gardens to produce high-quality coconut seedlings and improved varieties.
 - ♦ **Establishment of Small Coconut Nursery:** Promotes production of quality coconut seedlings through the establishment of public and private nurseries. During 2025-26, assistance was provided to establish 12 new nurseries with a combined annual production capacity of 1.06 lakh seedlings.
 - ♦ **Accreditation and Rating of Coconut Nurseries:** Ensures the availability of genuine, high-quality planting material through nursery accreditation and quality assessment.

Challenges

- Despite its strong production base, the coconut sector faces several challenges:
 - ♦ **Ageing and declining plantations;**
 - ♦ Pest and disease outbreaks, including **root wilt disease;**
 - ♦ Low levels of mechanisation in some regions;
 - ♦ Need for greater **value addition and processing capacity;**
 - ♦ Price fluctuations affecting farmer incomes;
 - ♦ The need to strengthen India's position in high-value global markets.

Way Forward

- Promote **high-yielding and disease-resistant planting material.**
- Strengthen rejuvenation and replanting of ageing plantations.
- Encourage **integrated and multi-tier farming systems** to diversify farmer incomes.
- Expand processing and value addition at the farm and local-enterprise level.
- Improve access to technology, mechanisation and post-harvest infrastructure.
- Strengthen export competitiveness through quality standards, branding and market diversification.

Source: **PIB**

TRANSMISSION CONSTRAINTS THREATEN TO CURB INDIA'S RENEWABLE ENERGY EXPANSION

Context

- **Insufficient transmission lines** have emerged as a **major obstacle to India's rapid expansion of renewable energy capacity**.

About

- **Close to 21 gigawatts (GW)**, that is about **9% of the country's installed renewable energy capacity**, is currently transferred from plants through **temporary grid connections** while awaiting dedicated transmission infrastructure.
 - ♦ Of this, around **12 GW faces restrictions on "power evacuation"** during periods of peak solar generation.
 - ♦ **Power evacuation** is the process of **transferring electricity generated at a power plant to the consumption point**.
- During the financial year 2025-26 (FY26), around 6,900 gigawatt-hour (GWh) of clean electricity faced restrictions due to a **mismatch between the rapid pace of renewable energy deployment and commissioning of associated transmission infrastructure**.
- Industry executives also cautioned that **these projects could turn into non-performing assets (NPAs) if the government doesn't address the issue**.

Electricity Transmission

- Electricity generated at a power plant **has to travel through transmission lines** before reaching distribution networks and ultimately consumers.
 - ♦ **The basic chain is:** From Renewable Energy Project to Transmission Network to Distribution Network and ultimately to Consumers.
- **India's solar and wind capacity has expanded rapidly**, but transmission infrastructure in some renewable-rich regions has not kept pace.
- This is particularly important because **India's major renewable-energy resources are concentrated in specific regions**.
 - ♦ Electricity generated in these regions may **have to travel hundreds or thousands of kilometres** to reach major demand centres.

Current Infrastructure for Grid Transmission

- **General Network Access (GNA) Framework:** It is a temporary arrangement that allows renewable energy plants to use whatever spare transmission capacity is available while they wait for their permanent transmission connection.
 - ♦ T-GNA projects, however, can schedule power **only if spare transmission capacity is available**.
- **Concerns:** During periods of network congestion, long-term GNA projects receive priority, often resulting in curtailment of generation from T-GNA-connected plants.
 - ♦ The curtailment faced by these projects are **as high as 70-80% of their generating capacity**, posing serious concern on project viability and debt servicing.
- When the **grid cannot accommodate all the electricity being generated**, power generation may have to be deliberately reduced. **This is known as power curtailment**.

Why are Transmission Projects Taking Time?

- Transmission infrastructure is **more complicated and time-consuming to develop** than generation capacity.
- **Major challenges include:**
 - ♦ Land acquisition and Right of Way (RoW) issues.
 - ♦ Obtaining environmental and other statutory clearances.
 - ♦ Delays in construction of transmission lines and substations.
 - ♦ Procurement of specialised equipment.
 - ♦ Coordination between renewable-energy developers, transmission companies and governments.
 - ♦ Mismatch between the commissioning dates of renewable projects and transmission infrastructure.
- This creates a situation where a renewable-energy project may be ready to generate electricity while **its dedicated transmission system is still under construction**.

Concerns:

- **Power Curtailment:** Insufficient transmission capacity can force renewable-energy plants to reduce generation, resulting in wastage of clean electricity.

- **Financial Stress:** Curtailment reduces revenue for renewable-energy developers, making it difficult to service project debt and potentially discouraging future investment.
- **Grid Stability:** The intermittent nature of solar and wind power, combined with inadequate transmission and storage, can create challenges in maintaining grid stability and balancing electricity supply and demand.
- **Delay in Renewable Targets:** Transmission bottlenecks can slow the effective utilisation of India's rapidly expanding renewable capacity, potentially affecting the achievement of its 2030 clean-energy and climate targets.

Government Initiatives

- **Grid Integration Plan:** India's grid is being reimagined through the ₹2.4 lakh crore Transmission Plan for 500 GW, linking renewable-rich states with demand centres.
 - ♦ The Government is prioritizing investment in transmission infrastructure through the **Green Energy Corridors** and new high-capacity transmission lines from Rajasthan, Gujarat, and Ladakh.
 - ♦ While these projects are multi-year efforts, once operational they will **unlock over 200 GW of new renewable capacity.**
- **Vision till 2032:** Government has already planned for building High-Voltage Direct Current (HVDC) corridors and boosting inter-regional transmission capacity from 120 GW today to 143 GW by 2027, and 168 GW by 2032.
- **Incentives:** Domestic manufacturing, incentivised through the Production-Linked Incentive (PLI) scheme, Domestic Content Requirement, imposition of duties, and duty exemptions for capital equipment, is reducing import dependency.
- **National Institute of Solar Energy (NISE):** Offers training programs, workshops, and research support for solar PV, solar thermal, and hybrid technologies.
- **Capacity Building for State Nodal Agencies (SNAs):** Training and technical support to state renewable energy agencies for project implementation, monitoring, and policy enforcement.

- **Research & Innovation Support:** Funding for R&D in battery storage, hybrid projects, offshore wind, and green hydrogen.
- **International Cooperation & Training Programs:** Collaboration with IRENA, GIZ, and other global agencies for knowledge exchange.
- **Deployment of Smart Grid Technologies:** Advanced grid support technologies are planned to enhance voltage stability, improve system strength, and support reliable integration of renewable energy.

Conclusion

- Over the past two years, **policy attention has consciously shifted from pure capacity growth to system design.**
- These reforms mark a **decisive step toward optimising transmission utilisation and fast-tracking stranded renewable projects**, directly addressing one of the sector's core implementation challenges.

Source: IE

NEWS IN SHORT

IDEA OF A 'PERFECT VICTIM' OR AN 'IDEAL VICTIM'

Context

- Bombay High Court set aside the 2021 judgment of the trial court that had acquitted Tarun Tejpal.
 - ♦ The High Court also said that it had fallen for the notion that a sexual assault complainant must be a **'perfect victim' and conduct herself in a certain way to appear credible.**

About

- The idea of a **'perfect victim' or an 'ideal victim'** was theorised by **Norwegian criminologist Nils Christie in 1986.**
- According to him, **'perfect victim' possesses five main attributes.**
 - ♦ They are often female, disabled, very young, or very old, and are therefore weak in relation to the offender.
 - ♦ They are involved in "respectable activities".
 - ♦ They cannot reasonably be blamed for being where they were during the crime.

- ♦ They do not know the offender personally.
- ♦ They are attacked by a perpetrator who is “big and bad”.
- **This one-size-fits-all idea of victimhood** is propagated widely by the media, social media, films, and by the larger society.
 - ♦ This narrow perception of an ‘ideal victim’ **creates a hierarchy of victimisation**.
 - ♦ Those who are thought of as “undeserving” are even perceived as contributing to the situation and receive less sympathy or none at all.
- **The High Court Stand:** The High Court criticised the Sessions Court for focusing on the complainant’s conduct, reactions, and personal background instead of the evidence on record.
- Recently, the Supreme Court issued a report **recommending greater gender sensitivity in judicial writing**.
 - ♦ It cautioned judges against drawing adverse conclusions from delayed reporting, lack of physical injuries, inconsistencies in testimony or a survivor’s demeanour, noting that **trauma affects people differently**.

Source: TH

COKING COAL

Context

- Indian Steel mills are facing mounting pressure on margins as **higher coking coal prices**, driven by supply disruptions in Australia and China and the Iran war, raise steelmaking costs.

About

- India, the **world’s second-largest crude steel producer**, meets around **90%** of its coking coal requirements through imports, with Australia accounting for at least half of these imports.
- In steel making, coal is converted into **coke**, a high-carbon fuel that generates the intense heat required in blast furnaces and helps extract iron from iron ore.
 - ♦ Coking coal accounts for nearly **40% of steel production costs**.
- **Coking coal** has suitable properties and relatively low ash content to produce strong coke required for blast furnaces.

- On the other hand, **non-coking coal**, despite its relatively high ash content, can generate sufficient heat to run boilers and turbines, making it suitable for power generation.

Initiatives

- **Mission Coking Coal (2021):** Aims to reduce import dependence by increasing domestic coking coal production to **140 MT** and raising the blending of domestic coal in steelmaking from **10% to 30% by 2030**.
- **Critical and Strategic Mineral:** The Government has notified coking coal as a **Critical and Strategic Mineral** under the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) to encourage domestic exploration and production.

Source: IE

NEW DEVELOPMENT BANK

In News

- Iran decided to join the New Development Bank to strengthen monetary, financial and banking cooperation with BRICS countries.

New Development Bank

- It is a multilateral development bank established by Brazil, Russia, India, China and South Africa (BRICS).
- It was founded in 2015 and Its membership is open to members of the United Nations, as well as to borrowing and non-borrowing member countries.
- It aims to mobilize resources for infrastructure and sustainable development projects in emerging markets and developing countries.
- **Members** : India, Brazil, Russia, China, South Africa, Bangladesh, UAE, Egypt, and Algeria are members of NDB.
 - ♦ Uzbekistan became the New Development Bank’s tenth member and the first Central Asian country to join the institution.
- Focus Areas :



BRICS

- It brings together eleven major emerging markets and developing countries of the world: Brazil, China, Egypt, Ethiopia, India, Indonesia, Iran, Russia, Saudi Arabia, South Africa and the United Arab Emirates.
- It serves as a useful platform for consultation and cooperation on contemporary issues having global as well as regional significance, and issues of global political and economic governance.
- It comprises :



49.5%
Population



40%
GDP



26%
Trade

Source: Reuters

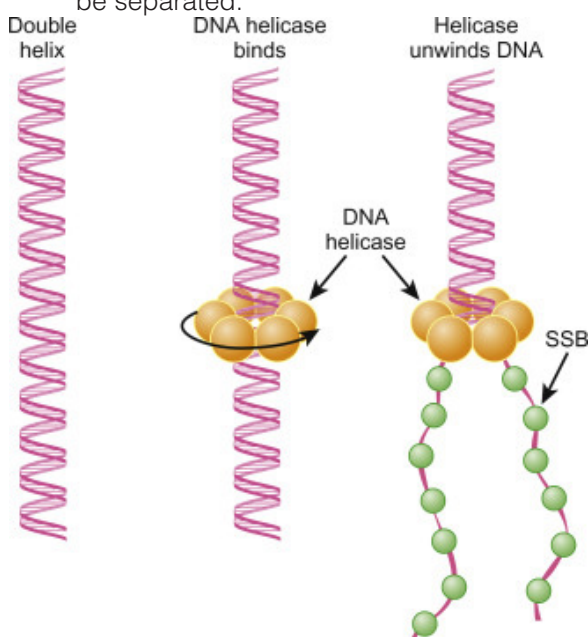
HELICASE: THE DNA SEPARATOR

Context

- In a recent study scientists found **how cells make sure they start copying DNA only at the right time.**

About

- **Helicase** is an **enzyme** that **unwinds the two strands of DNA** so that the **cell can copy the genetic information stored in them.**
- **DNA is normally a double helix**, i.e. two long strands held together by bonds between bases on each strand, spiralling around each other.
 - ♦ When a cell divides, it needs to make a copy of the DNA, which requires these strands to be separated.



- **Helicase** attaches to a particular region of DNA and moves along the molecule.
 - ♦ It uses **energy from ATP** — the cell's main chemical energy source — to change its shape and force apart the two DNA strands.
 - ♦ The result is a **Y-shaped region called the replication fork**, where the two strands are exposed.
 - ♦ Other enzymes called **topoisomerases** **relieve this twisting** and **prevent the DNA from becoming tangled or breaking.**
 - ♦ Once the helicase has separated the strands, **other replication machinery can use each exposed strand as a template.**

Source: TH

RAICHUR MIYAWAKI FOREST

In Context

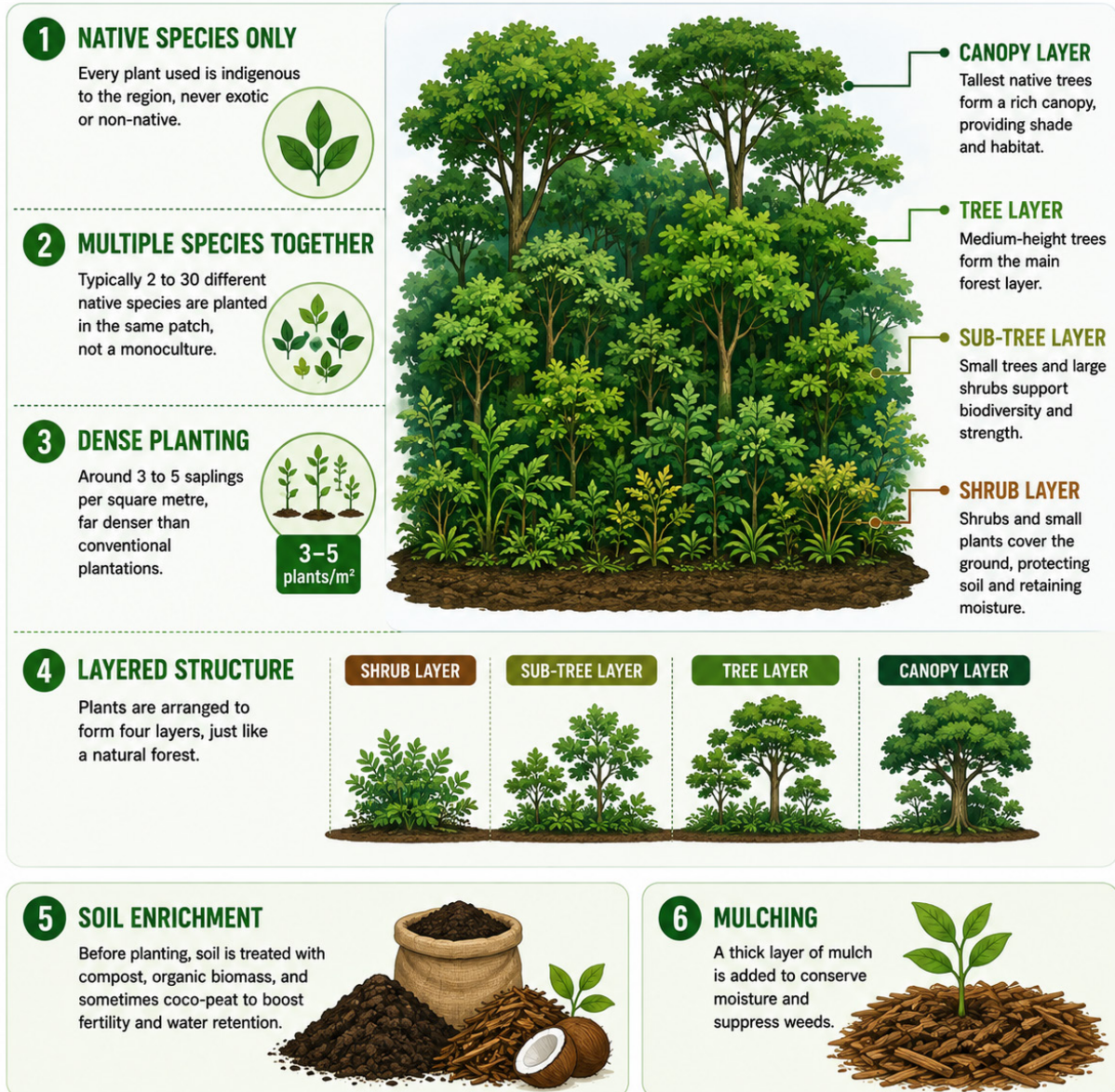
- The Miyawaki method has been in the news repeatedly over the past year from **Raichur's Yakalaspura dumpsite-turned-forest in Karnataka**, to Rajkot's Nakrawadi landfill transformation in Gujarat, to urban afforestation drives in Mumbai.

What is the Miyawaki Method?

- The Miyawaki method is an **afforestation technique** that creates dense, native, multi-layered forests in a short span of time, even in very small urban spaces.
- It was developed in the **1970s by Japanese botanist and plant ecologist Dr Akira Miyawaki**, who based it on the idea of **"potential natural vegetation"** means the forest that would naturally exist in a region if left undisturbed.
- The core idea is rather than **planting a few trees sparsely** and waiting decades for a forest to form, plant many native species very close together and let them compete for sunlight and nutrients.

MIYAWAKI METHOD – CORE PRINCIPLES

Create dense, native forests that restore ecosystems naturally and sustain biodiversity



Source: TH

AMAZON RAINFOREST

Context

- A recent study published in Global Change Biology has found that just 15–25 tree species play a major role in regenerating deforested areas of the Amazon rainforest.

About

- The Amazon rainforest, often called the **lungs of the Earth**, is home to about **10%** of all known plant and animal species — and countless others that haven't even been discovered yet.
- The Amazon spans **8 countries and one overseas territory**: **Brazil, Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela, and French Guiana** (a French overseas territory).
- It stores around **250–300 billion tonnes of carbon**, equivalent to **15–20 years of global greenhouse gas emissions**, and generates rainfall that supports some of the world's largest cities and most vital agricultural regions.
- It is home to over **47 million people**, including **2.2 million Indigenous and traditional communities**, whose cultures and livelihoods are deeply tied to the forest.



Source: [TH](#)