01St January 2025 to 05th January 2025: Daily Study Contents

Topic 1: Centre's Tobacco Tax Rejig to Take Effect from February 1

Why is it in News?

The Union Ministry of Finance has issued formal notifications to operationalise a revised taxation framework for tobacco products starting **1 February 2026**, under the **Central Excise (Amendment) Act, 2025**.

Key features of the revised regime include:

- Restoration and recalibration of **central excise duty on cigarettes**, which had been reduced to near-nominal levels after the introduction of GST.
- Activation of a **cess on pan masala manufacturing units** under the **Health Security and National Security Act, 2025**.
- **Discontinuation of the GST Compensation Cess** from 1 February.
- Rationalisation of **GST slabs for tobacco products**:
    - **Beedis shifted to 18% GST** (from the earlier 28% slab).
    - **Other tobacco products placed in a 40% GST slab**.

The Ministry highlighted that **cigarette affordability has not declined over the past decade**, despite income growth, contrary to global public-health norms that recommend **annual real price increases via higher specific excise duties**.

Relevance

- **GS III (Economy):** Tax policy, GST structure, excise vs cess, fiscal federalism, sin taxes, price elasticity.
- **GS II (Health & Governance):** Public health regulation, non-communicable diseases, Centre–State coordination.

Conceptual Foundations

Indirect Taxation of Tobacco (Pre-GST vs Post-GST)

- **Pre-GST:** Central excise + State VAT + surcharges.
- **Post-GST (2017 onwards):** GST (12/18/28%), supplemented by Compensation Cess; central excise retained only for cigarettes but reduced to minimal levels.

Types of Tobacco Taxes

- **Specific excise duty:** Fixed per unit; considered more effective for public-health objectives as it raises prices uniformly.
- **Ad valorem tax:** Percentage of price; allows down-trading to cheaper brands, diluting deterrence.

GST Compensation Cess

- Introduced to compensate States for GST-related revenue losses.
- Funded partly through levies on sin and luxury goods, including tobacco.

Economic Rationale for Sin Taxes

- Internalise negative externalities such as health expenditure and productivity losses.
- WHO–FCTC recommends regular real-price increases, preferably through specific excise duties.

Price Elasticity of Tobacco Demand

- Overall elasticity is low, but significantly higher among youth and low-income users, making taxation an effective control mechanism.

What Has Changed from 1 February

- Cigarette excise duty restored to a substantive specific levy.
- Pan masala cess enforced under the 2025 legislation.
- GST Compensation Cess discontinued.
- GST rate restructuring: beedis at 18%, other tobacco products at 40%.

Government's Policy Logic

Cigarettes have become progressively more affordable relative to income growth. The revised tax regime seeks to realign prices with international public-health benchmarks advocating periodic excise hikes.

Implications

Public Health:

- Gradual reduction in initiation and consumption, particularly among youth.
- Long-term decline in NCD burden and healthcare costs.

Revenue & Fiscal Federalism:

- Increased Union excise revenues.
- End of compensation cess alters Centre–State fiscal arrangements.

Equity & Behavioural Effects:

- Taxes are regressive in incidence but progressive in health outcomes, benefiting poorer households disproportionately.

Industry & Compliance:

- Potential shift to cheaper or illicit products; requires robust track-and-trace systems.
- Beedi sector's informality poses monitoring challenges.

Analytical Perspectives

- Trade-offs between revenue generation and health objectives.
- Specific vs ad valorem taxation models in global practice.
- Post-cess revenue options for States.

- Beedi sector dilemma: public health vs livelihoods.

Prelims-Ready Pointers

- Excise duty on cigarettes remains outside GST.
- Compensation Cess ends from 1 February.
- Beedis: 18% GST; other tobacco products: 40% GST.
- Specific excise is globally preferred for tobacco control.

Way Forward

- Inflation-indexed specific excise hikes.
- End-to-end tracking to curb illicit trade.
- Differential taxation based on harm.
- Health earmarking of revenues.
- Transition support for workers in tobacco and beedi sectors.

Topic 2: Ancient Marathi Literature Reveals Savannas Are Not Degraded Forests

Why is it in News?

A study published in **People and Nature** demonstrates that the savannas of **western Maharashtra** are **ancient ecosystems**, not degraded forests. Drawing upon medieval Marathi texts, oral traditions, archival material, and ecological indicators, researchers trace open tree–grass landscapes back **at least 750 years**, well before colonial forestry interventions.

The findings dispute the dominant assumption that savannas result from deforestation or human degradation and argue for **distinct conservation strategies** that respect biodiversity as well as cultural heritage.

Relevance

- **GS I:** Biomes, cultural landscapes, human–environment interaction.
- **GS III:** Ecosystem classification, biodiversity policy, grasslands vs forests.

Conceptual Foundations

Savannas Defined
Open-canopy ecosystems characterised by seasonal drought, fire–grazing dynamics, thorny trees, perennial grasses, and drought-adapted species.

Savannas vs Forests

- Savannas: fire- and grazing-maintained, low tree density, grass-dominated.
- Forests: closed canopy, shade-tolerant species, fire-sensitive ecology.

Historical Terminology

- *Vana / jāgala*: wild, open, drier landscapes.
- *Anūpa*: wetter, closed forest systems.
  Colonial-era translation errors conflated vana with dense forest, distorting policy.

Savanna Types in Maharashtra

- Fine-leaf savannas (≤1000 mm rainfall).
- Broadleaf savannas (≥700 mm rainfall).
  Both coexist across the 700–1000 mm rainfall gradient.

Evidence Base

- **Literary & Oral Sources (13th–20th c.):** Pastoral livelihoods, thorny vegetation, drought cycles.
- **Floral Evidence:** 27 savanna indicator species vs 14 forest species.
- **Functional Traits:** Fire tolerance, thick bark, grazing resilience.
- **Independent Corroboration:** Archival photos, revenue records, hunting logs, hero stones, archaeological remains.

Conclusion: Savannas are long-standing ecological systems, not degraded forests.

Why This Matters

- Misclassification leads to inappropriate afforestation, biodiversity loss, and livelihood disruption.
- Savannas embody biocultural landscapes requiring tailored conservation.
- Policy shift needed from plantation-centric models to ecosystem-specific management.

Topic 3: Why Does India Need Climate-Resilient Agriculture?

Why is it in News?

Escalating climate shocks, soil degradation, water stress, and input volatility are undermining India's agricultural productivity and farmer incomes. Policy discussions underscore the urgency of **Climate-Resilient Agriculture (CRA)**, integrating biotechnology, bio-inputs, genome-edited crops, digital tools, and climate advisories.

Despite initiatives like **NICRA** and **NMSA**, adoption gaps persist due to quality issues in bio-inputs, digital divides, and fragmented institutional coordination.

Relevance

- **GS I:** Climate variability and rural livelihoods.
- **GS III:** Food security, biotechnology, sustainable agriculture, climate adaptation.

Core Concept

CRA focuses on **adaptation and risk-proofing**, not just mitigation, aiming to sustain productivity under climatic stress.

Why India Needs CRA

- 51% rainfed area producing ~40% of food.
- Rising climate extremes destabilising yields.
- Soil and groundwater degradation.
- Population pressure on food systems.
- Environmental sustainability concerns.

Current Initiatives

- **NICRA:** Climate-resilient villages, stress-tolerant practices.
- **NMSA:** Rainfed focus, resource conservation.
- **BioE3 Policy:** Biotechnology-led adaptation.
- Expanding agritech and AI advisory ecosystems.

Challenges

- Low smallholder adoption.
- Quality inconsistencies in bio-inputs.
- Slow diffusion of climate-resilient seeds.
- Digital exclusion.
- Fragmented governance.

Way Forward

- Accelerate genome-edited crop deployment.
- Standardise bio-input certification.
- Expand digital inclusion.
- Climate-linked finance and insurance.
- Integrated national CRA roadmap.

Topic 4: Ikkis — The Story of 2nd Lt Arun Khetrapal & the Battle of Basantar

Why is it in News?

A renewed narrative around the **Battle of Basantar (1971)** and **Second Lieutenant Arun Khetrapal**, the youngest recipient of the **Param Vir Chakra**, has emerged alongside the film *Ikkis*.

Relevance

- **GS I:** Post-Independence wars and military leadership.
- **GS III:** Defence strategy and armoured warfare.

Context

The battle occurred in the **Shakargarh Bulge**, a strategic wedge threatening Punjab and Jammu corridors.

Operational Overview

Indian forces crossed the mined Basantar river to establish a bridgehead. Pakistani Patton tanks launched repeated counter-attacks.

2nd Lt Arun Khetrapal, despite his tank being hit, destroyed multiple enemy tanks and refused to withdraw, ultimately sacrificing his life.

Significance

- Secured the western front.
- Protected critical logistics corridors.
- Demonstrated combined-arms doctrine and leadership impact.

Prelims Pointers

- Battle: Basantar, Western Front, Dec 1971.
- Regiment: Poona Horse.
- Award: Param Vir Chakra (youngest awardee).

Topic 5: Amazonian Stingless Bees Become the World's First Insects with Legal Rights

Why is it in News?

A municipal ordinance in **Satipo, Peru**, has granted **legal rights to native Amazonian stingless bees**, marking the first instance of insects being recognised as rights-bearing entities.

Relevance

- **GS III:** Biodiversity, pollinators, environmental governance.

What Makes It Unique

- First legal recognition of insects as rights-holders.
- Integrates Indigenous ecological knowledge with Rights-of-Nature jurisprudence.

Rights Granted

- Right to exist, thrive, and regenerate.
- Right to pollution-free habitat and climate stability.
- Right to legal representation.

Why Protection Was Needed

- Climate stress, deforestation, pesticide exposure, competition from invasive species.

Significance

- Shifts conservation from utilitarian protection to rights-based stewardship.
- Sets a global precedent for species-centric legal frameworks.

Way Forward

- Community-led pollinator conservation.
- Reduced pesticide reliance.
- Rights-based or trustee models for critical species.

6. Mumbai–Ahmedabad Bullet Train Project — Mountain Tunnel Breakthrough

Why in News?
The first mountain tunnel breakthrough of the Mumbai–Ahmedabad High Speed Rail (MAHSR) corridor has been achieved in Palghar district, Maharashtra.
This breakthrough occurred in the 1.5 km-long MT-5 tunnel between Virar and Boisar, the longest of the seven mountain tunnels in the Maharashtra stretch.
The Railway Minister indicated that India's first bullet train is targeted to start operations by 15 August 2027.

Relevance
GS-III | Infrastructure — Transport & Economic Development
GS-II | Governance — Public Investment & Centre–State Coordination

Basics — MAHSR Project

- Route length: 508 km (Mumbai–Ahmedabad).
- Technology: Based on Japan's Shinkansen system.
- Executing agency: NHSRCL.
- Design speed: 320 kmph.
- Expected travel time: ~1 hour 58 minutes end-to-end.

Key Tunnel Facts

- Total tunnel length: 27.4 km.
- 21 km underground, 6.4 km surface tunnels.
- Mountain tunnels: 8 (7 in Maharashtra ~6.05 km, 1 in Gujarat 350 m).
- MT-5: ~1.5 km, longest mountain tunnel in state section; between Virar & Boisar; completed in ~18 months by Drill-and-Blast method.

Significance

- Travel time cut to ~1 hr 58 min vs 6–7 hrs now.
- Links Mumbai–Thane–Palghar–Vapi–Surat–Vadodara–Ahmedabad economic clusters.
- Large employment generation and technology transfer in tunnelling and high-speed systems.

7. Galaxy Frogs in the Western Ghats

Why in News?
A recent study reports that 7 individuals of the Galaxy Frog (Melanobatrachus indicus), among the world's rarest frogs, are now presumed dead due to unregulated photo-tourism in the Kerala Western Ghats.
The study in Herpetology Notes (Dec 2025) documents trampling, log displacement and stress from photography leading to breeding disruption and likely mortality.

Relevance
GS-III | Environment & Biodiversity
GS-III | Conservation Governance

Basics — Galaxy Frog

- Scientific name: Melanobatrachus indicus.
- Family: Micrixalidae.
- Habitat: Under rotten logs in evergreen & shola forests of Kerala Western Ghats.
- Size: ~2–3.5 cm.
- Appearance: Black body with blue speckles like a galaxy/starfield.
- First described: 1878.
- IUCN status: Vulnerable.

Key Study Findings

- Site: Mathikettan Shola National Park; monitoring 2019–2025.
- Seven earlier-recorded individuals not found again despite repeat surveys.
- Logs removed/shifted, vegetation trampled; frogs handled and flashed with strong lights.
- Conclusion: Behavioural disturbance + micro-habitat loss → likely mortality.

Drivers of Threat

- Primary: Photo-tourism disturbance (trampling, log displacement, flash & handling).
- Long-term: Forest conversion, fuelwood extraction, landslides, micro-habitat fragmentation, very restricted range.

Broader Concerns & Way Forward

- Highlights risk from unchecked nature-tourism and lack of ethical photography protocols.
- Calls for permit-controlled access, no-touch/no-flash rules, micro-habitat protection, Species Recovery Plan and citizen-science ethics code.

8. Financial & Cyber Fraud Losses in India

Why in News?
Data from I4C (MHA) and the National Cyber Crime Reporting Portal (NCRP) show Indians lost about ₹52,976 crore to fraud and cheating between 2019–2025.
Losses spiked in 2025, driven by online scams, investment frauds, phishing, impersonation and digital lending scams.
In 2025, Maharashtra had the highest losses, followed by Karnataka, Tamil Nadu, Uttar Pradesh and Telangana.

Coverage of 'Fraud & Cheating'

- Includes investment scams, phishing, OTP frauds, loan app scams, identity theft, mule accounts, dating/job/crypto/e-commerce frauds, banking & card fraud, impersonation/spoofing.
- Reported through NCRP portal & 1930 helpline and Citizen Financial Fraud Reporting & Management System.

Key Data (2019–2025)

- Total loss (6 yrs): ~₹52,976 crore.
- 2025: loss ~₹19,812–19,813 crore; 21,77,524 complaints.
- 2024: loss ₹22,849.49 crore; ~19.18 lakh complaints.

Top States 2025

- Maharashtra: ₹7,432.6 crore, >13 lakh complaints.
- Karnataka: ₹2,413 crore, >21 lakh complaints.
- Tamil Nadu: ₹1,897 crore, >12 lakh complaints.
- Uttar Pradesh: ₹1,443 crore, ~27.5 lakh complaints (very high volume).
- Telangana: ₹1,372 crore, ~9.5 lakh complaints.

Other Important Facts

- Gujarat: ₹1,312.6 crore; Delhi: ₹1,163 crore; West Bengal: ₹1,073.89 crore.
- Several scams linked to Myanmar, Laos, Cambodia hubs.
- Drivers: low digital literacy, rapid fintech use, social engineering, mule accounts, weak coordination.

Institutional Measures & Reforms

- I4C, NCRP-1930, Citizen Financial Fraud Reporting System, RBI security norms, CERT-In advisories, state cyber cells.
- Needed: AI-based scam alerts, cooling-off periods, shared mule-account blacklists, risk warnings, cross-border cooperation, fast-track courts, mass awareness in regional languages.

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9. How AWD helps rice farmers cut methane

Why in News?
Field trials (2024–25) in Telangana, Odisha, Tamil Nadu, Karnataka show Alternate Wetting and Drying (AWD) can reduce methane, save water and earn carbon credits without yield loss.

Key Technical Facts

- Continuous flooding → anaerobic soil → methane-producing microbes.
- AWD: fields are periodically drained and re-flooded, not kept fully submerged.

Trial Highlights

- Site: Warangal district (Telangana); ~30 farmers' fields, kharif & rabi.
- Emissions measured using acrylic chambers + lab gas analysis.
- Results: lower methane, water savings, yields similar to conventional flooding.

Carbon Credits

- Methane reductions converted to CO_2 -equivalent credits.
- Price: $15–25 per tonne CO_2 -eq.
- AWD cuts ~2.5 t CO_2 -eq/ha → ~$37.5/ha (~₹3,300/ha) extra income.
- Buyers: airlines, energy firms, large corporates chasing net-zero.

Scale-Up & Policy

- MITTI Labs: MRV; Good Rice Alliance (Bayer, Shell Energy India, GenZero/Temasek): 12,000+ farmers, 13 States, target ~1.2 lakh t CO_2 -eq mitigation.
- Supports NMSA, India's methane reduction pledges, and water-use efficiency in rice.

Key Challenges

- MRV costs, limited irrigation control, carbon price volatility, need for training & extension.

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10. Sacred Piprahwa Relics

Why in News?
The Ministry of Culture is holding an international exposition "The Light and the Lotus: Relics of the Awakened One" at Rai Pithora Cultural Complex, New Delhi.
It celebrates the reunion of the Sacred Piprahwa Gem Relics of Buddha, repatriated in July 2025 after 127 years, with relics excavated at Piprahwa in 1898 and 1971–75.

Basics — Piprahwa Relics

- Location: Piprahwa near Siddharthnagar (UP), linked to ancient Kapilavastu, capital of the Shakya clan.
- 1898 excavation by William Claxton Peppé: discovery of relic casket in a monolithic stone coffer inside a stupa.

- Contents: Buddha's relics, gem relics, jewelled offerings, reliquaries and ritual objects.
- Distribution: portions to King of Siam (Thailand), Peppé family in England, and Indian Museum, Kolkata.

Significance of 2026 Exposition

- Largest-ever assemblage of Piprahwa-related Buddha relics since 1898.
- Over 80 cultural objects (6th century BCE–present): sculptures, manuscripts, thangkas, reliquaries, ritual artefacts.

Key Displays

- 1898 Kapilavastu–Piprahwa relics.
- 1970s (1972–75) excavation treasures.
- Indian Museum, Kolkata reliquaries & jewelled treasures.
- Repatriated Peppé family gem relics (2025).
- The original monolithic stone coffer.

Repatriation Context

- 127 years after dispersal, Peppé relics returned in July 2025.
- Achieved via public–private partnership, stopping a Sotheby's Hong Kong auction, with support from global Buddhist communities.
- Part of heritage diplomacy under which over 600 (incl. 642) antiquities have been repatriated to India, with Piprahwa seen as a landmark cultural restitution success.

05th January 2026: Daily MCQs

Q1. With reference to tobacco taxation in India, consider the following statements:

1. Specific excise duties on tobacco are considered more effective for public health than ad valorem taxes.
2. The GST Compensation Cess on tobacco products is a permanent feature of India's GST framework.
3. Cigarette excise duty continues to be levied by the Union Government outside the GST mechanism.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation:

- Specific excise raises prices uniformly → stronger deterrence (✓).
- Compensation Cess was temporary and has ended (✗).
- Excise on cigarettes continues outside GST (✓).

Q2. Consider the following pairs:

Ecosystem	Correct Description
Savanna	Fire- and grazing-maintained open canopy ecosystem
Closed Forest	Dominated by fire-tolerant, grass-dependent species
Grassland	Tree-dominated, shade-tolerant ecology

Which of the pairs given above is/are correctly matched?

(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) None

Answer: (a)

Explanation:

- Savannas are open, fire–grazing maintained (✓).
- Closed forests are fire-sensitive, not fire-tolerant (✗).
- Grasslands are not tree-dominated (✗).

Q3. With reference to Climate-Resilient Agriculture (CRA) in India, consider the following statements:

1. CRA focuses primarily on climate-change mitigation rather than adaptation.
2. Genome-edited crops and bio-inputs are integral components of CRA strategies.
3. NICRA is implemented by the Indian Council of Agricultural Research.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation:

- CRA is adaptation-focused, not mitigation-only (✗).

- Genome-edited crops and bio-inputs are core tools (✓).
- NICRA is an ICAR initiative (✓).

Q4. The Battle of Basantar (1971) is best remembered for which of the following?

1. It took place in the Shakargarh Bulge on the western front.
2. It involved amphibious operations by the Indian Navy.
3. It was a decisive armoured engagement against Pakistani Patton tanks.
4. It led to India's first Param Vir Chakra being awarded post-Independence.

Select the correct answer using the code below:

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

Answer: (a)

Explanation:

- Location: Shakargarh Bulge (✓).
- Naval amphibious ops were not involved (✗).
- Major tank battle against Pattons (✓).
- PVC was not India's first, only youngest recipient (✗).

Q5. Which of the following best explains the concept of "Rights of Nature"?

(a) Assigning monetary value to ecosystem services
(b) Granting legal personhood to natural entities independent of human utility
(c) Declaring all protected areas as no-development zones
(d) Recognising biodiversity only through statutory conservation laws

Answer: (b)

Explanation:
Rights of Nature treats ecosystems or species as **legal rights-holders**, not merely resources.

Q6. With reference to Amazonian stingless bees, consider the following statements:

1. They are non-stinging, social insects that act as keystone pollinators.
2. They were declared endangered under CITES Appendix I.
3. A municipal ordinance has recognised them as legal rights-bearing entities.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation:

- Stingless bees are keystone pollinators (✓).
- No CITES Appendix I listing exists (✗).
- Legal rights granted via municipal ordinance (✓).

Q7. Which of the following correctly explains why rare-earth elements are considered "technologically scarce" rather than "geologically rare"?

(a) They exist only in deep-sea deposits
(b) They are radioactive and difficult to mine
(c) Their chemical similarity makes separation complex and costly
(d) Their demand is limited to defence applications

Answer: (c)

Explanation:
REEs occur widely but are difficult to **separate and refine** due to near-identical chemical behaviour.

Q8. Consider the following statements about savanna ecosystems in India:

1. They are always a result of anthropogenic forest degradation.
2. They support distinct biodiversity adapted to fire and grazing.
3. Colonial-era land classification often misidentified them as wastelands.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation:

- Savannas can be ancient ecosystems (✗ for 1).
- Fire–grazing adapted biodiversity exists (✓).

- Colonial misclassification is documented (✓).

Q9. Why is specific excise duty preferred over ad valorem tax in tobacco control?

(a) It increases government revenue during inflation
(b) It raises prices uniformly across brands, limiting down-trading
(c) It reduces administrative burden on States
(d) It aligns tobacco pricing with international trade norms

Answer: (b)

Explanation:
Specific excise prevents consumers from shifting to cheaper brands, making it more effective for health outcomes.

Q10. Which one of the following correctly pairs an Indian initiative with its objective?

(a) NICRA — Climate change mitigation in urban areas
(b) NMSA — Export-oriented agricultural growth
(c) BioE3 Policy — Biotechnology-led climate adaptation
(d) PMFBY — Carbon-neutral farming

Answer: (c)

Explanation:
BioE3 emphasises **biotechnology-driven climate resilience and adaptation**.