



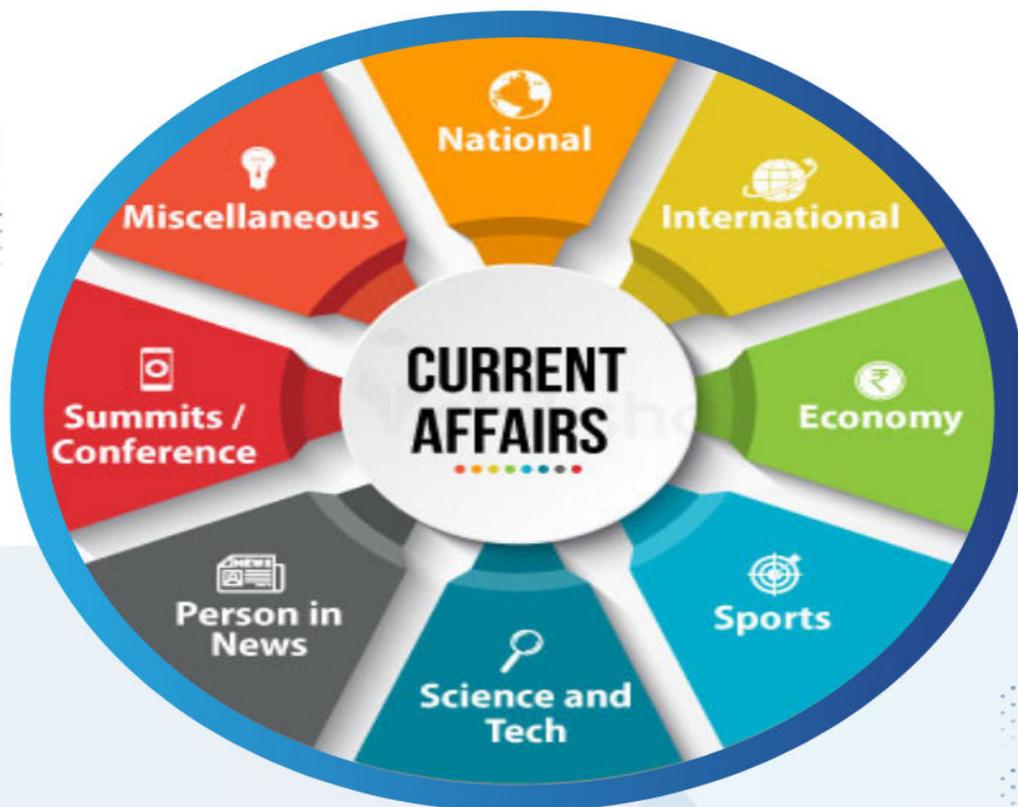
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VIDHVATH IAS KAS ACADEMY
&
STUDY CENTRE

DAILY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

DATE: 16/12/2025 (TUESDAY)



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1. Proposed Shift from MGNREGA to VB-GRAM G Bill

- **Proposed Legislation:** The Union Government is set to introduce the **Viksit Bharat — Guarantee For Rozgar And Ajeevika Mission (Gramin) Bill (VB-GRAM G Bill)** to replace the existing **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005**.
- **Fundamental Shift in Structure:** The core design shifts from the current **"demand-driven framework"** (where work is provided based on genuine local demand) to a **"supply-driven scheme"** (where allocations are capped at a fixed budget determined by the Union government based on unspecified parameters).
- **Key Changes in Workdays:** The guaranteed workdays are proposed to **increase from 100 days to 125 days** per household per financial year.
- **Increased Financial Burden on States:** The Bill proposes to significantly **raise the financial contribution of State Governments** from the current 10% share to **40% of the total expenditure**, which is a four-fold increase in their financial burden.
- **Scope and Allocation:** Employment provision under the new bill will be limited only to **rural areas notified by the Centre**. Under the supply-driven structure, budget allocations will be fixed and capped, which may potentially not meet the actual demand for work.
- **Aims and Implications:** The Bill, while increasing the guaranteed days, essentially dismantles the statutory right to demand work, potentially leading to a capped allocation not meeting local demand, and places a substantial, possibly unsustainable, financial obligation on the states.



Key Definitions & Concepts

- **Demand-Driven Scheme (MGNREGA):** A legal provision guaranteeing work to anyone who demands it. Budget allocation follows demand, ensuring work availability as a right.
- **Supply-Driven Scheme (Proposed VB-GRAM G Bill):** A scheme where the provision of work is constrained by a predetermined, capped budget allocation (supply) set by the central government, irrespective of the actual demand.

Constitutional & Legal Provisions

- **Article 41 (Directive Principle of State Policy):** Directs the State to make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other undeserved wants.
- **MGNREGA, 2005:** Enacted under the spirit of Article 41, it established a legal **"Right to Work"** by guaranteeing 100 days of wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

Additional Important Keypoints

- **Dismantling of Statutory Right:** The shift to a supply-driven, centrally-capped allocation system essentially removes the statutory and enforceable **"Right to Work"** embedded in MGNREGA.



- **Notified Rural Areas:** Restricting the scheme only to 'rural areas notified by the Centre' introduces a potential mechanism for discretionary exclusion or inclusion of areas, unlike the MGNREGA which covers all rural areas.

Conclusion and UPSC Relevance

The proposed VB-GRAM G Bill represents a critical policy divergence from the MGNREGA, pivoting from a rights-based, demand-driven rural employment guarantee to a fiscally capped, supply-driven scheme. While increasing the number of guaranteed workdays is a positive step, the significant increase in the financial burden on States and the removal of the legal guarantee to work against demand are major concerns. This change directly impacts the federal structure of financing social welfare and the effectiveness of providing a social safety net during times of distress.

UPSC Relevance (GS Paper I, II & III):

- **GS-II (Polity & Governance):** Federalism (Centre-State financial relations, State's financial autonomy), Statutory vs. Rights-based schemes, Social Justice.
- **GS-III (Economy):** Government Budgeting and Expenditure (Revenue and Capital receipts), Employment, Inclusive Growth, Infrastructure development through public works.
- **GS-I (Society):** Social Empowerment, Poverty and Development Issues.

2. Proposed Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025

- **Proposed Legislation & Replacement:** The Union government has proposed the **Viksit Bharat Shiksha Adhishthan (VBSA) Bill, 2025**, which aims to **overhaul the higher education regulatory framework** in India. The Bill seeks to **replace the existing University Grants Commission (UGC)**.
- **Review Mechanism:** The Bill has been proposed to be sent to a **Joint Parliamentary Committee (JPC)**, comprising members from both the Lok Sabha and the Rajya Sabha, for detailed examination, indicating the government's intent to build consensus or address concerns.
- **Concerns Raised by Opposition:** Opposition parties strongly opposed the Bill, citing concerns over **"executive overreach"** and the potential for **"pervasive executive control"** over Higher Educational Institutions (HEIs).
- **Key Provisions Criticized:** Critics argue the Bill subjects HEIs to: **graded autonomy** (potentially leading to differential treatment), **intrusive compliance requirements**, **severe penalties**, and broad **closure powers** vested in the new regulatory body, which they claim undermines institutional independence.
- **Federalism Challenge:** A primary objection raised is that the Bill allegedly **goes against the principles of federalism** by concentrating regulatory power at the Centre, impacting the autonomy of State-level universities and institutions.
- **Language/Nomenclature Objection:** MPs from non-Hindi-speaking states (e.g., Kerala and Tamil Nadu) objected to the **nomenclature** (Viksit Bharat Shiksha Adhishthan) and the naming of new authorities in Hindi, arguing it constitutes an **"imposition of Hindi"** on non-Hindi-speaking regions.

New chapter

The Viksit Bharat Shiksha Adhishthan Bill was introduced by Union Minister Dharmendra Pradhan in the Lok Sabha

■ The Bill proposes the setting up of a higher education commission along with three councils

■ It seeks to subsume the functions of the University Grants Commission, the All India Council for Technical Education, and the National Council for Teachers' Education

■ The commission will be an apex umbrella body to provide direction for comprehensive and holistic growth of higher education and ensure coordination between the Councils, the Bill says





Key Definitions & Concepts

- **University Grants Commission (UGC):** The statutory body established in 1956 responsible for the coordination, determination, and maintenance of standards of university education in India. It disburses grants to universities.
- **Joint Parliamentary Committee (JPC):** An ad-hoc committee formed by a motion passed in one House of Parliament and agreed to by the other. It is constituted to investigate a specific matter or to examine a Bill, drawing members from both Houses.
- **Executive Overreach:** A situation where the Executive branch (government/ministry) assumes or exercises powers that traditionally belong to the Legislative (Parliament) or Judicial branches, or excessive power over autonomous bodies.
- **Graded Autonomy:** A policy framework where universities are granted varying degrees of operational freedom (e.g., in curriculum, admissions, fees) based on their performance, accreditation, and rank.

Constitutional & Legal Provisions

- **Entry 66 of the Union List (List I, Seventh Schedule):** Grants the Union Government the power to regulate "coordination and determination of standards in institutions for higher education or research and scientific and technical institutions."
- **Entry 25 of the Concurrent List (List III, Seventh Schedule):** Deals with "Education, including technical education, medical education and universities, subject to the provisions of entries 63, 64, 65 and 66 of List I." This means both Centre and States can legislate on education, but Central laws prevail in case of conflict.
- **Principle of Federalism (Basic Structure):** The division of powers between the Union and the States is a foundational principle of the Indian Constitution, which includes their respective jurisdictions over education.

Additional Important Keypoints

- **Impact on HEI Autonomy:** Critics view the Bill as replacing the collegial structure of the UGC with a body more susceptible to executive direction, thereby compromising the **academic and administrative autonomy** of higher educational institutions, which is vital for quality research and teaching.
- **Precursor to Change:** This Bill follows the recommendations of the National Education Policy (NEP) 2020, which proposed replacing the UGC and the All India Council for Technical Education (AICTE) with a single, overarching regulator (HECI - Higher Education Commission of India), though the current Bill name is different.

Conclusion and UPSC Relevance

The proposed VBSA Bill, 2025, represents a significant attempt by the Central government to restructure the regulation of higher education, replacing the decades-old UGC. While the stated goal is improved standards, the move has triggered a major debate over institutional autonomy, the centralisation of power (federalism), and potential cultural/linguistic imposition (nomenclature). Its referral to a JPC highlights the political sensitivity of education reform. The outcome will be crucial in defining the future regulatory landscape and the Centre-State balance in higher education.



UPSC Relevance (GS Paper I & II):

- **GS-II (Polity & Governance):** Federalism (Centre-State legislative and administrative relations in the Concurrent List), Statutory bodies (Role and replacement of UGC), Bills and Committees in Parliament (JPC), Issues relating to development and management of Social Sector/Services relating to Education.
- **GS-I (Society):** Social empowerment, Role of education in social development.

3. The SHANTI Bill, 2025 and Nuclear Sector Reform

- **Aim and Replacement:** The **Sustainable Harnessing and Advancement of Nuclear energy for Transforming India (SHANTI) Bill, 2025** is introduced to replace and consolidate the **Atomic Energy Act, 1962** and the **Civil Liability for Nuclear Damage (CLND) Act, 2010**. The primary aim is to incentivize **private sector participation** (both Indian and foreign) in nuclear power production to accelerate capacity addition.
- **Opening the Sector:** The Bill ends the decades-old monopoly of the Department of Atomic Energy (DAE)/NPCIL, allowing private companies, joint ventures, and public-private partnerships to **make, own, and operate** nuclear power plants. Private entities can also participate in the nuclear value chain, including **exploration, fuel fabrication, and equipment manufacturing**.
- **Reform of Nuclear Liability:** The Bill overhauls the contentious liability regime by **restricting the operator's right of recourse against the supplier** (a key bottleneck under CLND Act, 2010), thus protecting foreign and domestic equipment suppliers. It introduces **graded liability caps** for operators based on plant size and establishes a **Nuclear Liability Fund** for government backstop compensation.
- **Institutional and Regulatory Changes:** The SHANTI Bill proposes to grant **statutory status to the Atomic Energy Regulatory Board (AERB)**, ensuring greater regulatory independence and aligning India with international nuclear safety norms (IAEA). It also proposes a **dedicated Nuclear Tribunal** for dispute resolution.
- **Focus on Scale and Technology:** The Bill is crucial for achieving India's ambitious target of **100 GW nuclear capacity by 2047** (up from \sim 8.8 GW currently). It specifically promotes the research, development, and deployment of **Small Modular Reactors (SMRs)**, which are central to India's clean energy transition.
- **Strategic Core Control Retention:** While opening up generation and associated activities, the Bill **retains Central Government control** over sensitive and critical activities like the enrichment and isotopic separation of radioactive substances, management and reprocessing of spent fuel, and production of heavy water.



Key Definitions & Concepts

- **Atomic Energy Act, 1962:** The primary law governing the use of atomic energy for the welfare of the people of India and for other peaceful purposes; it established the Central Government's monopoly over nuclear power.



- **Civil Liability for Nuclear Damage (CLND) Act, 2010:** Established a no-fault liability regime for nuclear damage victims but contained controversial provisions (Section 17(b)) allowing the plant operator a "**Right of Recourse**" against the equipment supplier, which deterred foreign investment.
- **Small Modular Reactors (SMRs):** Advanced nuclear reactors designed to be smaller (typically $\$ < 300\$$ MWe), factory-built, and modular, allowing for easier, faster, and more flexible deployment.

Constitutional & Legal Provisions

- **Entry 6 (Union List, Seventh Schedule):** Grants the Union Government exclusive power to legislate on "**Atomic energy and mineral resources necessary for its production.**" This ensures the Centre's overarching control in this strategic sector.
- **Convention on Supplementary Compensation for Nuclear Damage (CSC), 1997:** An international treaty aiming to establish a global nuclear liability regime and ensure adequate compensation for victims. The SHANTI Bill seeks closer alignment with CSC by limiting supplier liability.

Additional Important Keypoints

- **Energy Security and Net-Zero Goal:** The move is a strategic step to secure **baseload, low-carbon power** needed for India's growing economy and to meet its commitment of **Net-Zero emissions by 2070**. Nuclear power complements intermittent renewable sources.
- **Financial Model:** Private players will primarily **finance** the projects and will likely receive assured long-term captive power supply, while NPCIL/Central Government may **retain ownership and operational control** in certain models, especially for large plants.
- **Investment Attraction:** The relaxation of supplier liability, alongside the provision for **up to 49% FDI** in certain nuclear activities, is designed to attract high-value foreign investment and technology transfer, particularly from the US, France, and Russia.

Conclusion and UPSC Relevance

The SHANTI Bill, 2025, represents a landmark policy and legislative pivot, transforming India's tightly controlled nuclear power sector from a state monopoly to one involving significant private and foreign participation. This shift is vital for achieving India's aggressive nuclear capacity targets and clean energy goals. However, the success of the reform hinges on effectively balancing the need for massive private investment (requiring relaxed liability norms) with paramount concerns of public safety, environmental protection, and strategic control over sensitive core functions.

UPSC Relevance (GS Paper I, II & III):

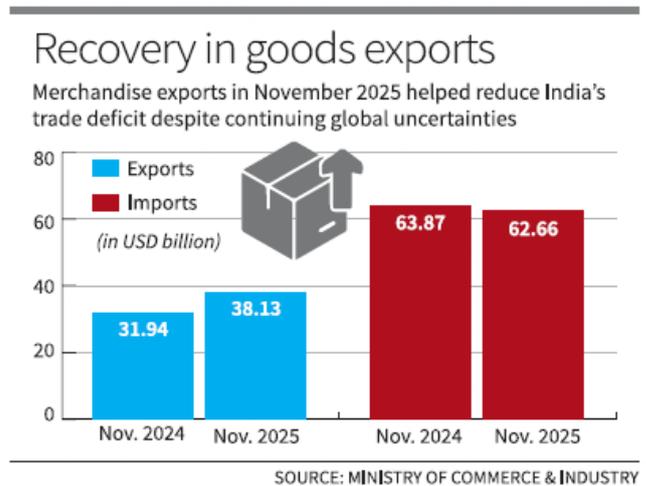
- **GS-III (Economy & Science and Tech):** Energy Security, Infrastructure (Energy), Investment Models (PPP/FDI), Indigenous Technology (SMRs), Nuclear Technology and its applications.
- **GS-II (Polity & Governance):** Repeal of Acts and Legislative Overhaul, Role of Statutory Bodies (AERB), Impact of International Conventions (CSC) on domestic law.
- **GS-I (Geography):** Location of nuclear plants, Resource mapping.

4. India's Trade Deficit Narrows Sharply in November 2025

- **Significant Reduction in Trade Deficit:** India's overall trade deficit (Merchandise and Services combined) plummeted by over 61% year-on-year in November 2025, narrowing to **$\$6.6$ billion** (from $\$17.1$ billion in Nov 2024). This comes after a surge in the deficit in October 2025.



- **Key Driver: Strong Merchandise Exports:** Merchandise exports saw a sharp rebound, growing by **19.4% to \$38.1 billion** in November 2025 (the highest exports recorded in any November over the last 10 years), compensating for the dip in October. Major contributing sectors included Engineering Goods, Electronic Goods, and Gems & Jewellery.
- **Key Factor: Contraction in Imports:** The overall import bill saw a marginal slide of **0.6% to \$80.6\$ billion**. This moderation was driven by a sharp decline in specific merchandise imports, most notably **Gold imports, which fell by nearly 60%** year-on-year, having previously surged in October due to the festive season.
- **Resilience in US Trade:** Despite facing steep **50% punitive tariffs** imposed by the US, India's exports to the US showed strong growth, rising by **22.6%** in November 2025 compared to November 2024, indicating the resilience of Indian exporters.
- **Services Trade Contribution:** The Services sector continued to be a net positive contributor, with **Services Exports estimated at \$35.86\$ billion** and Services Imports at \$17.96\$ billion, resulting in a substantial **Services Trade Surplus of \$~\$17.9 billion**.
- **Overall Trade Outlook:** The Commerce Secretary noted that the November data addressed the concerns that arose after the October data, pointing towards a strong and resilient export performance amid global uncertainties, driven by both goods and services sectors.



Key Definitions & Concepts

- **Trade Deficit:** Occurs when the value of a country's total imports (Goods and Services) exceeds the value of its total exports over a specific period. It is also referred to as a **Negative Balance of Trade (BOT)**.
- **Merchandise Trade:** Pertains exclusively to the trade of **physical goods** (e.g., electronic goods, petroleum products, gold, textiles).
- **Current Account Deficit (CAD):** A broader measure than the trade deficit. It is the sum of the balance of trade (goods and services), net earnings from investments abroad, and net transfer payments (e.g., remittances).

Constitutional & Legal Provisions

- **Article 301 (Freedom of Trade, Commerce, and Intercourse):** While primarily dealing with internal trade, the overarching principle guides the government to adopt policies that promote smooth and competitive trade.
- **Foreign Trade (Development and Regulation) Act, 1992:** Empowers the Central Government to make provisions for the development and regulation of foreign trade. The Ministry of Commerce and Industry's data and policy actions are governed by this framework.



Additional Important Keypoints

- **Impact of Rupee:** A weakening Indian Rupee (INR) against the US Dollar generally makes Indian exports cheaper and more competitive in global markets, providing a tailwind to export growth.
- **Export Promotion Efforts:** The strong performance in sectors like Engineering Goods and Electronics suggests the positive impact of government initiatives like the **Production Linked Incentive (PLI) Schemes** and focus on diversifying export markets.
- **Policy Negotiations:** The continuous positive growth in US exports is significant given the ongoing India-US trade talks aimed at lowering reciprocal tariffs, highlighting the strategic importance of the US market for India.

Conclusion and UPSC Relevance

The narrowing of the trade deficit in November 2025, driven by a decade-high surge in merchandise exports and moderation in imports (especially gold), provides a crucial sign of India's external sector resilience against prevailing global headwinds and geopolitical trade tensions (like the US tariffs). While the robust services surplus provides a persistent cushion, sustained growth in merchandise exports is vital for long-term job creation and achieving ambitious trade targets. The trade figures are critical indicators for the **Current Account Deficit (CAD)**, influencing the stability of the Rupee and overall macroeconomic management.

UPSC Relevance (GS Paper I & III):

- **GS-III (Economy):** Balance of Payments (BoP), Trade Deficit, Foreign Trade Policy, Exchange Rate Dynamics (INR vs USD), Gold Imports, Export Promotion Schemes (PLI), Impact of global trade on the Indian economy.
- **GS-II (Polity & IR):** Bilateral Trade Relations (India-US), Impact of protectionism (Tariffs) on exports.

5. Illicit Cannabis Cultivation in Kandhamal: Scale, Challenges and Policy Dilemmas

1. Background and Scale of Illicit Cultivation

Kandhamal district in Odisha has emerged as one of India's major hubs of illicit cannabis (ganja) cultivation. Its remote, hilly, forested and largely inaccessible terrain, combined with a favourable climate, has enabled large-scale illegal plantations.

In 2025 alone, district police razed more than 4,000 acres of cannabis plantations and seized a national-high 59,068kg of ganja, highlighting both the magnitude of cultivation and enforcement efforts.

2. Profitability and Local Motivation

Cannabis cultivation offers significantly higher returns compared to legal cash crops. The produce fetches approximately ₹2,000–₹3,000 per kg, making it far more lucrative than traditional agriculture.

This high profitability incentivises villagers to cultivate cannabis, often on forest land, despite its illegality. The trade has deep roots in the region, with allegations of involvement extending to corrupt officials and patronage from the outlawed CPI(Maoist), further entrenching the illegal economy.





3. Enforcement Challenges on the Ground

Law enforcement agencies face severe logistical and financial constraints. Plantations are often located nearly 15km inside dense forests, requiring long treks and sustained manpower deployment. Growers use counter-measures such as cultivating smaller patches (often fewer than 150 plants) under thick tree cover to evade detection by drones and satellite imagery. These tactics significantly reduce the effectiveness of surveillance-based enforcement.

4. Difficulty in Targeting Financiers and Networks

A major limitation of enforcement lies in identifying and prosecuting the financiers and organisers behind the cultivation. Villagers are frequently used as labour, shielding the real beneficiaries from legal scrutiny. Investigators often lack specialised financial investigation skills required to establish money trails and successfully prosecute transporters, financiers and arms dealers linked to the cannabis network.

5. Proposed Counter-Strategy: Alternative Livelihoods

To address the root cause of illicit cultivation, the administration is considering a livelihood-centric strategy. The focus is on engaging villagers in alternative income-generating activities during cannabis sowing and harvesting seasons.

Proposed options include cultivation of fruits, spices, high-value vegetables, beekeeping and agroforestry, supported through government schemes such as the rural employment guarantee programme. The aim is to reduce economic dependence on illegal crops.

6. Socio-Cultural and Governance Dilemma

Police action is calibrated to avoid alienating local communities, as large sections of villagers participate collectively in cannabis cultivation. This creates a governance dilemma between strict enforcement and social stability.

The situation is particularly ironic given that Kandhamal is internationally recognised for Kandhamal Turmeric, which holds a Geographical Indication tag, underscoring the tension between traditional legal livelihoods and illicit profit-driven activities.

Key Definitions and Concepts

Cannabis (Ganja): A plant genus used for recreational, medicinal and industrial purposes. Cultivation and possession for recreational use are illegal in India.

Illicit Cultivation: The clandestine and illegal growing of controlled substances, usually on forest or government land, without official authorisation.

Geographical Indication (GI) Tag: A certification granted to products with a specific geographical origin and distinct qualities or reputation, such as Kandhamal Turmeric.

Constitutional and Legal Provisions

Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985: The principal law prohibiting production, possession, sale, transport and use of narcotic drugs, including cannabis.

Indian Penal Code and Code of Criminal Procedure: Applied in cases involving criminal conspiracy, financing, transportation and organised crime linked to illicit cultivation.

Forest Conservation Act, 1980

Relevant as illegal cannabis cultivation often involves encroachment and environmental degradation of forest land.



Additional Important Key Points

Nexus with Extremism: Alleged CPI(Maoist) patronage indicates a narco-extremism nexus, where drug trade finances extremist activities, posing a serious internal security threat.

Inter-State Coordination: The cannabis supply chain extends from Kandhamal to distant metropolitan markets, necessitating strong inter-state police and intelligence coordination.

Financial Investigation: Referral of cases to agencies such as the Income Tax Department highlights the need for multi-agency cooperation and financial intelligence-led policing to dismantle networks rather than focusing solely on cultivators.

Conclusion: Illicit cannabis cultivation in Kandhamal represents a multidimensional governance challenge involving poverty, organised crime, internal security, environmental degradation and regulatory limitations. Sustainable resolution requires a shift from reactive crop destruction to a comprehensive strategy focused on financial disruption, alternative livelihoods, promotion of GI-tagged crops, and technology-enabled surveillance, while maintaining social trust.

UPSC Relevance

GS Paper III: Internal Security challenges (narco-extremism nexus), organised crime, drug trafficking, economic development, agroforestry, and use of technology in policing.

GS Paper II: Governance issues, NDPS Act implementation, alternative livelihood policies, MGNREGA, and social justice concerns.

GS Paper I: Role of geography in shaping illicit activities, society-economy linkages, and importance of GI tags in regional development.

6. Karnataka Holds Back Amendment to Anti-Cow Slaughter Act

- **Proposed Amendment:** The Karnataka State Government planned to introduce the **Karnataka Prevention of Slaughter and Preservation of Cattle (Amendment) Bill, 2025** to amend the state's existing anti-cow slaughter law.
- **Key Change in Seizure Provision:** The Amendment Bill sought to change the process for the **release of vehicles seized** during the illegal transportation of cattle for slaughter. It proposed allowing release upon the submission of an **"indemnity bond"** instead of the current requirement of a **"bank guarantee"** equivalent to the value of the vehicle.
- **Rationale for the Change:** The stated intent behind proposing the shift from a bank guarantee to an indemnity bond was to **provide relief to poor vehicle owners** who operate on a hire basis and whose livelihoods are severely affected by the vehicle's seizure.
- **Reason for Holding Back:** The State Government decided to put the Bill on hold despite it being approved by the State Cabinet and listed in the legislative agenda. The primary reason is the **fear of political controversy** and a possible backlash from the Opposition.
- **Political Controversy and Communal Allegations:** A section of ruling party MLAs expressed apprehension that the Opposition might use the Bill—despite its intended relief for vehicle owners—





to launch an **attack on the government along "communal lines,"** suggesting it weakens the enforcement of the anti-cow slaughter law.

- **Implications:** The decision reflects the political sensitivity and communal charge surrounding the issue of cow slaughter and cattle preservation laws in the state. The move prioritizes **avoiding controversy** over implementing legislative changes aimed at administrative ease for vehicle owners.

Key Definitions & Concepts

- **Indemnity Bond:** A legally binding document where one party (the vehicle owner/operator) promises to hold the other party (the government/court) harmless and compensate them for any loss or damage. It does not require a tied-up cash deposit.
- **Bank Guarantee:** A promise from a bank that it will meet the liabilities of a party (the vehicle owner) in case the party fails to fulfill its obligations. It requires the owner to pledge collateral or deposit an equivalent amount, tying up significant capital.
- **Cow Slaughter Legislation:** State laws passed under the constitutional framework that prohibit or severely restrict the slaughter of cows and their progeny for religious, cultural, or agricultural preservation reasons.

Constitutional & Legal Provisions

- **Entry 15 of the State List (List II, Seventh Schedule):** Grants the State Governments the exclusive power to legislate on matters related to "Preservation, protection and improvement of stock and prevention of animal diseases; veterinary training and practice." This is the basis for state anti-cow slaughter laws.
- **Article 48 (Directive Principle of State Policy):** Directs the State to endeavor to organize agriculture and animal husbandry on modern and scientific lines and, in particular, take steps for **preserving and improving the breeds, and prohibiting the slaughter of cows and calves and other milch and draught cattle.**

Additional Important Keypoints

- **Federal Dimension:** Anti-cow slaughter laws are a prime example of the State's power under the State List and Article 48, often leading to varied and politically charged legislation across different states.
- **Impact on Livelihoods:** The existing law's requirement for a bank guarantee often causes significant financial distress to poor vehicle owners, essentially amounting to an effective, permanent seizure due to the high costs involved. The amendment was intended as an **administrative relief** measure.
- **Political Polarization:** The decision to delay the bill highlights how legislation concerning cattle protection is often highly **politicized**, making it difficult to pass even administrative changes without facing accusations of favoring a particular community or undermining the law's spirit.

Conclusion and UPSC Relevance

The temporary withdrawal of the Karnataka Prevention of Slaughter and Preservation of Cattle (Amendment) Bill, 2025, underscores the profound political and communal sensitivity surrounding cow protection legislation in India. While the amendment aimed to provide genuine administrative and financial relief to small vehicle owners by substituting an indemnity bond for a bank guarantee, the fear of political exploitation along communal lines halted its passage. This situation highlights the complex interplay



between **social policy (Article 48), state legislative authority, judicial mechanisms (seizure and release), and the highly charged political environment** in India.

UPSC Relevance (GS Paper I & II):

- **GS-II (Polity & Governance):** Federalism (State List and Article 48), Role of the Legislature, Issues related to the functioning of the Executive, Social Justice vs. Political Compulsions.
- **GS-I (Society):** Communalism and Political Polarization, Social Issues related to Cattle Preservation and Animal Husbandry.

7. SC Rulings on Governor's Assent to State Bills (Article 200)

- **Initial Verdict (State of Tamil Nadu vs Governor of Tamil Nadu, April 2025):** The Supreme Court (SC) sought to end indefinite gubernatorial delays on Bills passed by elected State Legislatures. It imposed **definitive timelines** for the Governor to act (assent, withhold, or reserve for the President) and asserted that unexplained inaction could attract **judicial intervention**, potentially leading to the Bill being considered "**deemed to have been assented**".
- **Subsequent Advisory Opinion (Special Reference No. 1 of 2025):** The SC, answering a Presidential Reference, subsequently laid the ground for course reversal. It held that judicially imposed timelines and the concept of "deemed assent" had **no textual basis** in the Constitution and were "anathema" to the constitutional scheme, thereby restoring the **elasticity of discretionary gubernatorial powers**.
- **Undermining Re-enacted Bills:** The second ruling effectively undermines the clear text of the first proviso to **Article 200**, which implies that if a State Assembly reconsiders and **re-enacts a Bill**, the Governor's only option is to assent. The Advisory Opinion allows the Governor to **refer even a reconsidered Bill to the President**, creating a constitutional "black hole" for Bills.
- **Failure to Recognise Misuse:** The Court's emphasis on "constitutional dialogue" overlooks the fundamental issue: Governors were misusing their power for obstructionist tactics to frustrate Opposition-ruled States. The latest opinion offers limited judicial relief (only a direction to decide) for prolonged inaction, effectively legitimising "**motivated silence**".
- **The "Check" vs. "Balance" Interpretation:** The SC invoked "checks and balances" to justify its expansive interpretation of the Governor's discretion, arguing against the legislature's potential constitutional breaches. Critics argue this **elevates the power of assenting** (a procedural aspect) to a power of preliminary judicial review, making it more of an unfettered "**check**" than a constitutional "**balance**".
- **Constitutional Retrogression:** The outcome, irrespective of its legal binding nature, is viewed as an act of **constitutional retrogression**—a retreat from principled restraint on gubernatorial power and an unwanted fillip to the **Union's domination over the States**, undermining legislative supremacy in the law-making process.



Key Definitions & Concepts

- **Article 200:** Deals with the power of the Governor to assent to Bills passed by the State Legislature, withhold assent, or reserve the Bill for the consideration of the President.



- **Presidential Reference (Article 143):** Allows the President of India to seek the advisory opinion of the Supreme Court on any question of law or fact of public importance. This opinion is not legally binding like a judgment.
- **Deemed Assent:** A legal concept where the inaction of an authority (Governor) on a Bill after a prescribed timeline is considered equivalent to the grant of assent.

Constitutional & Legal Provisions

- **Article 200 (Assent to Bills):** Details the Governor's constitutional duty and powers regarding state legislation. The first proviso mandates reconsideration by the Legislature if the Governor returns the Bill.
- **Article 201 (Bills Reserved for Consideration of the President):** Governs the powers of the President regarding bills reserved by the Governor, including the President's ability to direct the Governor to return the Bill.
- **Article 143 (Power of President to consult Supreme Court):** The basis for the Special Reference in this case, enabling the Supreme Court to give an advisory opinion.
- **Article 361 (Protection of President and Governors):** Grants the Governor immunity from judicial scrutiny regarding their official acts, which often limits the court's ability to enforce timelines or actions.

Additional Important Keypoints

- **Sarkaria Commission:** The issue of the Governor's unilateral reference of Bills to the President (especially without specific constitutional necessity) was flagged as a concern by the Sarkaria Commission on Centre-State relations.
- **Discrepancy between Judgment and Opinion:** Though an advisory opinion does not legally overrule a binding judgment, an opinion from a Constitution Bench carries immense **persuasive heft**, effectively weakening the *State of Tamil Nadu* verdict.

Conclusion and UPSC Relevance

The SC's two contrasting rulings on Article 200 demonstrate the persistent tension in India's quasi-federal structure regarding the discretionary powers of the Governor, an unelected appointee of the Union. While the first judgment introduced constitutional discipline and safeguarded legislative supremacy, the subsequent advisory opinion, by denying judicial timelines and the possibility of deemed assent, has restored the Governor's unfettered discretion. This outcome significantly impacts the functioning of state legislatures, particularly in Opposition-ruled states, and underscores the ongoing need for institutional reforms to ensure the balance of power between the Centre and States.

UPSC Relevance (GS Paper II):

- **GS-II (Polity & Governance):** Quasi-Federalism, Centre-State Relations (Legislative and Administrative), Role and discretionary powers of the Governor (Article 200), SC Judgments and Advisory Opinions (Article 143), Legislative Supremacy vs. Executive Overreach.

8. Strengthening India-Oman Strategic Partnership

- **Significance and Milestones:** Prime Minister Narendra Modi's visit to Oman marks **70 years of diplomatic relations** between the two nations and comes at a crucial time amid regional geopolitical flux. Oman is considered a **trusted partner** in West Asia, known for its policy of **moderation and mediation**, and is a crucial pillar of India's West Asia Policy.



- **Deepening Strategic & Defence Ties:** Defence and security engagement is a key pillar, governed by a 2005 MoU. Oman is the first Gulf country with which all three wings of India's defence forces hold joint exercises. The landmark **Duqm Port logistics agreement (2018)** provides the Indian Navy with basing, turnaround, and logistics facilities, which is vital for **maritime security** in the Indian Ocean Region and watching Chinese PLA Naval activity.
- **Economic and Investment Boost:** Bilateral trade reached **\$10.613 billion** for FY 2024-25. The **Oman-India Joint Investment Fund (OIJIF)**, a 50-50 JV, has robustly invested in India. A major expected outcome is the signing of the **India-Oman Comprehensive Economic Partnership Agreement (CEPA)**, which will help India diversify its trade options.
- **Key Areas of Future Cooperation:** The visit provides an opportunity to set new benchmarks in **Energy Cooperation** (including Green Hydrogen, renewable energy, and strategic petroleum reserves), **Connectivity** (with Oman potentially playing a key role in the **India-Middle East-Europe Economic Corridor - IMEC**), and **Defence Manufacturing** (joint production, supply of platforms like Tejas/Naval Patrol Ships).
- **Digital and Educational Engagement:** The partnership includes key agreements in digital payments, notably the 2022 MoU between the Central Bank of Oman and NPCI to link payment systems and the launch of the **Rupay debit card in Oman** (a DPI initiative). Cooperation is also likely in setting up **offshore campuses** of prestigious Indian institutes (e.g., IITs/IIMs) in Oman.
- **Regional Geopolitical Role:** Oman's neutral stance in a conflict-prone region makes it valuable. The strengthening partnership ensures that India can expand its economic and strategic footprint in its extended neighbourhood, securing its **energy and economic interests** and acting as a **balancing factor** against regional uncertainties.



Key Definitions & Concepts

- **Strategic Partnership Agreement (2008):** Elevates bilateral ties beyond routine diplomatic relations to include defense, security, and counter-terrorism cooperation.
- **Comprehensive Economic Partnership Agreement (CEPA):** A treaty between two countries covering trade in goods, services, investment, and other areas of economic cooperation, aimed at lowering tariffs and easing trade barriers.
- **Digital Public Infrastructure (DPI):** Technology platforms, like UPI/Rupay, that facilitate the delivery of essential public and private services.

Constitutional & Legal Provisions

- **Article 51 (Promotion of International Peace and Security):** Directs the State to foster respect for international law and treaty obligations, which forms the basis for bilateral agreements like the CEPA and defense MoUs.
- **Entry 10 of the Union List (List I, Seventh Schedule):** Grants the Union Government exclusive power to legislate on "Foreign Affairs," covering international relations and treaties.



Additional Important Keypoints

- **"Look West" Policy:** Oman is central to India's policy of deepening engagement with the Gulf and West Asia, moving beyond traditional energy and diaspora focus to strategic and defense cooperation.
- **Soft Power Diplomacy:** The establishment of IIT/IIM offshore campuses in Oman is a significant step in India's **educational diplomacy**, leveraging its strong higher education brand to deepen cultural and economic linkages.

Conclusion and UPSC Relevance

The India-Oman strategic partnership is rapidly evolving into a comprehensive relationship encompassing defense, deep maritime security cooperation (Duqm Port), significant investment, and new-age cooperation in digital and green energy sectors. The imminent CEPA signing and Oman's strategic position in connectivity projects like IMEC are crucial for India's foreign policy objectives, particularly energy security, export diversification, and regional stability. This multifaceted relationship highlights India's commitment to consolidating its influence in the strategically vital Indian Ocean Region.

UPSC Relevance (GS Paper II & III):

- **GS-II (International Relations):** India and its neighborhood-relations; Bilateral relations (India-Oman), Key Strategic Locations (Duqm Port), India's West Asia Policy, IMEC.
- **GS-III (Economy & Security):** Energy Security (Strategic Reserves, Green Hydrogen), Economic Diplomacy (CEPA, FDI), Defence Cooperation, Maritime Security, Geopolitics.

9. The Water and Power Challenge to India's Data Centre Boom

- **Scale of Investment and Ambition:** India is witnessing a massive influx of investment (up to \$70 billion pledged in 2025) to develop **6 GW** of data centre capacity, fueling the country's AI and digital ambitions. This expansion is essential as India generates a high percentage of global data but has a limited share of global data centre capacity.
- **Critical Challenge: Water Scarcity:** The primary concern is the massive water consumption required for **cooling solutions**, especially for high-density chips in AI infrastructure. India is already a water-stressed country (per-capita water availability projected to fall nearly 20% below the threshold by 2030), and the doubling of data centre water consumption (projected to reach 358 billion litres by 2030) will severely exacerbate this scarcity, particularly in concentration hubs like Mumbai, Hyderabad, and Bengaluru.
- **Cooling Technology Trade-Off:** Data centres prefer **water-based cooling** (like evaporative cooling towers) because it is more energy-efficient and cost-effective than specialised solutions (like direct-to-chip or liquid immersion cooling). This creates an unavoidable trade-off between **power efficiency** (using less electricity) and **water efficiency** (using less water). Moreover, the water consumed is often lost through evaporation and cannot be reused as freshwater for human consumption.
- **Energy Consumption and Grid Capacity:** Data centres are **power-hungry infrastructure** (estimated to consume 1 GW currently, rising sharply to \sim \$13.56 GW by FY2031-32). While the Union Government claims India's integrated 500 GW national grid is robust enough to handle the surge and ensures an uninterrupted supply, the actual realization of this depends on the speed of **green energy transition** and managing the carbon footprint.



- **Regulatory and Policy Response:** India is drafting a national **Data Centre Policy** to establish a regulatory framework and grant the sector "**Infrastructure Status.**" The draft policy aims to address sustainability by mandating the sourcing of energy from **solar grids and Small Modular Reactors (SMRs)**, requiring the creation of dedicated **Data Centre Economic Zones (DCEZs)**, and mandating data centres to report their **Water Usage Effectiveness (WUE)**.
- **Sustainability Initiatives and Gaps:** Many firms are pitching "**green**" data centres by vowing to source clean energy. However, experts stress the need for mandated solutions like using **treated municipal and industrial wastewater** instead of freshwater, better site selection (away from water-stressed regions), and regulatory enforcement to balance economic growth with long-term water and energy security.

Key Definitions & Concepts

- **Water Usage Effectiveness (WUE):** An industry metric used to measure a data centre's water efficiency by calculating the ratio of annual water usage for the data centre operation to the IT equipment energy consumption.
- **Power Usage Effectiveness (PUE):** A ratio that describes how efficiently a computer data centre uses energy; $PUE = \text{Total Facility Energy} / \text{IT Equipment Energy}$. A lower PUE (closer to 1.0) is better.
- **Small Modular Reactor (SMR):** Advanced nuclear reactors that are smaller than conventional reactors, can be built in a factory, and transported to site. They are touted as a source of round-the-clock, low-carbon power.

Constitutional & Legal Provisions

- **Entry 17 of the State List (List II, Seventh Schedule):** Grants the State Governments power to legislate on "**Water,**" including water supplies, irrigation, canals, drainage, and water power. This decentralised control makes national water-use regulation challenging.
- **Environment (Protection) Act, 1986:** Provides the Central Government with powers to take measures to protect and improve the environment, which is relevant for regulating the ecological impact (heat/water stress) of data centres.

Additional Important Keypoints

- **AI Demand Multiplier:** The rapid adoption of **Artificial Intelligence (AI)** is turbocharging data centre growth, as AI workloads require massive compute capacity and consume significantly more power and water than traditional servers.
- **Urban Concentration Risk:** The concentration of data centres in already water-stressed urban clusters (Mumbai, Bengaluru, Chennai) heightens the risk of **water conflicts** between industrial and residential users, potentially leading to operational disruptions and community pushback.
- **Infrastructure Status Benefit:** Granting data centres Infrastructure Status makes them eligible for long-term credit from domestic and international lenders, boosting investment.

Conclusion and UPSC Relevance

India's data centre boom is a critical component of its digital economy and AI ambitions, attracting global investments. However, this growth faces a sustainability trilemma involving **water scarcity, high energy consumption, and the need for reliable clean power.** The proposed Data Centre Policy and industry commitment to "green" operations are positive steps, but the reliance on water-based cooling in a water-



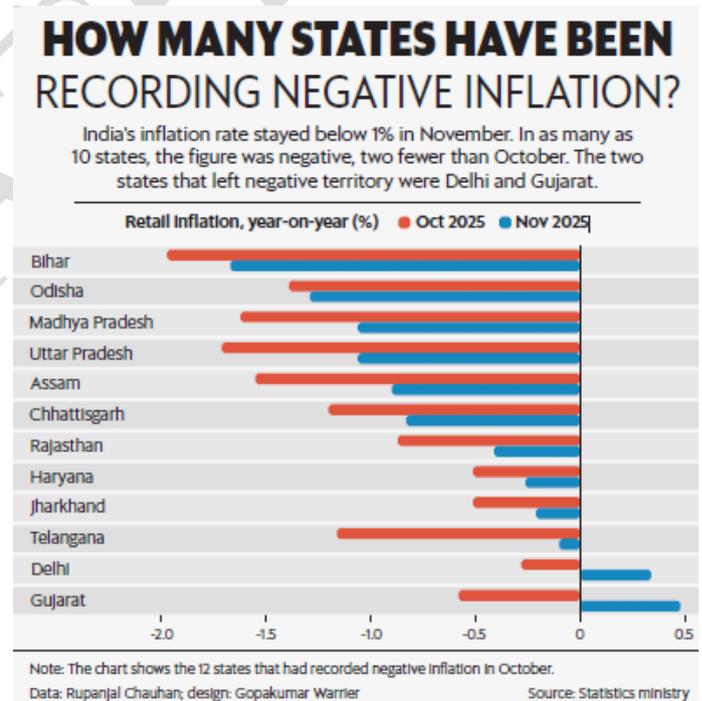
stressed nation requires urgent and strict regulatory interventions, such as mandated use of recycled water and strategic site selection. Resolving this resource-intensive challenge is paramount to ensuring that digital growth is truly sustainable and equitable.

UPSC Relevance (GS Paper I & III):

- **GS-III (Economy, Security & Science and Tech):** Infrastructure (Digital, Energy), Sustainable Growth, Energy Security (SMRs, Green Energy), Water Resource Management, Technology and Environment, Investment Models (FDI).
- **GS-I (Geography):** Resource Distribution, Water Crisis, Urbanisation and Resource Consumption.

10. Negative Retail Inflation in Indian States (November 2025)

- **National Inflation Context:** India's overall **Retail Inflation** (measured by CPI) for November 2025 was exceptionally low at **0.71%**, marking the second-lowest level recorded in the current data series. This overall low figure is largely a result of a sharp decline in food prices.
- **Prevalence of Negative State Inflation:** In November 2025, as many as **10 states** recorded a **negative year-on-year retail inflation** figure. This is a reduction from the 12 states recorded in October 2025, with Delhi and Gujarat moving out of the negative territory. The states in negative inflation include Bihar, Odisha, Madhya Pradesh, Uttar Pradesh, Assam, Chhattisgarh, Rajasthan, Haryana, Jharkhand, and Telangana.
- **Primary Driver: Food Price Deflation:** The main factor driving the overall low national inflation, and particularly the negative inflation in these states (many of which are agrarian), is a **steep contraction in food prices**. The Consumer Food Price Index (CFPI) registered a sharp year-on-year decline of **-3.91%** in November 2025, mainly due to the high base effect from the previous year and a significant price fall in **vegetables and pulses**.
- **Impact of High Base Effect:** A significant statistical reason for the low and negative inflation figures is the **High Base Effect**. Since inflation was elevated in October and November 2024 (e.g., 5.5% in Nov 2024), measuring the price change year-on-year makes the current inflation figures appear abnormally low, even if underlying conditions haven't changed dramatically. This effect is expected to wear off in the coming months.
- **Implications for Farmers and Rural Demand:** While low food prices benefit urban consumers, persistent **food price deflation** can severely impact the **incomes and livelihoods of farmers**, potentially forcing sales below the Minimum Support Price (MSP). This situation risks undermining **rural demand** (as households reduce spending on non-essentials), which is crucial for overall economic growth.
- **Monetary Policy Response:** Given the low inflation environment, the Reserve Bank of India's (RBI) Monetary Policy Committee (MPC) cut the **Repo Rate by 25 basis points to 5.25%** in





December 2025. This rate cut aims to support economic growth, as the current situation is described as a "Goldilocks period" of high growth and low inflation.

Key Definitions & Concepts

- **Retail Inflation (CPI):** Measures the changes in prices of goods and services consumed by a typical household. It is the RBI's benchmark for inflation targeting.
- **Negative Inflation/Deflation:** A persistent decrease in the general price level of goods and services ($\text{Y-o-Y} < 0\%$). Unlike disinflation (a slowing rate of inflation), deflation can signal weak demand and hurt investment.
- **Base Effect:** The impact of the choice of the base year or preceding period on the calculated inflation rate. A very high price level in the base period leads to a statistically low inflation rate in the current period.
- **Core Inflation:** Headline inflation excluding volatile components like food and fuel. It reflects underlying price pressures (e.g., in services, housing).

Constitutional & Legal Provisions

- **Reserve Bank of India Act, 1934:** The central law governing the RBI. It mandates the Central Government to set an **inflation target** (currently $4\% \pm 2\%$) in consultation with the RBI, giving the bank the primary objective of maintaining price stability.
- **Monetary Policy Committee (MPC):** Established under the RBI Act, the six-member committee is responsible for fixing the benchmark interest rate (Repo Rate) to achieve the inflation target.

Additional Important Keypoints

- **CPI Weightage Skew:** The current CPI series (2012 base) is heavily weighted towards **Food and Beverages** ($\sim 46\%$), giving food prices a disproportionate impact on the overall headline figure. This structure makes headline inflation highly susceptible to agricultural supply shocks.
- **New CPI Series:** The government is expected to release a **new CPI series** (with a base year of 2024) in 2026-27, which will adjust the weightages to better reflect current consumption patterns, likely reducing the overwhelming influence of the food component.
- **Fiscal vs. Monetary Policy Trade-off:** The low inflation and high real GDP growth create a delicate balance for policymakers. While the RBI cuts rates, the low nominal GDP growth (influenced by low inflation) strains the government's ability to meet its fiscal deficit and revenue targets.

Conclusion and UPSC Relevance

The prevalence of negative retail inflation in multiple Indian states, driven primarily by a statistical base effect and food price deflation, presents a complex economic scenario. While the overall macro-economic indicators show a favorable "Goldilocks" environment for monetary policy easing, the micro-level reality of **deflationary pressure on farm incomes** and its consequent risk to **rural demand** is a critical concern. For UPSC, this topic is relevant for understanding the mechanics of inflation, the challenges of monetary policy in a skewed CPI structure, and the impact of price volatility on vulnerable sections like farmers.

11. Inter-State Sugarcane Diversion from UP to Haryana

- **The Price Differential:** Sugarcane farmers in border villages of Uttar Pradesh (UP) are diverting their produce to mills in neighbouring Haryana due to a **higher State Advised Price (SAP)** offered



by the latter. Haryana's SAP is set at **₹415 per quintal** for early varieties, exceeding UP's SAP of **₹400 per quintal** by ₹15.

- **Economic Drivers for Farmers:** The differential of ₹15 per quintal is significant enough to influence a farmer's decision, especially when **input costs have surged**. Besides the higher SAP, Haryana also offers an **additional incentive** of a **faster payment mechanism** compared to mills in UP, making the trade more lucrative.
- **Geographical and Logistical Viability:** The diversion is concentrated in western UP districts bordering Haryana, such as Saharanpur, Shamli, Baghpat, and Muzaffarnagar. The inter-state sale is logistically viable only when the farmer's field is within a **20 km radius** of the mills, thus limiting the immediate impact but highlighting the competitive pressure on border mills.
- **Policy Implications for States:** This trend, though currently limited in scale, puts **substantial pressure on UP** and other states to either raise their sugarcane prices or revisit procurement policies to ensure farmers receive competitive remuneration. Failure to do so incentivises farmers to cross state borders, potentially causing supply issues for local mills.
- **UP Government's Response:** The UP government is actively **keeping a vigil** to discourage farmers from diverting their crop to Haryana. Their primary strategy is to ensure that payments are made to UP farmers **on time by local mills**, aiming to mitigate the financial incentive and address the 'faster payment' appeal of Haryana's mills.



Key Definitions & Concepts

- **State Advised Price (SAP):** The minimum price fixed by a State Government that sugar mills are legally obligated to pay to sugarcane farmers. SAP is typically higher than the Centre's **Fair and Remunerative Price (FRP)**.
- **Fair and Remunerative Price (FRP):** The minimum price that sugar mills must pay, determined by the Central Government on the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**.
- **Input Costs:** The expenses incurred by a farmer to produce a crop, including seeds, fertilizers, irrigation, labour, and fuel.

Constitutional & Legal Provisions

- **Entry 33 of the Concurrent List (List III, Seventh Schedule):** Deals with trade and commerce in, and the production, supply, and distribution of, **products of any industry** where the control of such industry by the Union is declared by Parliament to be expedient in the public interest. Sugar industry is regulated under this.
- **Essential Commodities Act, 1955:** Provides the legal framework for the Central and State Governments to regulate the production, supply, and distribution of essential commodities, including sugarcane and sugar.
- **Sugarcane (Control) Order, 1966:** Issued under the Essential Commodities Act, this order empowers the Central Government to fix the minimum price (FRP) and State Governments to fix their own prices (SAP).



Additional Important Keypoints

- **Inter-State Price War:** The diversion highlights the challenge of maintaining a consistent price structure for a crucial cash crop like sugarcane across states, leading to an effective, albeit geographically limited, "price war."
- **Impact on Mills:** Western UP mills, which are already facing tight margins due to delayed cane payments and regulated sugar sale prices, face a dual challenge: higher input costs for their cane (due to the potential need to match Haryana's SAP) and lower supply due to diversion.

Conclusion and UPSC Relevance

The inter-state diversion of sugarcane from UP to Haryana due to the SAP differential underscores a critical political economy issue: the divergence between the Centre's FRP and State-specific SAPs. While the higher SAP benefits farmers by ensuring better returns against rising input costs, the resulting cross-border flow disrupts the supply chain for state mills and puts pressure on state finances. The solution lies in better Centre-State coordination on price fixation, addressing the input cost inflation, and enforcing timely payments to maintain the viability of the sugar industry across states.

UPSC Relevance (GS Paper III & II):

- **GS-III (Economy & Agriculture):** Cropping Patterns, MSP/FRP/SAP mechanism, Food Processing Industry (Sugar Industry), Factors affecting farmer income, Supply Chain dynamics, Subsidies.
- **GS-II (Polity & Governance):** Federalism (Centre-State conflict on pricing, Concurrent List issues), Role of State Governments in economic policy.

12. India's Evolving Biosecurity Framework and Challenges

- **Rising Threat from New-Age Biotechnology:** Advances in biotechnologies, such as CRISPR and synthetic biology, bestow increased control over biological agents. This capability raises the significant risk of **intentional misuse** by malicious actors and non-state actors (e.g., alleged preparation of Ricin toxin), necessitating a robust biosecurity upgrade to protect human, animal, and plant health.
- **Biosecurity vs. Biosafety Distinction:** **Biosecurity** refers to practices and systems designed to **deter the intentional misuse** (theft, diversion, or deliberate release) of biological agents, toxins, or technologies. **Biosafety** refers to practices designed to prevent the **unintentional or accidental leakage** of pathogens. A strong biosafety protocol is a foundational component of biosecurity.
- **India's High Vulnerability:** India's vast geography, high population density, rich biodiversity, and heavy **dependence on agriculture** make it extremely vulnerable to cross-border bio-risks. An attack on crops or livestock could severely jeopardize food security and national economic stability, reinforcing the urgency for a cohesive defense mechanism.
- **Existing but Fragmented Legal and Institutional Framework:** India has multiple agencies and laws:
 - **Agencies:** Department of Biotechnology (research governance), National Centre for Disease Control (outbreak surveillance), Department of Animal Husbandry (livestock biosecurity), and Plant Quarantine Organisation (agricultural imports).





- **Laws: Environment (Protection) Act, 1986** (governs GMOs/hazardous microbes) and the **Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005** (criminalizes biological weapons).
- **Gap in Unified National Framework:** Despite the multitude of engaged agencies, India currently lacks a **unified national biosecurity framework**. This fragmentation leads to gaps in coordination, surveillance, and effective response. The country's performance on the **Global Health Security Index (currently ranked 66th)** indicates that while detection capability has improved, the capacity for effective threat response has reduced.
- **International Commitments:** India is a signatory to the **Biological Weapons Convention (BWC), 1975**, the first multilateral treaty banning an entire category of Weapons of Mass Destruction (WMD), which prohibits the development, production, stockpiling, and acquisition of biological weapons. India also participates in the **Australia Group**, an informal arrangement aimed at harmonizing export controls on items that could be used for chemical or biological weapons.

Key Definitions & Concepts

- **Biological Agents:** Naturally occurring or engineered microorganisms (bacteria, viruses, fungi) or toxins that can cause disease or death in humans, animals, or plants.
- **Dual-Use Research:** Biological research that provides clear benefits but could also be misused to pose a threat to public health or security.
- **Bioweapons:** Weapons of Mass Destruction (WMD) that use biological agents or toxins to kill or incapacitate humans, animals, or plants.

Constitutional & Legal Provisions

- **Entry 15 of the State List (List II):** Deals with "Public health and sanitation" and "preservation, protection and improvement of stock," giving states a primary role in health and animal biosecurity.
- **Entry 10 of the Union List (List I):** Covers "Foreign affairs, all matters which bring the Union into relation with any foreign country," under which the Central Government handles international treaties like the BWC.
- **Article 21 (Right to Life):** A robust biosecurity framework is integral to protecting the fundamental right to life and health of the population.

Additional Important Keypoints

- **One Health Approach:** Effective biosecurity necessitates the adoption of a **One Health approach**, recognizing the interconnectedness of human, animal, and environmental health, thereby requiring seamless coordination across different nodal agencies.
- **Biosecurity in Defense:** The need for specialized bio-defense capabilities, including advanced pathogen detection and rapid countermeasure development, is paramount to addressing sophisticated biotreats.
- **Modernizing Laws:** The need to modernize outdated legal frameworks to keep pace with the rapid and complex advancements in biotechnology is a critical gap that must be addressed to effectively regulate dual-use research.

Conclusion and UPSC Relevance



The evolution of biotechnology and the rising threat from both state and non-state actors necessitate an urgent and transformative upgrade of India's biosecurity apparatus. The current fragmented institutional and legal framework, reflected in the low Global Health Security Index ranking, poses a profound risk to national security and public health. Establishing a **unified, One Health-integrated National Biosecurity Framework** is essential for coordinating threat detection, response, and international cooperation (under BWC) to safeguard India's large population and vital agricultural sector from biological disasters.

UPSC Relevance (GS Paper II & III):

- **GS-III (Security & Science and Tech):** Challenges to Internal Security (Bioweapons, Non-state actors), Role of Biotechnology, Science and Technology in defense, Disaster Management (Biological Disasters).
 - **GS-II (IR & Governance):** International Treaties (BWC, Australia Group), Health and Governance, Institutional Frameworks for national security.
-