

NEXT IAS

DAILY NEWS

ANALYSIS



12th December

Explained

1. Adichanallur Historical Site
2. AI and Copyright Act Changes
3. Air Pollution - Largest Health Threat
4. Narco Tests - Legal Perspective
5. Human-Rating for Gaganyaan

Decoded

6. Import Tariff by Mexico
7. Gold Card

DNA QUIZ

PRACTICE QUESTION

Playlist Link:



What to Read: <https://bit.ly/3FYdutC>

Daily News Analysis: <https://bit.ly/4ge9BgF>

www.nextias.com

DELHI CENTRE:
Vivekananda House

6-B, Pusa Road, Metro Pillar No. 111,
Near Karol Bagh Metro
New Delhi-110060

DELHI CENTRE:
Tagore House

27-B, Pusa Road, Metro Pillar No. 118,
Near Karol Bagh Metro
New Delhi-110060

DELHI CENTRE:
Mukherjee Nagar

637, Banda Bahadur Marg,
Mukherjee Nagar, Delhi-110009

PRAYAGRAJ
CENTRE:

31/31 Sardar Patel Marg,
Civil Lines, Prayagraj

JAIPUR CENTRE:

Plot No. 6 & 7, 3rd Floor,
Sree Gopal Nagar,
Gopalpura Bypass, Jaipur-302015

EXPLAINED

1. ADICHANALLUR HISTORICAL SITE

Backdrop : HC ruling on barring sand mining near Adichanallur site

Relevance : GS prelims - Ancient History and Art and Culture

About News

- While disposing of a 2016 petition, Madurai Bench of the Madras High Court prohibited sand mining near the Adichanallur archaeological site and village.
- The petition, filed by the Cauvery Neervala Sutrusoolal Padhukappu Sangam, alleged indiscriminate sand mining near the Adichanallur Iron-Age urn burial site on the Thamirabarani riverbank and sought a ban on such activity.



Adichanallur Historical Site

- Location - **Srivaikuntam taluk, Thoothukudi district**, Tamil Nadu, on the **right bank of the Thamirabarani River**.



Adichanallur Historical Site

- One of **India's oldest Iron Age burial sites**, dating back **3,000+ years**.

- Excavations reveal **urn burials**, skeletal remains, iron tools, pottery, bronze artefacts, and evidence of early metallurgy.
- Notified as a **nationally protected monument** and excavated by the **Archaeological Survey of India (ASI)**.
- Considered crucial for understanding **South Indian prehistory** and **early human settlements** along the Thamirabarani valley.
- The Union Government has announced the establishment of a **National Museum at Adichanallur** to showcase artefacts and preserve the region's Iron Age cultural heritage.

2. AI AND COPYRIGHT ACT CHANGES

Backdrop : The Union government plans to amend the **Copyright Act, 1957** within the next **three years** to address challenges posed by AI.

Relevance : GS III - issues relating to Intellectual Property Rights.

About News

The Union government plans to amend the **Copyright Act, 1957** within the next **three years** to address challenges posed by AI.

A DPIIT **working paper** proposes a new framework for managing data used by AI models.

“One Nation, One License, One Payment: Balancing AI Innovation and Copyright.”

Background and Concerns

- The proposal comes amid rising global concerns over AI firms using copyrighted material without payment.
- Several publishers worldwide — including members of **DNPA in India**, The Indian Express, and The New York Times — have filed lawsuits against AI firms like OpenAI.
- Creators affected include **news publishers, authors, and musicians**.

Recommendations

- Proposes a **mandatory blanket licensing model** for all AI companies using copyrighted content.
- AI firms will be required to pay **royalties to Indian content creators** whose work is used to train AI models.
- Royalty payments will be calculated as a **percentage of the AI developer's global revenue**, not just Indian earnings.

- Suggests the creation of a **government-appointed committee** to determine royalty rates.

Copyright Royalties Collective for AI Training (CRCAT)

- Royalty payments would be collected **after the AI model is commercialised**, not during the training phase.

Objective of Proposal

- Aims to reduce conflict between **publishers** (news outlets, book publishers, etc.) and **AI developers** over data used in training.
- Seeks to ensure **free access to public content** for model training while guaranteeing **compensation** to copyright holders.

Future Steps

- A second working paper (expected in ~2 months) will address whether **AI-generated works** can be copyrighted.
- Following consultations, the government may introduce **amendments** in Parliament to establish the new regime.

3. AIR POLLUTION - LARGEST HEALTH THREAT

Backdrop : Air pollution in India has become a year-round national crisis affecting all demographic groups and multiple organ systems.

Relevance : GS III - Environmental Pollution and Degradation

About news

- Air pollution in India has evolved from a seasonal northern problem to a **year-round national crisis**.
- It affects **all demographic groups** and multiple organ systems.
- Dangerous PM_{2.5} levels are altering disease patterns, slowing child development, and reducing life expectancy.

Scale and Spread of the Crisis

Centre for Research on Energy and Clean Air -

- Of 256 monitored cities (2025), **150 exceeded national PM_{2.5} limits**.
- For most urban residents, breathing unhealthy air is routine.

Severe Conditions in Indo-Gangetic Plain

- Delhi's seasonal PM_{2.5} levels in 2025: **107–130 $\mu\text{g}/\text{m}^3$** .

- Safe Limites
 - India's limit - 60 $\mu\text{g}/\text{m}^3$
 - WHO guideline - 15 $\mu\text{g}/\text{m}^3$

Issues with AQI framework

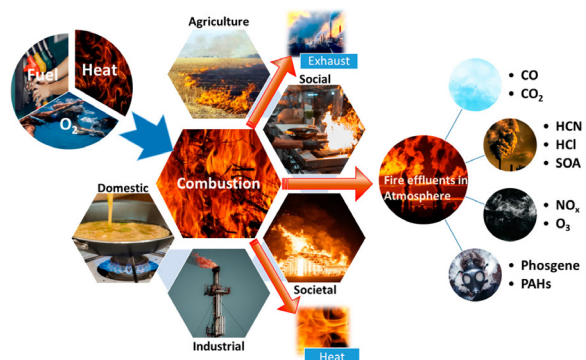
- India's AQI caps values at **500**, despite real-time levels exceeding this in Delhi and other cities.
- Cap introduced years ago to avoid panic, assuming uniform harm above 500.
- Extreme pollution collapses into one "severe" category, hiding true severity.



- Experts call for:
 - Recalibration of thresholds
 - Removal of the upper cap
 - Upgraded monitoring instruments

Structural Sources vs. Seasonal Distractions

- Public discourse fixates on stubble burning and Diwali fireworks.



- However, **year-round contributors** drive baseline PM_{2.5}:
 - Vehicular emissions
 - Industrial pollution
 - Construction/demolition dust
 - Informal waste burning
 - Household biomass use

- Seasonal episodes merely intensify an already severe baseline.

Massive Health Burden

A. Loss of Life Expectancy

- Nearly **46% of Indians** live in areas where pollution drastically reduces life expectancy.
- Delhi: PM2.5 exposure results in **8+ years** of life lost (AQLI).
- Northern India: **3.5–7 years** life expectancy reduction.

B. Rising Mortality

- Nearly **2 million deaths in 2023** attributed to air pollution (State of Global Air, 2025).
- Major causes: cardiovascular disease, stroke, COPD, diabetes.
- Pollution-linked mortality up **43%** since 2000.

Impact on Human Body

Cardiovascular Damage

- PM2.5 penetrates lungs → bloodstream → systemic inflammation.
- Indian studies: **8% rise in annual mortality** per 10 µg/m³ increase in long-term exposure.
- Linked to hypertension, atherosclerosis, heart attacks, arrhythmias, and ischemic stroke.

Respiratory Illnesses

- 6% of Indian children suffer from asthma.
- AIIMS data: 10 µg/m³ rise in PM2.5 → **20–40% spike** in paediatric emergency cases.
- Children show **10–15% reduced lung capacity** in polluted cities.
- Adults:** increasing COPD, bronchitis, and recurrent respiratory infections.

Neurological Impacts

- PM2.5 crosses the blood–brain barrier → neuroinflammation, oxidative stress.
- Linked to poor academic performance, impaired memory, slower cognitive development.
- International studies show **35–49% higher dementia risk** per 10 µg/m³ rise.
- Accelerates brain aging via vascular injury and toxic metal deposition.

Maternal and Neonatal Harm

- Associated with

- preterm births
- low birth weight
- Still births
- higher neonatal mortality.

- Women near roads, industries, and waste-burning sites face higher risks.
- Impacts contribute to **inter-generational inequity**.

Disproportionate Burden on the Poor

- Lower-income groups live closest to emission hotspots:
 - Roads, industries, construction zones, landfills
- Poor housing and limited clean-fuel access worsen vulnerabilities.
- Northern winter months see severe AQI levels where the poorest suffer most.

Towards a Health-Centred Air Quality Strategy

Transport Reforms

- Electrification of buses, taxis, autos, and two-wheelers.
- Shift freight from diesel trucks to rail/electric fleets.
- Real-world emissions monitoring.
- Low-emission zones and congestion pricing.

Industrial Controls

- Strict enforcement of pollution-control technologies.
- Phased move away from coal-based industrial processes.

Construction Sector Regulation

- Mandatory dust suppression.
- Enclosure norms and mechanised sweeping.

Waste Management Reforms

- Segregation at source and decentralised treatment.
- Biomethanation and scientific landfill remediation.
- Eliminating open waste burning.

Integration with Health Systems

- AQI-based district-level health advisories.
- Lung-function testing in school health programmes.
- Screening for COPD and cognitive decline in high-exposure groups.

4. NARCO TESTS - LEGAL PERSPECTIVE

Backdrop : SC set aside Patna HC order regarding Narco Test

Relevance : Indian Constitution - Significant Provisions and Basic Structure.

About News

Supreme Court Ruling on Narco Tests

- The Supreme Court has held that **any forced or involuntary narco test shall be unconstitutional and invalid**, setting aside a Patna High Court order that permitted such a test in

Amlesh Kumar v. State of Bihar (2025).

- The apex court is of the view that the High Court's order was in **contravention of the guidelines given in**

Selvi v. State of Karnataka (2010).

Other relevant cases

Results of a narco test do not confirm guilt

- Manoj Kumar Saini v. State of MP (2023)
- Vinobhai v. State of Kerala (2025),

Constitutional Concerns

Protection Against Self-Incrimination (Article 20(3))

- Clause (3) of Article 20 of the Constitution** provides for the protection against self-incrimination,
- no person accused of any offence shall be compelled to be a witness against himself.**
- Without free consent, any such test would be unconstitutional**
- Any information obtained therefore shall not be used as evidence.

Article 20 form the constitutional foundation of India's criminal justice system:

- Clause (1):** deals with ex-post facto laws — laws that declare an act as an offence which, when committed, was not an offence.
- Clause (2):** no person shall be prosecuted and punished for the same offence more than once (protection against double jeopardy).
- Clause (3):** protects an accused from self-incrimination.

The 'Golden Triangle'

Article 21, together with Articles 19 and 14, constitute the 'Golden Triangle' of the Constitution, as explained by the Supreme Court in

Maneka Gandhi v. Union of India (1978).



Violation of the Right to Privacy would thereby violate the Right to Life and Personal Liberty, and, finally, the Golden Triangle.

SC observations

- Information obtained from the test **must be corroborated with other evidence.**
- Consent must be informed, recorded before a magistrate**
- Test must be undertaken with medical, legal, and procedural safeguards.
- The court has made it clear that a person may volunteer for a narco-analysis test at the stage of defence evidence under **Section 253 of BNSS**; however, **there is no indefeasible right to such testing.**

5. HUMAN-RATING FOR GAGANYAAN

Backdrop : ISRO is upgrading LVM-3 for human-rating.

Relevance : Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology, Awareness in the fields of IT, Space

About News

India's maiden human spaceflight programme will use the LVM-3 rocket. The Indian Space Research Organisation (ISRO) has upgraded it and it's currently being certified for human-rating. Once it's thus rated, it will be called the HLVM-3 and will be able to carry Indian astronauts into space.

Definition of Human-Rating

- Human-rating is the rigorous engineering and certification process that ensures a space system, such as a launch vehicle or crew module, can safely carry humans.
- Human-rated systems maintain an acceptable level of risk
 - NASA specifies a **0.2% chance of catastrophic loss of crew** during ascent and descent.
- Process includes:
 - Redundant critical systems (triple/quad flight computers).
 - Robust abort capabilities such as the crew escape system.
 - Fault tolerance to single failures.
 - Reliable environmental control and life support system.
- Involves exhaustive testing, verification, and documentation well beyond cargo rockets.

Human-Rated Vehicles

Country / Agency	Launch Vehicle / Programme	Certification Authority	Mission Record / Success Rate
Russia	Soyuz-2 / Soyuz Programme	Roscosmos	>150 crewed missions; ~98% success; 100% crew survival since 1971
China	Long March 2F / Shenzhou Programme	CMSA (China Manned Space Agency)	16 crewed missions; 100% success (Shenzhou-20 capsule damaged but crew safe)
United States	SpaceX Falcon 9 + Crew Dragon	NASA	20 human missions; 100% success
United States	Space Launch System (SLS)	NASA	Only one uncrewed Artemis I mission flown so far
United States	Space Shuttle Programme (1981–2011)	NASA	135 missions; 133 successes, 2 failures → 98.5% success rate
United States	ULA Atlas V + Boeing Starliner	NASA (pending certification)	Limited crew test flights; certification pending

Human-Rating for Gaganyaan

- LVM-3** selected for India's maiden human spaceflight mission; being upgraded and certified as **HLVM-3**.
- ISRO enhancements include:
 - Added backup and reliability-improved systems.
 - Strengthened engines.
 - Extensive testing of subsystems.
 - A rapid crew escape system to pull crew module away from danger during launch.
- Alignment with Atmanirbhar Bharat goals for self-reliance in human spaceflight.

6. IMPORT TARIFF BY MEXICO

Backdrop : Mexico imposes 50% tariffs on India

Relevance : GS III - Challenges to Indian Economy - External Sector

About News

Mexico's 50% Tariff Hike: Implications for Indian Auto Exports

LVM-3 chosen due to:

- Proven track record (seven consecutive successful missions including Chandrayaan-3).
- Highest reliability in ISRO's fleet.
- Fully indigenous propulsion stages (Vikas engines, C25 cryogenic stage, S200 boosters).

- Mexico's Senate approved tariffs of up to **50%** on imports from Countries with no Free Trade Agreement including India, in December 2025.
- Tariffs cover ~1,400 product lines—textiles, steel, auto parts, plastics, footwear—with reductions on two-thirds of items compared to the initial draft.
- These tariffs are **not new**—they have been in place since **April 2024**.

- ♦ Original decision (April 2024): tariffs of **5–50%** on items from non-FTA partners, valid for **two years**.
- ♦ Senate's 2025 decision essentially **extends the same tariffs** to apply from **April 1, 2026** onwards.
- Automotive import duty to increase from **20% to 50%**.
- Move linked to concerns over goods rerouting due to U.S. tariff actions and ahead of the **United States-Mexico-Canada trade agreement (USMCA) review**.

Rationale Behind Mexico's Move

- Aimed at **aligning with U.S. expectations** ahead of USMCA review.
- Expected to generate **\$3.76 billion** additional revenue to help reduce Mexico's fiscal deficit.
- Protects local industries facing competition from **Chinese imports**.
- Supports domestic jobs and strengthens domestic production chains.

Impact on India

- Concerns persist over similar actions by other South American countries.
- India's vehicle and auto-parts exports to the U.S. were nearly **\$1 billion (Apr–Sep)**;
- Total goods exports to Mexico were **\$5.3 billion** (last fiscal).
- Indian automakers heavily rely on Mexico, India's **third-largest car export market**.

India's exports to Mexico are **concentrated in a few key sectors**.

Automobiles and auto parts are the most vulnerable:

- Motor cars + auto components: **\$1.4 billion (25% of exports to Mexico)**.
- Motorcycles: **7%** of exports to Mexico.

Mexico is a **major global market** for these products:

- Receives **~10%** of India's total auto and auto-parts exports.
- Accounts for **~12%** of India's motorcycle exports.

Industry Response from India

- Industry warns tariff hike will directly hit Indian automobile exports and disrupt production planning and export-driven economies of scale.

Indian carmakers argue:

- ♦ Indian vehicles are **not competitors** to Mexico's high-end vehicles aimed at the North American market.
- ♦ Compact cars (<1-litre engines) form the bulk of India's exports to Mexico; designed for the Mexican market, not for rerouting to the U.S.
- ♦ India accounts for only **6.7%** of Mexico's annual sales (1.5 million passenger vehicles).

7. GOLD CARD

Backdrop : US Gold Card Visa Programme came online on Dec 10, 2025

Relevance : GS II - International Relations

About news

Launch of the Gold Card Visa Programme

- President Donald Trump formally launched the **"gold card" visa** on December 10, 2025.
- Online application portal has gone live.
- Offers **legal residency** and a pathway to **U.S. citizenship**.
- Costs:
 - ♦ **\$1 million per individual**;
 - ♦ **\$2 million per foreign employee** for corporations.
- Aim: attract and retain **high-skilled workers**, especially top graduates from U.S. universities.
- ♦ Business leaders reportedly face difficulties retaining foreign graduates due to visa limits.

Replacement for the EB-5 Visa

- Programme intended to replace the **EB-5 investor visa** created in 1990.
- EB-5 required a \$1 million investment and job creation; the gold card **removes job-creation requirements** and mentions **no caps**.

≡ PRACTICE QUESTION ≡

Q.1 Which of the following artefacts have been found at the Adichanallur Iron Age site?

1. Bronze artefacts
2. Iron weapons
3. Painted Grey Ware pottery
4. Human skeletal remains

Correct answer:

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

Q.2. "One Nation, One License, One Payment" is related to which of the following?

- (a) Data protection in FinTech
- (b) AI training and copyright management
- (c) Cybersecurity threat monitoring
- (d) Digital India land records system

Q.3. Assertion (A): India's AQI framework fails to capture the true severity of extreme air pollution.

Reason (R): The AQI scale is capped at 500, even though real-time pollution levels often exceed this threshold.

- (a) A and R are true, and R is the correct explanation
- (b) A and R are true, but R is not the correct explanation
- (c) A is true, R is false
- (d) A is false, R is true

Q.4. Which Supreme Court judgment laid down guidelines explicitly prohibiting involuntary narco-analysis tests?

- (a) Maneka Gandhi v. Union of India (1978)
- (b) Selvi v. State of Karnataka (2010)
- (c) Kartar Singh v. State of Punjab (1994)
- (d) PUCL v. Union of India (1997)

Q.5. With reference to HLVM-3, consider the following statements:

1. It includes strengthened engines and more reliable subsystems.

2. It incorporates a rapid crew escape system.
3. It uses foreign propulsion stages for reliability.

Which of the statements are correct?

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

Q.6. Mexico's Senate-approved tariff hike of up to 50% (Dec 2025) applies to imports from countries that:

- (a) Are WTO non-members
- (b) Have high trade deficits with Mexico
- (c) Have no Free Trade Agreement with Mexico
- (d) Export more than \$5 billion annually to Mexico

Q.7. With reference to the U.S. Gold Card Visa Programme, consider the following:

1. Corporations can apply for multiple Gold Cards.
2. A single Gold Card can be shared among multiple employees.
3. The programme seeks to shift the demographic profile of green-card holders toward higher-income applicants.

Which of the above statements is/are correct?

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

Answer

1. (b)	2. (b)	3. (a)	4. (b)	5. (a)	6. (c)	7. (a)
--------	--------	--------	--------	--------	--------	--------

