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**VIDHVATH IAS KAS ACADEMY**  
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**STUDY CENTRE**

# DAILY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

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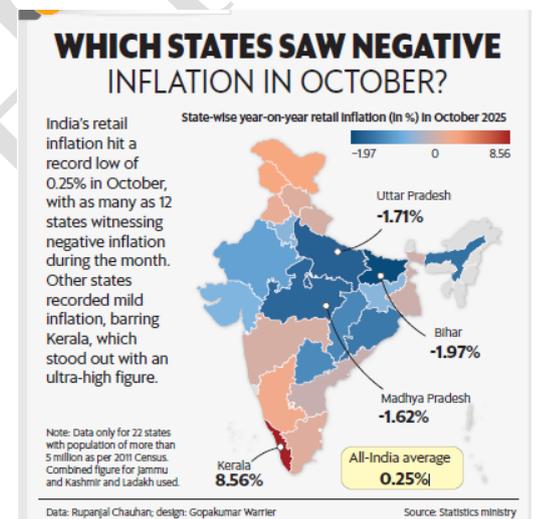


## 1. States with Negative Inflation in October – Key Summary

- **12 Indian states recorded *negative retail inflation* in October 2024**, contributing to India's overall record-low inflation of **0.25%**. States like **Bihar (-1.97%)**, **Uttar Pradesh (-1.71%)**, and **Madhya Pradesh (-1.62%)** saw the sharpest decline.
- **Deflation (negative inflation)** reflects a fall in general price levels, often driven by **reduced food prices**, excess supply, or subdued rural demand. It can signal short-term relief but also economic concerns such as falling incomes or weak consumption.
- **Kerala was a major outlier**, recording extremely high inflation at **8.56%**, indicating localised pressures—mainly **food inflation, supply bottlenecks, and higher service-sector costs**.
- **Inflation trends varied sharply across states** despite uniform monetary policy, reflecting **state-level supply chains, agricultural output differences, regional consumption patterns, and local taxation policies**.
- **Policy implications:** Negative inflation in populous states can influence **RBI's monetary stance**, fiscal transfers, and targeted welfare schemes, while high-inflation states require state-specific supply-side interventions.

### Additional Key Points (Important for UPSC)

- **Inflation:** A sustained rise in general price levels measured in India by CPI (Consumer Price Index).
- **Deflation:** A sustained decrease in general prices; can lead to reduced production, layoffs, and economic slowdown.
- **Disinflation:** A fall in the *rate* of inflation, not below zero.
- **CPI as a constitutional/legal metric:**
  - CPI inflation is the basis for **RBI's inflation-targeting mandate** under the amended **RBI Act, 1934 (2016)**.
  - **Target:**  $4\% \pm 2\%$ , set by the **Monetary Policy Committee (MPC)** under **Section 45ZB**.



### Key Constitutional & Legal Provisions

- **Finance Commission (Art. 280):** Inflation/deflation patterns influence state revenue needs and devolution.
- **GST Framework (Art. 246A, 269A):** State-level tax rate variations and compliance impact inflation differentially.
- **Essential Commodities Act, 1955:** Used to curb inflation by regulating supply of essential goods.
- **MSP, FRP frameworks:** Influence food inflation—particularly cereals, pulses, sugarcane.

### Conclusion

The occurrence of **negative inflation in twelve states** amidst an overall record-low national inflation highlights the **divergence in state-level economic conditions**, particularly in agriculture-driven states. While it offers temporary relief to consumers, persistent deflation may indicate deeper structural issues such as **weak demand and rural distress**. The contrasting spike in Kerala underscores the need for **targeted, state-specific inflation management** rather than a one-size-fits-all approach.



## UPSC Relevance

- Relevant for **GS Paper 3**: Indian Economy—Inflation, Price Stability, Monetary Policy.
- Useful for **Prelims**: CPI components, inflation trends, inflation-targeting framework, MPC.
- Important for **Essay & Interview**: State-wise disparities, food inflation dynamics, regional economic variation, RBI–State coordination.

## 2. India Seeking New Foreign Buyers to Offset US Tariffs – Key Summary

- **India has initiated consultations with eight countries** — Ghana, Rwanda, Uganda, Togo, Bahrain, Bhutan, Nepal, and Sri Lanka — to counter the impact of the **50% US tariff imposed from 27 August**, which has hit **MSMEs (45% of India’s exports)** the hardest.
- **Pilot project launched by the MSME and Commerce Ministries** aims to **diversify export destinations** through buyer–seller meets, embassy-led engagements, and logistics facilitation, redirecting goods originally meant for the US toward **Africa and South Asia**.
- **India’s export footprint with these nations is significant**, with **\$18.4 billion** exported in FY25 to the eight countries, forming **4.2% of total exports**. Total exports to African nations stood at **\$35.75 billion (FY25)** and to South Asian countries **\$27.19 billion (FY25)**.
- **African nations like Ghana and Togo are emerging as strategic export hubs**, especially for **textiles, pharmaceuticals, engineering goods, and processed foods**, providing alternative demand for exporters facing order cancellations due to US tariff hikes.
- **Two buyer–seller meets under the RAMP scheme** (Pune and Vizag) have already facilitated **MoUs for sampling worth \$1.47 million**, with potential to yield **\$116.77 million in export orders** for MSMEs from non-traditional markets.
- This strategy forms part of India’s broader **export resilience framework**, aimed at reducing dependence on the US (still India’s largest trading partner with **\$86.5 billion exports in FY25**) and building **long-term access to emerging markets**.

### EXPORT DESTINATIONS

India is scouting for newer markets for its MSME sector

#### • FOR ENGINEERING GOODS

Key markets: US, UAE, Saudi Arabia, Germany, and Italy.

Vincent, Mongolia, El Salvador, Turkmenistan, Honduras, Bahrain, Somalia, Puerto Rico, Vietnam, and Sweden.

#### • FOR PHARMACEUTICALS

Key markets: Montenegro, South Sudan, Chad, Comoros, Brunei, Latvia, Ireland, Sweden, Haiti, and Ethiopia.

#### • FOR AGRICULTURAL AND PROCESSED FOOD GOODS

Key markets: Nigeria, Switzerland, Lithuania, Slovenia, Mexico, Sweden, Portugal, Cameroon, Djibouti, Latvia, Egypt, Senegal, Canada, Argentina, and Brazil.

#### • FOR ELECTRONICS

Key markets: São Tomé, Montenegro, Cayman Islands, St.

## Additional Key Points (Important for UPSC)

- **US Tariffs (50%)**: Affect sectors such as textiles, leather goods, engineering products — impacting MSMEs most severely.
- **Export Diversification**: Reduces vulnerability to geopolitical shocks and tariff barriers; promotes stable foreign exchange earnings.
- **RAMP Scheme**: Raising and Accelerating MSME Performance — boosts competitiveness, market access, and export capability of small firms.
- **Role of Indian Missions Abroad**: Facilitating certification, market entry, quality compliance, and business connects.



## Key Keyword Definitions

- **Tariff:** A tax imposed on imported goods; used for protectionism or geopolitical leverage.
- **Market Diversification:** Strategy of spreading exports across multiple countries to reduce risk.
- **Non-Traditional Markets:** Countries that are not major historic trading partners but have emerging import potential.
- **MSMEs:** Micro, Small, and Medium Enterprises—major drivers of employment and exports.

## Constitutional & Legal Provisions Relevant

- **Foreign Trade (Development & Regulation) Act, 1992:** Empowers government to regulate exports/imports, issue trade policy.
- **Customs Act, 1962:** Governs tariffs, duties, and export–import procedures.
- **Article 246 & Seventh Schedule:** Union List includes foreign trade and commerce — making it a Central subject.
- **Article 253:** Parliament can make laws for implementing international agreements/treaties affecting trade.
- **Bilateral Investment Promotion & Trade Agreements:** Enable easier access to emerging markets.

## Conclusion

India's move to engage emerging African and South Asian markets represents a **strategic recalibration of export policy** in response to the disruptive US tariff regime. By strengthening MSME participation, expanding buyer networks, and forming new trade channels, India aims to ensure **export continuity, market resilience, and reduced dependence on any single major trading partner**. The strategy also aligns with long-term goals of **Atmanirbhar Bharat** and global value chain integration.

## UPSC Relevance

- **GS Paper 2:** India's foreign trade policy, bilateral and regional relations.
- **GS Paper 3:** External sector, MSMEs, trade diversification, tariff impacts, economic resilience.
- **Prelims:** Trade data, FTDR Act, RAMP scheme, export destinations, African/South Asian trade.
- **Essay/Interview:** Global trade disruptions, India's export strategy, MSME challenges, trade resilience.

## 3. Anti-Dumping Duty on Vietnamese Steel – Key Summary

- **India has imposed a five-year anti-dumping duty of \$121.5 per tonne** on hot-rolled flat products (alloy and non-alloy steel) imported from Vietnam, based on DGTR's recommendation, to protect domestic steelmakers from cheap inflows.
- **Actual market impact is expected to be limited**, as imports of hot-rolled coils (HRC) from Vietnam were already negligible in the first half of FY26; however, importers have increasingly shifted to **semi-finished steel (billets and slabs)** that attract **zero duty**, serving as an indirect route for cheaper imports.



- **Semi-finished steel imports surged sharply**, rising from **0.17 mt in FY25 to 0.49 mt in H1 FY26**, while India imported **\$242 million worth of semi-finished products from Vietnam** between April and September—an **887% YoY increase**, reflecting importers' circumvention of tariff barriers.
- Industry leaders argue that the measure is **insufficient**, as the duty applies only to **one Vietnamese company (Hoa Phat)** and **one product category (HRC)**, leaving loopholes for other firms and product types, especially given India's vulnerability to cheap imports and domestic oversupply.
- **Protectionist measures abroad (25–50%) outpace India's tariff levels (<15%)**, prompting domestic producers to demand stronger trade safeguards to stabilise prices and prevent dumping through semi-finished product routes.
- Vietnamese HRC imports—which once formed **11% of India's HRC inflows**—have already decreased from **0.62 mt (FY24) to 0.45 mt (FY25)** primarily due to BIS certification expiry rather than tariff actions.



#### Additional Key Points (Important for UPSC)

- **DGTR (Directorate General of Trade Remedies)** investigates dumping, subsidies, and safeguard breaches.
- **Dumping** occurs when a country exports goods at prices lower than domestic market value, harming local industries.
- **Hot-Rolled Coils (HRC)**: Essential steel input used in automobiles, construction, and engineering sectors.
- **Circumvention Routes**: Switching to semi-finished imports to bypass tariffs—common challenge in global trade protection.

#### Key Definitions

- **Anti-Dumping Duty**: A tariff imposed to counteract dumping and protect domestic industries from unfair pricing.
- **Semi-Finished Steel**: Partially processed steel (billets, slabs) used as input for finished products; often exempt from duties.
- **Protectionism**: Policy of restricting imports to protect domestic industries through tariffs or quotas.

#### Constitutional & Legal Provisions Relevant

- **Customs Tariff Act, 1975 (Section 9A)**: Legal basis for imposing anti-dumping duties in India.
- **Foreign Trade (Development & Regulation) Act, 1992**: Governs trade policy and regulation of imports/exports.
- **Article 246 & Union List (Entry 41)**: Foreign trade and commerce are under exclusive central jurisdiction.
- **WTO Anti-Dumping Agreement**: India must ensure duties comply with global rules on fair investigation and injury determination.

#### Conclusion

The anti-dumping duty on Vietnamese steel, while symbolically important, may offer **limited real protection** due to rising semi-finished steel imports that exploit duty gaps. With global markets turning



increasingly protectionist and domestic oversupply depressing prices, the Indian steel industry seeks **broader and stricter trade defence measures**. Policy refinement is essential to prevent circumvention and ensure domestic price stability and industrial competitiveness.

### UPSC Relevance

- **GS Paper 3:** External sector, trade remedies, protectionism, steel sector dynamics.
- **Prelims:** DGTR, anti-dumping duty (legal basis), Customs Tariff Act, dumping definition.
- **GS Paper 2:** WTO rules, trade policy formulation, Centre–industry coordination.
- **Essay/Interview:** Global trade wars, India’s industrial protection strategies, steel sector vulnerabilities.

### 4. Draft Seeds Bill 2025 – Key Summary

- **The Ministry of Agriculture has released the Draft Seeds Bill 2025** for public comments, aiming to modernise and overhaul India’s seed regulatory system by replacing the **Seeds Act, 1966** and the **Seeds (Control) Order, 1983**.
- The Bill seeks to establish a **comprehensive and updated legal framework** for regulating seed quality, certification, labelling, and traceability, incorporating modern technologies, new breeding techniques, and evolving agricultural practices.
- **Key focus areas** include strengthening **seed quality assurance**, mandating **registration of all seed varieties**, enhancing **farmer protection mechanisms**, and improving **accountability of seed producers and distributors**.
- The Bill aims to address challenges such as **fake seeds, low germination rates, unregulated private seed markets, and lack of transparency**, which significantly affect farm productivity and farmer incomes.
- It also seeks to promote **innovation in plant breeding**, encourage **private sector participation**, and ensure that farmers have access to high-quality seeds suited to local agro-climatic conditions.
- With the seed sector becoming more market-driven and technologically advanced, the new Bill aims to ensure a **robust regulatory architecture** to support India’s food security and agricultural competitiveness.



### Additional Key Points (Important for UPSC)

- **Seed Certification & Registration:** Expected to introduce updated national standards aligned with international norms.
- **Farmers’ Rights:** Likely to ensure farmers’ access to quality seeds and compensation mechanisms for seed failure.
- **Role of Private Sector:** Increased private seed production necessitates stronger regulation and monitoring.
- **Technology Integration:** Use of digital platforms for seed traceability, quality testing, and market information.



## Key Definitions

- **Seed Certification:** Process ensuring seeds meet prescribed standards of genetic purity, physical purity, and germination.
- **Germination Rate:** Percentage of seeds that successfully sprout under ideal conditions—key indicator of seed quality.
- **Seed Variety Registration:** Legal requirement mandating evaluation and approval before commercial sale.

## Constitutional & Legal Provisions Relevant

- **Article 246 & Seventh Schedule (List III):** Agriculture is a State subject, but seeds and plant materials fall under coordinated regulation between Centre and States.
- **Essential Commodities Act, 1955** (historically used): Empowered the government to regulate essential inputs, including seeds.
- **Protection of Plant Varieties and Farmers' Rights Act (PPV&FRA), 2001:** Protects breeders' rights while safeguarding farmers' rights to save, use, exchange, and sell farm-saved seeds (non-branded).
- **Seed Control Order, 1983:** Currently governs licensing of seed dealers (to be replaced by the new Bill).

## Conclusion

The Draft Seeds Bill 2025 represents a **major reform** aimed at modernising India's seed governance with stronger quality controls, improved accountability, and enhanced farmer protection. By replacing outdated legislation, it aligns India's seed system with technological advancements and global standards, ensuring long-term agricultural sustainability and higher productivity.

## UPSC Relevance

- **GS Paper 3:** Agriculture, food security, agri-regulation, seed quality, PPV&FRA.
- **Prelims:** Seeds Act 1966, Seed Control Order 1983, PPV&FR Act, definitions of certification and germination.
- **GS Paper 2:** Public consultation process, legislative reforms, Centre–State coordination.
- **Essay/Interview:** Seed quality, agricultural reforms, technological regulation in farming.

## 5. Emerging Nations Can Realign Trade to Weather US Tariffs

- A study by **Verisk Maplecroft** finds that major emerging economies—**China, Brazil, India**—possess sufficient resilience to withstand **US tariff pressures** without significant economic disruption, challenging assumptions about the effectiveness of US trade weaponization.
- The analysis examined **20 major emerging markets** based on parameters such as **external debt, export dependence on the US, domestic market strength, and economic diversification**, concluding that most have the capacity to **re-route exports and shift supply chains**.
- Countries with **large domestic markets and diversified export baskets** (such as India) are better positioned to absorb tariff shocks by **redirecting trade flows** toward Africa, Latin America, and intra-Asian networks.



- The report indicates that the **global trading system has become more multipolar**, reducing dependence on US markets and weakening the impact of unilateral tariff actions.
- Vulnerabilities persist for countries with **high US-market concentration**, weaker currencies, or high external debt, but broader resilience suggests that **tariffs may not generate the intended leverage** in geopolitical or economic negotiations.
- For India, export realignment strategies—including **new trade partnerships, tariff-neutral destinations, and supply-chain diversification**—enhance its ability to manage such tariff shocks effectively.

### Additional Key Points

- **Trade Diversification Strategy:** Reduces risk from external shocks and supports long-term economic stability.
- **Multipolar Trade Order:** Rise of South–South trade, regional value chains, and alternative markets beyond traditional Western economies.
- **Economic Resilience Indicators:** Low external debt, strong forex reserves, and robust domestic demand increase ability to absorb tariff stress.
- **US Trade Tools:** Tariffs under Section 301 and national security grounds have historically targeted China and other exporters.



### Key Definitions

- **Tariff Shock:** A sudden increase in import duties by a major trading partner, affecting export competitiveness.
- **Export Dependence:** Degree to which a country's export revenues rely on one or few markets—higher dependence increases vulnerability.
- **Trade Realignment:** Redirection of export flows to new or alternative markets to avoid tariff-related losses.

### Constitutional & Legal Provisions Relevant

- **Foreign Trade (Development & Regulation) Act, 1992:** Empowers India to review, modify, and diversify trade policies in response to global changes.
- **Customs Act, 1962 & Customs Tariff Act, 1975:** Provide mechanisms for imposing or responding to tariff actions.
- **Article 246 (Union List: Entry 41):** Foreign trade is exclusively under the central government's jurisdiction.
- **WTO Framework:** Allows members to challenge unjustified tariffs and adopt countermeasures under multilateral rules.

### Conclusion

The study highlights a crucial shift: **emerging economies are no longer as vulnerable to US tariff pressures** as they were previously, thanks to diversified export markets, stronger domestic consumption, and



strategic trade realignment. For countries like India, this underscores the importance of **multipolar trade linkages and flexible export strategies** in an era of rising protectionism and geopolitical tensions.

### UPSC Relevance

- **GS Paper 2:** India's foreign trade relations, global economic governance, multipolar order.
- **GS Paper 3:** External sector, trade diversification, tariff impacts, resilience of emerging markets.
- **Prelims:** Basics of tariffs, WTO, FTDR Act, trade indicators.
- **Essay/Interview:** Global trade wars, US protectionism, emerging economy resilience, shifting global economic power.

## 6. India's CO<sub>2</sub> Emissions See Slower Rise in 2025

- The **Global Carbon Budget 2025 report**, released at **COP30 in Brazil**, projects that **India's CO<sub>2</sub> emissions will rise by only 1.4% in 2025**, indicating a **slower growth rate** compared to previous years driven by rising clean energy adoption.
- The moderation in emissions growth reflects **expansion of renewable energy capacity**, improved energy efficiency, and a gradual shift in industry and power sectors away from coal dependence.
- India remains the **third-largest CO<sub>2</sub> emitter**, but its **per-capita emissions remain far below the global average**, highlighting the development-equity debate in climate negotiations.
- The slower rise aligns with India's commitments under **NDCs (Nationally Determined Contributions)**—especially targets related to **non-fossil energy capacity, emission intensity reduction, and carbon sink creation**.
- Continued economic growth and infrastructure expansion still exert upward pressure on emissions, but **policy measures, green investments, and technology adoption** are increasingly moderating the trajectory.
- The report reinforces India's message at global forums that **emissions growth is decoupling from GDP growth**, strengthening its position in climate diplomacy.

• **Annual growth in CO<sub>2</sub> emissions (in percentage)**

	2025 vs 2024	2024 vs 2023	2015-2024*	2005-2014*
India	1.4	4	3.6	6.4
China	0.4	0.7	2.5	6.7
United States	1.9	-0.6	-1.2	-1.4
World	1.1	1.1	0.8	2.1

\* AVERAGE GROWTH SOURCE: GLOBAL CARBON PROJECT DATA

### Additional Key Points (Important for UPSC)

- **Major sources of India's emissions:** Power generation (coal), industry (steel/cement), transport, and agriculture (methane).
- **Renewable Energy Progress:** India is rapidly advancing towards its **500 GW non-fossil capacity by 2030** target.
- **Energy Transition Challenges:** Grid integration, storage capacity, financing of green technologies remain major hurdles.

### Key Definitions

- **CO<sub>2</sub> Emissions:** Release of carbon dioxide—primarily from fossil fuel combustion, industrial processes, and land-use changes.



- **Global Carbon Budget:** Annual scientific assessment of global carbon emissions, sinks, and pathways to limit warming.
- **Emission Intensity:** CO<sub>2</sub> emissions per unit of GDP—key metric for India's climate commitments.

### Constitutional & Legal Provisions Relevant

- **Article 48A:** Directive Principle directing the State to protect the environment.
- **Article 51A(g):** Fundamental duty of citizens to safeguard the natural environment.
- **Environmental Protection Act, 1986:** Umbrella legislation enabling government to regulate emissions and pollution.
- **National Action Plan on Climate Change (NAPCC), 2008:** Provides missions on solar, energy efficiency, sustainable habitat, and green India.
- **Energy Conservation Act, 2001:** Mandates efficiency norms; strengthened via 2022 amendment to promote carbon markets.

### Conclusion

India's projected **1.4% rise in CO<sub>2</sub> emissions in 2025** marks a significant shift toward **slower emission growth**, showing the early results of renewable expansion and policy reforms. While the country continues to pursue development goals, the moderation highlights a **balanced transition pathway** consistent with climate commitments and global climate justice principles.

### UPSC Relevance

- **GS Paper 3:** Climate change, emissions trends, environmental policies, NDCs, COP mechanisms.
- **GS Paper 2:** International climate negotiations, India's stance at COP, global environmental governance.
- **Prelims:** NDC targets, Global Carbon Budget, renewable energy milestones, environmental Acts.
- **Essay/Interview:** Energy transition, climate justice, sustainable development pathways for emerging economies.

## 7. India–Nepal Rail Connectivity Pact – Key Summary

- **India and Nepal signed an amendment to the Protocol of the India–Nepal Treaty of Transit**, aimed at enhancing **rail-based connectivity** for smoother trade access, especially enabling Nepal to reach **Indian ports and global markets** more efficiently.
- The agreement expands **existing transit routes**, adds new rail corridors, and improves logistics flexibility—reducing transportation time, cost, and dependence on road routes.
- The pact strengthens India's role as **Nepal's primary trade and transit partner**, aligning with regional connectivity initiatives and improving Nepal's access to ports such as **Haldia, Visakhapatnam, and potentially other Indian rail-linked ports**.
- The strengthened railway network will support **trade diversification, supply-chain resilience**, and greater bilateral economic integration, especially in sectors like agriculture, manufactured goods, and energy.





- The move aligns with India's **Neighbourhood First** and **Act East** policies, while supporting Nepal's efforts to modernize trade infrastructure, integrate with global value chains, and reduce its landlocked disadvantage.
- The pact also symbolises growing cooperation on **infrastructure, energy, cross-border movement of goods**, and long-term economic interdependence between the two countries.

#### Additional Key Points (Important for UPSC)

- **India–Nepal Treaty of Transit (1960, revised multiple times)** guarantees Nepal free and unrestricted transit through Indian territory for foreign trade.
- Rail connectivity supplements existing **Integrated Check Posts (ICPs), cross-border pipelines, and transmission lines** as part of expanding bilateral connectivity.
- Enhanced rail routes will reduce congestion at border points like **Birgunj–Raxaul** and **Biratnagar–Jogbani**.

#### Key Definitions

- **Transit Treaty:** Agreement allowing a landlocked country free movement of goods through a neighboring country to access global markets.
- **Rail Connectivity:** Infrastructure integration enabling cross-border freight movement through rail corridors.
- **Landlocked Country:** A nation with no direct access to the sea, relying heavily on transit arrangements for international trade.

#### Constitutional & Legal Provisions Relevant (India)

- **Article 253:** Parliament can make laws for implementing treaties and international agreements.
- **Article 246 & Union List (Entry 41):** Foreign trade and commerce fall exclusively under the Union government.
- **Customs Act, 1962:** Governs international cargo movement at transit points.
- **Bilateral Trade & Transit Agreements:** Legally bind India and Nepal to maintain uninterrupted transit facilities.

#### Conclusion

The India–Nepal rail connectivity pact marks a **significant milestone in regional economic integration**, enabling faster, cheaper, and more secure trade movement. It strengthens bilateral ties, supports Nepal's developmental needs, and enhances India's strategic influence in South Asia through cooperative connectivity frameworks.

#### UPSC Relevance

- **GS Paper 2:** India's neighbourhood policy, bilateral treaties, regional cooperation.
- **GS Paper 3:** Infrastructure, logistics efficiency, international trade.
- **Prelims:** Treaty of Transit, India–Nepal border points, ICPs, constitutional provisions.
- **Essay/Interview:** Connectivity as a strategic tool, India–Nepal relations, landlocked country challenges.



## 8. Global Nuclear Order Under Strain – Key Summary

- Despite major achievements — **no nuclear weapon use since 1945**, stockpiles reducing from **65,000 (1970s) to <12,500 today**, and the number of nuclear-armed states remaining at **nine** — the **global nuclear order is weakening**, mainly due to renewed great-power rivalry and U.S. policy shifts.
- A major shock came with **U.S. President Donald Trump’s announcement (Oct 2025)** instructing the “Department of War” to resume *nuclear testing*, signalling a possible end to the decades-long global moratorium. This has raised fears of a renewed **nuclear arms race** involving the U.S., Russia, China, India, and Pakistan.
- **Russia and China** have recently tested advanced nuclear systems (Burevestnik cruise missile, Poseidon underwater torpedo, hypersonic glide vehicles). The U.S. is modernising its arsenal with **low-yield warheads** and dual-use delivery systems. However, all three have refrained from **explosive nuclear testing** since the early 1990s.
- The **Comprehensive Test Ban Treaty (CTBT)**, though signed by 187 states, has **never entered into force** because key required states (U.S., China, India, Pakistan, North Korea, Israel, Egypt, Iran) have not ratified or signed it. Russia even withdrew its ratification in 2023. A resumption of explosive testing would effectively **kill the CTBT norm**.
- The sole remaining U.S.–Russia arms-control pact, **New START**, limiting deployed strategic warheads to 1,550 each, will **expire in February 2026** with no negotiations underway. Meanwhile, China’s arsenal is expanding rapidly (expected to **cross 1,000 warheads by 2030**).
- If the U.S. resumes explosive tests, **China, Russia, India, and Pakistan are likely to follow**, potentially enabling nuclear-wannabe states and eroding the **NPT-based non-proliferation system**, raising risks of miscalculation and escalation.



### Additional Key Points (Important for UPSC)

- **NPT (1968)** allows only five nuclear weapon states; India, Pakistan, Israel, North Korea are outside this regime.
- **Nuclear Taboo**: Unwritten international norm against the use of nuclear weapons since 1945.
- **Stockpile Stewardship Programme (U.S.)** maintains and modernises nuclear warheads without explosive tests.
- **Dual-use Systems** (hypersonics, cruise missiles, unmanned platforms) increase ambiguity and escalation risks.

### Key Definitions

- **Nuclear Explosive Test**: A test involving a self-sustaining nuclear chain reaction producing explosive yield.
- **Zero-Yield Test**: A non-explosive test that does not trigger a self-sustaining nuclear reaction (e.g., hydronuclear experiments).
- **Arms Control**: Agreements that limit the development, deployment, or testing of weapons to reduce conflict risk.



## Constitutional & Legal Provisions Relevant (India)

- **Parliamentary Powers (Art. 246, 253):** Centre's exclusive power over defence, external affairs, disarmament treaties, and war.
- **Atomic Energy Act, 1962:** Governs nuclear research, weapons development, and regulation in India.
- **India's Nuclear Doctrine (2003):** No-First-Use, credible minimum deterrence, massive retaliation.
- **India and CTBT:** India has neither signed nor ratified the CTBT, citing its discriminatory nature and inadequate definition of permissible tests.

## Conclusion

The global nuclear order is entering a **dangerous phase**, marked by the collapse of arms-control agreements, rapid technological innovations, geopolitical fragmentation, and the potential revival of explosive testing. If major powers abandon restraint, the consequences will reverberate globally — undermining non-proliferation norms, accelerating arms races, and eroding the nuclear taboo that has held for 80 years. A new 21st-century nuclear order must prioritize **risk reduction, transparency, and preservation of the norm against nuclear use**.

## UPSC Relevance

- **GS Paper 2:** International security, nuclear treaties (NPT, CTBT), global governance, geopolitics.
- **GS Paper 3:** Strategic technologies, defence modernisation, India's nuclear doctrine, global security risks.
- **Prelims:** CTBT, NPT, New START, nuclear arms race, nuclear-armed states.
- **Essay/Interview:** Nuclear ethics, geopolitics of deterrence, breakdown of arms-control architecture, future of global security.

## 9. Corporate Bonds Seen as Safer Than Government Debt

- In the **\$150 trillion global bond market**, investors increasingly consider the bonds of top global corporations (e.g., Microsoft, Airbus, L'Oréal, Siemens) as **safer investments** than the sovereign bonds of their home governments due to stronger corporate finances and deteriorating public finances.
- Since the pandemic, many large companies have **cut debt, strengthened balance sheets, maintained lean budgets**, and improved credit ratings, while **governments in G7 countries** continue high deficit spending, pushing **debt-to-GDP ratios upward**.
- Investors now demand **lower yields for high-grade corporate bonds** than for sovereign bonds of countries like the U.S., France, and Germany — reflecting concerns over **fiscal slippage, populist politics, weak governance**, and reduced perception of sovereign credit safety.
- Government debt issuance has surged since 2020 due to COVID-era stimulus, while corporate debt supply has grown more modestly. Credit downgrades for the **U.S. and France**, alongside **record corporate upgrades**, illustrate this shifting risk landscape.





- Strong corporate fundamentals—such as **declining net-debt-to-EBITDA ratios** (from 2.53 to 1.74 for ~2,500 MSCI ACWI companies)—contrast sharply with sovereigns, where the **IMF projects global public debt to rise to 137% of GDP by 2030**.
- Massive demand for corporate debt is evident from recent mega-issuances: **Meta's \$30 billion offer attracting \$125 billion in bids** and **Alphabet's \$25 billion offer receiving \$90 billion**, with tighter spreads than comparable U.S. corporates.

#### Additional Key Points (Important for UPSC)

- Corporate debt is increasingly viewed as stable due to **predictable earnings, diversified operations, and stronger governance standards** compared to political volatility in sovereign fiscal policy.
- Sovereign bond risk grows when governments face **persistent high deficits, political fragmentation, weak rule of law**, or lack fiscal discipline.
- Investors still acknowledge that **sovereign bonds offer higher liquidity and legal protections**, making them essential during crises.

#### Key Definitions

- **Bond Yield:** The return investors receive; lower yield indicates higher perceived safety.
- **Sovereign Debt:** Borrowing by national governments, traditionally considered risk-free in developed markets.
- **Corporate Bonds:** Debt issued by companies; investment-grade bonds are considered relatively safe.
- **Debt-to-GDP Ratio:** Measures a country's capacity to repay debt; rising ratios signal fiscal pressure.
- **Net Debt-to-EBITDA:** Corporate leverage metric indicating ability to repay debt from earnings.

#### Constitutional & Legal Provisions Relevant (India)

- **FRBM Act, 2003:** Aims to ensure fiscal discipline and sustainable borrowing by the Union government.
- **SEBI Regulations** on corporate bond markets: Enhance transparency and safeguard investor interest.
- **Public Debt Management Framework** under the RBI: Ensures stability of sovereign borrowing.
- **Companies Act, 2013:** Governs corporate governance, strengthening creditworthiness.

#### Conclusion

The shifting investor preference toward corporate bonds over sovereign debt reflects a **broader structural change** in global finance: strong corporate balance sheets versus weakening government fiscal positions. While this does not fully displace the traditional safe-haven role of sovereign bonds, it signals erosion of trust in the fiscal sustainability of advanced economies and highlights the growing **financial resilience of multinational corporations**.

#### UPSC Relevance

- **GS Paper 3:** Financial markets, debt dynamics, corporate governance, sovereign risk.
- **GS Paper 2:** Impact of political economy and governance on fiscal stability.
- **Prelims:** Bond yields, credit ratings, FRBM Act, debt metrics.



- **Essay/Interview:** Populism and fiscal policy, global financial stability, corporate vs. sovereign creditworthiness.

## 10. Tamil Nadu's Sub-State Climate Action Model

- Tamil Nadu has developed one of India's **most advanced, decentralised climate governance systems** through the creation of the **Tamil Nadu Green Climate Company (TNGCC)**, which integrates four missions: **Climate Change Mission, Green TN Mission, Wetlands Mission, and Coastal Restoration Mission**.
- The State released a detailed **Greenhouse Gas (GHG) Inventory (2005–2019)** and a **Net-Zero Pathway**, showing that despite being highly industrialised, Tamil Nadu contributed **only 7% of India's emissions** in 2019 and reduced its **emission intensity to GDP by 60%** during 2005–2019.
- Tamil Nadu launched **district-level decarbonisation plans** and a real-time **Climate Action Tracker**, beginning with four pilot districts—The Nilgiris, Coimbatore, Ramanathapuram, and Virudhunagar—each identifying sector-specific emission sources and designing **tailor-made mitigation strategies** such as EV infrastructure, waste management, industrial decarbonisation, and forest restoration.
- The pilots show that **up to 92% of projected emissions** in these districts can be abated by 2050 and nearly **3 million tonnes of CO<sub>2</sub>e** can be sequestered. Nilgiris can achieve **net zero by 2030**, Ramanathapuram by **2047**, and Coimbatore & Virudhunagar by **2055**, depending on scenario and ambition levels.
- Tamil Nadu is pursuing a holistic ecological strategy: restoring **mangroves, wetlands, seascapes**, expanding forest cover, protecting **20 Ramsar sites**, ensuring **30% land area is protected**, and integrating nature-based solutions with climate mitigation.
- The State places **communities at the centre** of climate action, ensuring that climate governance is **participatory, measurable, transparent**, and strongly embedded at district and sub-district levels—a model for aligning national net-zero goals with local implementation.



### Additional Key Points (Important for UPSC)

- **Energy Transition:** 60% of Tamil Nadu's installed capacity and 30% of electricity generation now comes from renewables.
- **Major Emission Sources (district-specific):**
  - Nilgiris & Coimbatore: Road transport, residential energy
  - Virudhunagar: Cement, heavy industry, transport
  - Ramanathapuram: Public electricity generation, rice cultivation
- **Nature-Based Solutions:** Forest restoration, wetland revival, coastal resilience, mangrove expansion.
- **Administrative Innovation:** Dedicated Project Management Units (PMUs) to oversee implementation.

### Key Definitions

- **Net Zero:** A state where greenhouse gas emissions are balanced by removals through sinks.



- **Emission Intensity:** GHG emissions per unit of GDP, indicating efficiency improvements.
- **GHG Inventory:** A systematic accounting of sector-wise emissions over time.
- **Nature-Based Solutions (NbS):** Actions that protect, manage, or restore ecosystems to address societal challenges.

### Constitutional & Legal Provisions Relevant

- **Article 48A:** State's duty to protect the environment and forests.
- **Article 51A(g):** Fundamental duty of citizens to safeguard the natural environment.
- **Environment (Protection) Act, 1986:** Framework for climate and ecological governance.
- **Biological Diversity Act, 2002:** Supports conservation of biodiversity and ecosystem restoration.
- **Disaster Management Act, 2005:** Addresses climate vulnerability and adaptation planning.

### Conclusion

Tamil Nadu's climate governance demonstrates that **effective climate action must be locally grounded**. Through detailed inventories, district-level decarbonisation plans, and strong institutional mechanisms, the State has created a **participatory, data-driven, and scalable model** for achieving net-zero targets. It reframes climate change as an opportunity for **green growth, resilience, and ecological restoration**.

### UPSC Relevance

- **GS Paper 3:** Climate change mitigation, adaptation, biodiversity, renewable energy, ecological restoration.
- **GS Paper 2:** Cooperative federalism, sub-national governance, environmental institutions, decentralised planning.
- **Prelims:** Ramsar sites, climate missions, TN-specific initiatives, Environment Protection Act.
- **Essay/Interview:** Bottom-up climate governance, India's net-zero pathway, nature-based solutions, sustainable development.

## 11. Maharashtra Local Body Elections & Voters' List Issues

Following **Supreme Court directions**, Maharashtra will conduct local body elections in **three phases starting December 2**, covering municipal councils, nagar panchayats, zilla parishads, panchayat samitis, and finally municipal corporations, with **all elections to conclude by January 31, 2026**.

- The **State Election Commission (SEC)** has *no power to add or delete names* from voters' lists. It relies entirely on the **electoral rolls prepared by the Election Commission of India (ECI)** under the **Representation of the People Act, 1950**, and only *bifurcates* these lists ward-wise for local body elections.
- For the upcoming polls, the SEC will use the electoral roll as of **July 1, 2025**, which has led to criticism as **first-time voters turning 18 after January 1, 2025** are excluded, due to the unchanged cut-off date.
- The SEC is responsible for **ward delimitation, publishing draft lists, inviting objections**, and marking **duplicate or doubtful entries** using a tool that filters entries based on *first name, middle name, last name, and gender*. It cannot delete entries but forwards them to the Chief Electoral Officer for verification.



- The Opposition alleges persistent issues such as **double entries, bulk voters at one address, ghost voters, and out-of-State names**, arguing that the SEC's revision exercise is insufficient because flaws in the **base list (prepared by ECI)** cannot be corrected at the State level.
- To ensure fairness, the SEC will publish **draft lists, accept objections (four categories allowed), conduct field verification**, and require voters with potential duplicates to give an undertaking specifying the booth at which they will vote to prevent multiple voting.

### Additional Key Points (Important for UPSC)

- **Four permissible objections:** missing names in local lists, wrong ward allotment, duplicate entries, multiple voters at same address.
- **Elections supervised by SEC** under powers granted by **Articles 243K (Panchayats) and 243ZA (Municipalities)**.
- SEC's role includes **polling station list publication, final ward list release, and monitoring electoral integrity** at the local level.

### Key Definitions

- **Electoral Roll:** The official list of eligible voters prepared under the RP Act, 1950.
- **Delimitation:** Redrawing boundaries of electoral wards/constituencies based on population and administrative needs.
- **Duplicate Entry:** A voter appearing more than once in the electoral roll.
- **Nagar Panchayat / Municipal Council / Zilla Parishad:** Local bodies under the 73rd and 74th Constitutional Amendments.

### Constitutional & Legal Provisions Relevant

- **Article 243K & 243ZA:** SEC has exclusive authority over conduct of local body elections.
- **Representation of the People Act, 1950:** Governs preparation of electoral rolls by ECI.
- **73rd & 74th Constitutional Amendments:** Strengthen local governance and mandate regular elections.
- **Supreme Court Directions:** Mandate timely elections and prevent undue delays by State governments.

### Conclusion

Maharashtra's local body elections highlight the **complex interplay** between the State Election Commission's administrative responsibilities and the Election Commission of India's authority over voter rolls. While the SEC can refine, bifurcate, and verify entries, it cannot rectify fundamental defects in the base electoral roll—leading to continued political contention. The structured revision and verification mechanisms add transparency, but concerns regarding missing and duplicate voters remain partly unresolved.

### UPSC Relevance

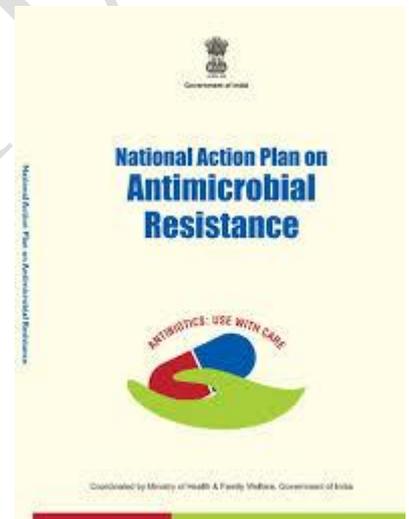
- **GS Paper 2:** Election management, State vs Central election bodies, constitutional provisions for local governance.



- **GS Paper 2 (Polity):** 73rd/74th Amendments, powers of SEC vs ECI, electoral roll preparation issues.
- **Prelims:** Articles 243K, 243ZA, RP Act 1950, structure of local bodies.
- **Essay/Interview:** Electoral reforms, voter list integrity, local democracy and decentralisation.

## 12. Antimicrobial Resistance (AMR) in India

- The **WHO Global Antibiotic Resistance Surveillance Report 2025 (GLASS)** highlights that **India faces one of the highest AMR burdens globally**, with **1 in 3 bacterial infections resistant** to commonly used antibiotics in 2023—far exceeding the global average of 1 in 6.
- Major pathogens showing high resistance include **E. coli, Klebsiella pneumoniae, and Staphylococcus aureus**, especially in ICUs. Key drivers of AMR in India are **OTC antibiotic sales, misuse, incomplete treatments, inadequate regulation, and environmental contamination** from pharma waste and hospital effluents.
- India's AMR surveillance suffers from **limited, non-representative data**, as most samples come from tertiary hospitals (ICMR-AMRSN, i-AMRSS, NARS-Net), excluding primary and secondary care settings—leading to **potential overestimation** of national resistance levels.
- Implementation of India's **National Action Plan on AMR (NAP-AMR)** has been slow; **Kerala** is the only State showing strong progress, with initiatives such as **AMRITH**, OTC antibiotic sale restrictions, inter-sectoral coordination, and AMR literacy efforts, resulting in a **slight dip in AMR levels**.
- Experts emphasise the need to **expand surveillance networks**, integrate **500+ NABL-accredited labs**, strengthen microbiology capacity, promote stewardship, and ensure enforcement of measures like the **2019 Colistin ban** in animal husbandry.
- Development of new antibiotics remains inadequate—despite **97 candidates in the global pipeline**, only **12 meet WHO innovation criteria**, and few target high-priority MDR pathogens. Approvals in India (four new candidates) offer promise, but accessibility gaps persist in LMICs.



### Additional Key Points (Important for UPSC)

- **One Health Approach:** Essential for linking human, animal, and environmental sectors to control AMR.
- **Environmental Drivers:** Pharmaceutical wastewater, hospital effluents, and agricultural run-off significantly accelerate resistance.
- **Public Awareness Gap:** AMR remains abstract to the public; experts call for AMR literacy and humanising the crisis.

### Key Definitions

- **Antimicrobial Resistance (AMR):** When microbes (bacteria, viruses, fungi) evolve to resist drugs designed to kill them.



- **MDR/XDR Pathogens:** Multi-drug resistant or extensively drug-resistant organisms that limit treatment options.
- **Antibiogram:** A summary of antimicrobial susceptibility patterns of local bacterial isolates.
- **One Health:** Integrated approach linking human, animal, and environmental health.

### Constitutional & Legal Provisions Relevant

- **Drugs and Cosmetics Act, 1940:** Regulates antibiotic prescription and sales.
- **Food Safety and Standards Act, 2006:** Regulates antibiotic use in livestock & food chains.
- **Environment (Protection) Act, 1986:** Regulates pharmaceutical and hospital waste disposal.
- **Livestock and Public Health regulations at State level:** Affect AMR spread.
- **National Action Plan on AMR (2017):** India's framework aligned with WHO Global Action Plan.

### Conclusion

India is confronting a **deepening AMR crisis**, driven by misuse, regulatory gaps, and inadequate surveillance. While Kerala's progress demonstrates that **effective AMR containment is possible**, national-level action remains fragmented. Strengthening surveillance networks, enforcing regulations, boosting antibiotic stewardship, and supporting innovation—while enhancing public awareness—are crucial to prevent routine infections from becoming untreatable and threatening India's health security.

### UPSC Relevance

- **GS Paper 2:** Public health systems, WHO initiatives, regulatory frameworks, One Health.
- **GS Paper 3:** Science & Technology, biotechnology, drug resistance, environmental pollution.
- **Prelims:** GLASS, NAP-AMR, Colistin ban, One Health, ICMR AMR networks.
- **Essay/Interview:** AMR crisis, health governance, regulatory enforcement, global health security.