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VIDHVATH IAS KAS ACADEMY & STUDY CENTRE

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FOR UPSC CIVIL SERVICE EXAMINATION

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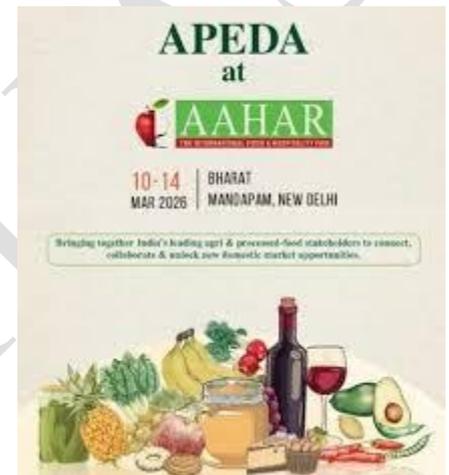
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1. APEDA'S Strategic Push for Agri-Exports at AAHAR 2026

- **Milestone in Export Revenue:** India's agricultural and processed food exports have surpassed the significant threshold of ₹5 lakh crore annually, marking a decade of robust growth in the export of pulses, fruits, vegetables, and processed items.
- **Expansion through Trade Diplomacy:** Recent Free Trade Agreements (FTAs) with the UAE, Australia, and EFTA nations (including Switzerland) have provided preferential market access to nearly two-thirds of global trade, benefiting MSMEs and farmers.
- **Knowledge-Driven Strategy: Agricultural and Processed Food Products Export Development Authority (APEDA),** in collaboration with ICRIER, released specialized research reports for products like cucumber, cashew, pineapple, and pomegranate to enhance supply chain efficiency and global competitiveness.
- **Innovation in Packaging and GI Branding:** New technical packaging standards developed with the Indian Institute of Packaging (IIP) were launched for GI-tagged products, including Karbi Anglong Ginger and Prayagraj Surkha Guava, to improve shelf life and international appeal.
- **Focus on Emerging Segments:** The 40th edition of AAHAR emphasized high-growth sectors such as Basmati rice, organic produce, and sustainable plant-based food alternatives, reflecting shifting global consumer preferences.
- **Collaborative Federalism:** The event featured pavilions from over 18 states, integrating local producer organizations and startups into the global B2B ecosystem to showcase region-specific agricultural strengths.



Key Definitions and Institutional Framework

- **APEDA:** The Agricultural and Processed Food Products Export Development Authority is a statutory body established under the APEDA Act, 1985. It functions under the Ministry of Commerce and Industry to promote the export of scheduled products.
- **GI Tag (Geographical Indication):** A sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin (e.g., Jalgaon Banana). It is governed by the GI of Goods (Registration and Protection) Act, 1999.
- **EFTA (European Free Trade Association):** An intergovernmental organization of Iceland, Liechtenstein, Norway, and Switzerland, recently engaged with India for broad-based trade and economic partnership.

Constitutional and Legal Provisions

- **Article 246 (Seventh Schedule):** While "Agriculture" is a State Subject (Entry 14, List II), "Inter-state trade and commerce" and "Establishment of standards of quality for goods to be exported" fall under the Union List (Entries 42 and 51, List I), giving the Center the mandate for export promotion.
- **Foreign Trade (Development and Regulation) Act, 1992:** Provides the primary legal framework for the development and regulation of foreign trade by facilitating imports into and augmenting exports from India.



Conclusion

The participation of APEDA at AAHAR 2026 underscores India's transition from a primary producer to a value-added exporter in the global food value chain. By leveraging FTAs and focusing on quality standards for GI-tagged goods, India is positioning its "Brand India" as a reliable, high-quality supplier in the international market, ultimately aiming to double farmers' income through export-led growth.

UPSC Relevance

- **General Studies II:** Government policies and interventions for development in various sectors; International treaties and agreements (FTAs).
- **General Studies III:** Economics of animal-rearing and food processing; Issues related to direct and indirect farm subsidies and MSP; Land reforms; Infrastructure; Supply chain management.
- **Prelims:** Statutory bodies (APEDA), GI Tags, and India's major export destinations and commodities.

2. Escalating Maritime Conflict in the Persian Gulf: Global Energy and Security Implications

- **Systemic Attacks on Commercial Shipping:** The security situation in the Middle East has deteriorated as Iran targeted commercial vessels, including the India-bound Thai cargo ship *Mayuree Naree*, near the strategic Strait of Hormuz, resulting in crew members going missing and vessels being set ablaze.
- **Expanding Conflict Theater:** Beyond maritime targets, Iranian drone strikes have been reported near Dubai International Airport and across Kuwait and Saudi Arabia, specifically targeting the Shaybah oil field, marking a shift from naval skirmishes to attacks on critical regional infrastructure.
- **India's Strategic Concerns:** The Ministry of External Affairs (MEA) has officially deplored the targeting of commercial shipping, emphasizing the risk to Indian citizens and the sanctity of international trade routes, especially for vessels destined for Indian ports like Kandla in Gujarat.
- **Global Energy Crisis and IEA Response:** With Brent crude prices rising by approximately 20% since the onset of hostilities, the International Energy Agency (IEA) has announced the release of 400 million barrels of oil from emergency reserves—the largest release in history—to stabilize global markets.
- **Retaliatory Cycles:** These escalations follow intense American airstrikes on Iranian naval assets and the port of Bandar Abbas, with Iran threatening to further target financial institutions in West Asia in response to strikes on its sanctioned banking entities.
- **Threat to Global Chokepoints:** The focus of attacks on the Strait of Hormuz poses a direct threat to nearly 1/5th of the world's total oil consumption that passes through this narrow waterway daily, raising fears of a prolonged global energy supply chain disruption.





Key Definitions and Strategic Concepts

- **Strait of Hormuz:** A vital maritime chokepoint between the Persian Gulf and the Gulf of Oman. It is the world's most important oil transit route, through which a significant portion of India's crude oil imports pass.
- **International Energy Agency (IEA):** An autonomous intergovernmental organization established in the framework of the OECD to help countries respond to major oil supply disruptions. India is an "Association Country" of the IEA.
- **Strategic Petroleum Reserves (SPR):** Emergency fuel storage maintained by countries to ensure economic stability during energy supply shocks. India maintains its SPR at Visakhapatnam, Mangaluru, and Padur.

Constitutional and Legal Framework

- **Article 51 of the Constitution:** Under Directive Principles of State Policy, India is committed to promoting international peace and security and maintaining just and honorable relations between nations.
- **UNCLOS (United Nations Convention on the Law of the Sea):** The "Constitution of the Oceans" which provides the legal framework for the "Right of Innocent Passage" through territorial waters and "Transit Passage" through international straits like Hormuz.
- **Suppression of Unlawful Acts (SUA) against Safety of Maritime Navigation:** An international treaty (to which India is a party) that provides a legal basis for action against persons committing acts of violence against ships or their crews.

Conclusion

The targeting of civilian maritime assets represents a significant breach of international maritime law and poses a dual threat to India's energy security and the safety of its diaspora working in the Gulf. As regional tensions transition into a broader kinetic conflict involving vital infrastructure and financial institutions, the global community faces the challenge of maintaining the freedom of navigation while preventing a total energy market collapse.

UPSC Relevance

- **General Studies II:** India and its neighborhood-relations; Effect of policies and politics of developed and developing countries on India's interests; Indian diaspora.
- **General Studies III:** Energy security; Security challenges and their management in border areas (Maritime Security); Role of external state and non-state actors in creating challenges to internal security.
- **Prelims:** Mapping (Strait of Hormuz, Persian Gulf, Oman coast, Bandar Abbas); International Organizations (IEA); Maritime Laws (UNCLOS).

3. Uniform National Cooperative Ecosystem: Vision 2025 and Beyond

- **NCP 2025 and Strategic Pillars:** The National Cooperation Policy (NCP) 2025 is built upon six strategic pillars, with a core focus on inclusivity. It aims to deepen the reach of cooperatives among youth, women, and marginalized sections (SC/ST, specially-abled) to ensure equitable economic participation.



- **Expansion of Primary Units:** Significant growth has been recorded in the cooperative sector with the registration of 33,853 new Multipurpose PACS (M-PACS), Dairy, and Fishery societies. This is part of a larger plan to establish a cooperative presence in every Panchayat and village within the next five years.
- **Technological Integration:** To ensure transparency and efficiency, a ₹2925.39 crore project for the computerization of over 79,000 functional PACS is underway. This involves adopting a common ERP-based national software linked directly with NABARD, facilitating seamless financial flow.
- **White Revolution 2.0:** This initiative targets a 50% increase in milk procurement by dairy cooperatives over the next five years. It emphasizes empowering women and providing market access to dairy farmers in previously uncovered geographical areas.
- **Diversification of PACS:** Primary Agriculture Credit Societies (PACS) are being transformed into multi-service entities. They are now authorized to function as Common Service Centres (CSCs), Jan Aushadhi Kendras, and retail outlets for petrol/diesel, effectively becoming one-stop shops for rural needs.
- **World's Largest Grain Storage Plan:** A decentralized infrastructure project is being implemented at the PACS level to create warehouses and custom hiring centres. By converging various government schemes, the plan aims to reduce post-harvest losses and enhance the bargaining power of farmers.



Key Definitions and Infrastructure

- **PACS (Primary Agricultural Credit Societies):** The lowest tier of the Three-Tier Short-term Cooperative Credit Structure in India, operating at the village level to provide credit and agricultural inputs.
- **Sahakar-se-Samridhi:** The vision of "Prosperity through Cooperation," aimed at making cooperatives the backbone of rural development and self-reliance.
- **National Cooperative Database (NCD):** A comprehensive digital repository launched to capture disaggregated data on cooperative societies to enable targeted policy interventions.

Constitutional and Legal Provisions

- **97th Constitutional Amendment Act, 2011:** It accorded constitutional status and protection to cooperative societies. It added "cooperative societies" to the Right to Form Associations under **Article 19(1)(c)** and inserted **Article 43B** (Promotion of cooperative societies) in the DPSP.



- **Entry 32, List II (State List):** Agriculture and Cooperative Societies are primarily state subjects. However, Multi-State Cooperative Societies (MSCS) fall under **Entry 44, List I (Union List)**.
- **Multi-State Co-operative Societies Act, 2002:** The primary legal framework for cooperatives operating in more than one state, recently amended to enhance transparency and election procedures.

Conclusion

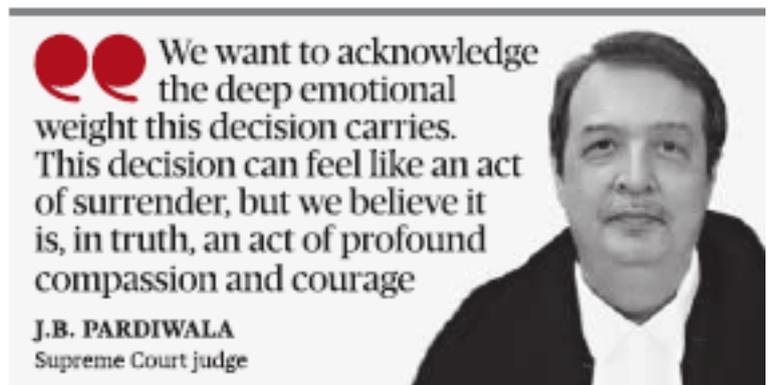
The transition toward a "Uniform National Cooperative Ecosystem" represents a paradigm shift from traditional credit-lending to multi-dimensional business enterprises. By integrating technology, diversifying services, and ensuring constitutional safeguards, the cooperative sector is being positioned as a primary driver of India's ₹5 trillion economy goal, particularly through the empowerment of the rural and marginalized populations.

UPSC Relevance

- **General Studies II:** Development processes and the development industry—the role of NGOs, SHGs, and various groups and associations (Cooperatives).
- **General Studies III:** Agriculture and related activities; Supply chain management; Food security (Grain Storage Plan); and inclusive growth.
- **Prelims:** 97th Amendment Act, Ministry of Cooperation initiatives (White Revolution 2.0, PACS computerization), and statutory frameworks like the MSCS Act.

4. Judicial Recognition of the Right to Die with Dignity: The Harish Rana Case

- **Landmark Enforcement of 2018 Guidelines:** For the first time, the Supreme Court has practically implemented the 2018 Constitution Bench guidelines (Common Cause v. Union of India) by allowing the withdrawal of life-sustaining treatment for a patient in a persistent vegetative state.
- **Recognition of Dignity in Death:** The court upheld that the "Right to Life" under Article 21 includes the right to die with dignity, particularly when a patient has no prospect of recovery and is surviving solely on Clinically Assisted Nutrition and Hydration (CANH).
- **Withdrawal of Life Support:** The Bench permitted the cessation of CANH for 32-year-old Harish Rana, who suffered 100% quadriplegic disability for 13 years, characterizing the move not as "giving up" but as an act of "profound compassion."
- **Shift in Legal Terminology:** The ruling acknowledged that the term "passive euthanasia" is increasingly viewed as obsolete and confusing, preferring the more precise medical description of "withdrawal of life-sustaining treatment."
- **Best Interest Principle:** The decision was rooted in the "best interest" of the patient, balancing medical stoicism with the emotional and physical suffering of the individual and their primary caregivers.





- **Judicial Role in Medical Ethics:** By delivering a 286-page opinion, the court has provided a detailed legal framework for how high courts and medical boards should navigate the delicate intersection of medical technology, ethics, and human rights.

Key Definitions and Medical Ethics

- **Persistent Vegetative State (PVS):** A condition in which a patient is wakeful but has no cognitive awareness or ability to interact with the environment due to severe brain damage.
- **CANH (Clinically Assisted Nutrition and Hydration):** Medical interventions (such as tubes) that provide food and water to patients who cannot swallow or digest normally.
- **Passive Euthanasia:** The act of withdrawing or withholding medical treatment or life support, allowing a terminally ill patient to die naturally.
- **Living Will (Advance Medical Directive):** A legal document in which a person specifies what actions should be taken for their health if they are no longer able to make decisions for themselves due to illness or incapacity.

Constitutional and Legal Provisions

- **Article 21 of the Constitution:** Interpreted by the Supreme Court to include the right to a dignified exit from life. While *Gian Kaur v. State of Punjab (1996)* initially held that the right to life does not include the right to die, the *Common Cause (2018)* judgment clarified that it does include the right to die with dignity.
- **Common Cause v. Union of India (2018):** The landmark case that legalized passive euthanasia and advance directives in India, establishing strict protocols involving medical boards and judicial magistrates.
- **Parens Patriae Jurisdiction:** The legal doctrine where the court acts as the "parent of the nation," making decisions for those who are unable to care for or make decisions for themselves, such as patients in PVS.

Conclusion

The Supreme Court's ruling in the Harish Rana case marks a pivotal moment in Indian jurisprudence, moving from theoretical guidelines to the actual exercise of the right to die with dignity. By acknowledging the limitations of medical science and the reality of human suffering, the court has reinforced that the sanctity of life is not merely about biological survival but about the quality and dignity of that existence.

UPSC Relevance

- **General Studies II:** Important Supreme Court judgments; Evolution of Fundamental Rights; Judiciary's role in social and ethical issues.
- **General Studies IV (Ethics):** Ethical dilemmas in medical science; Euthanasia and the sanctity of life; Compassion as a judicial and social value.
- **Essay Paper:** Topics related to human rights, medical ethics, and the definition of a "dignified life."

5. Historical Discovery in Gadag: Vijayanagara-era Gold Ornaments

- **Archaeological Context:** A treasure evaluation committee has estimated that 466 grams of gold ornaments discovered in Lakkundi, Karnataka, are approximately 500-600 years old, dating back to the Vijayanagara Empire (14th-17th century).



- **Artistic Significance:** The ornaments feature intricate "Keertimukh" (Face of Glory) and lion motifs, which were historically reserved for deities or royalty rather than the general public.
- **Composition and Value:** The collection includes gold embedded with pearls, emeralds, and blue sapphires; while the bullion value is estimated at ₹80 lakh, the historical and antique value is considered ten times higher.
- **Religious Implications:** Archaeologists suggest the items were likely "Devabhushana" (ornaments for a female deity), given the specific iconography and the nature of the craftsmanship.
- **Discovery Locale:** Found at a depth of five feet in a copper container (*charige*) during house renovation in Lakkundi village, a site known for its rich Chalukyan and Hoysala architectural heritage.
- **Civic Responsibility:** The find was voluntarily handed over to the local administration by the Ritti family, highlighting the successful implementation of heritage conservation protocols at the grassroots level.

Key Definitions and Historical Terminology

- **Keertimukh (Face of Glory):** A common motif in Indian temple architecture and jewelry, representing a swallowing monster face with bulging eyes, often used as a protective symbol.
- **Lakkundi:** Historically known as *Lokkigundi*, it was a major city of the Later Chalukyas, Kalachuris, and Seunas, famous for its numerous temples and stepwells (Kalyanis).
- **Treasure Trove:** Under Indian law, any money, bullion, or precious stones found hidden in the soil, the owner of which is unknown.



Constitutional and Legal Provisions

- **Article 49 (DPSP):** It is the obligation of the State to protect every monument or place or object of artistic or historic interest, declared by or under law made by Parliament to be of national importance.
- **Article 51A(f):** A Fundamental Duty of every citizen to value and preserve the rich heritage of the country's composite culture.
- **Indian Treasure Trove Act, 1878:** This colonial-era law (still in practice) mandates that any treasure found exceeding ₹10 in value must be reported to the District Collector. The finder may be entitled to a share of the value or the object itself under specific conditions if no owner is found.
- **Antiquities and Art Treasures Act, 1972:** Regulates the export and internal trade of antiquities to ensure the preservation of objects over 100 years old in their place of origin.

Conclusion

The Lakkundi find provides a rare material glimpse into the zenith of the Vijayanagara Empire's craftsmanship. It underscores the importance of the Gadag region as a critical archaeological corridor in South India. For a nation striving to preserve its "Amrit Virasat," such discoveries necessitate a robust framework for documentation and the strengthening of local museums to prevent the illicit trade of national heritage.



UPSC Relevance

- **General Studies I:** Indian Culture - Salient aspects of Art Forms, Literature, and Architecture from ancient to medieval times (specifically Vijayanagara and Chalukyan influences).
- **General Studies II:** Government policies for the preservation of heritage and the functioning of the Archaeological Survey of India (ASI).
- **Prelims:** Specific motifs (Keertimukh), historical geography (Lakkundi/Gadag), and legal acts governing antiquities in India.

6. Technology-Driven District-Level Early Warning Systems (EWS) for Disasters

- **Operationalizing District-Level EWS:** The India Meteorological Department (IMD) now provides district-wise weather updates four times daily, with a seven-day validity. This system focuses on high-impact events like heavy rainfall and cyclones, ensuring that local authorities have actionable data for immediate disaster response.
- **Nodal Agencies and Flood Forecasting:** The Central Water Commission (CWC) serves as the primary agency for flood alerts, operating 350 forecasting stations. This includes 150 inflow stations for dams and 200 level stations for rivers, providing a critical lead time of up to seven days through advanced mathematical modelling.
- **Granular Monitoring via C-Flood & Flood Watch:** The "C-Flood" platform offers village-level inundation maps for the Godavari, Tapi, and Mahanadi basins using 2D hydrodynamic modelling. Complementing this, the "Flood Watch India" app provides real-time status updates for 500 monitoring stations and 150 reservoirs.
- **Last-Mile Connectivity and Fishermen Safety:** Dissemination is streamlined through the Common Alerting Protocol (CAP) and the NAVIC satellite system. Special provisions for deep-sea fishermen include alerts via INCOIS and All India Radio, ensuring no "communication dark zones" during maritime emergencies.
- **Institutional Synergy:** The system integrates central agencies (IMD, CWC, INCOIS) with State Disaster Management Authorities (SDMAs). Warnings are channeled through State Emergency Operation Centres (SEOCs) to local sirens and mobile alerts, creating an end-to-end disaster communication loop.
- **Financial Backing for Mitigation:** Strengthening of EWS infrastructure is funded through the State Disaster Response Fund (SDRF) and State Disaster Mitigation Fund (SDMF), with additional support from national-level funds (NDRF/NDMF) based on gravity and requirements.



Ministry of Earth Sciences

District-level Early Warning Systems for Floods and Cyclones Operational Across Vulnerable Districts: Dr. Jitendra Singh in Lok Sabha

Technology-Driven Early Warning Systems Strengthening Disaster Preparedness, says Dr Jitendra Singh in Lok Sabha

Flood Watch India App Provides Real-Time Alerts from 200 Forecasting Stations: Dr Jitendra Singh

Government Enhancing Public Awareness and Local Response to Early Weather Warnings, says Dr Jitendra Singh

Posted On: 11 MAR 2026 7:18PM by PIB Delhi

Key Definitions and Digital Platforms

- **Common Alerting Protocol (CAP):** An international standard format for emergency alerts and public warnings, designed for "all-hazards" over all types of networks.



- **Inundation Forecasting:** The process of predicting the extent, depth, and duration of flooding in a specific area, often visualized through color-coded maps (Red, Orange, Yellow).
- **Quantitative Precipitation Forecast (QPF):** A technical estimate of the amount of liquid precipitation expected to fall in a specified area over a set period.
- **NAVIC (Navigation with Indian Constellation):** India's autonomous regional satellite navigation system, used here for transmitting emergency messages to fishermen beyond the range of terrestrial mobile networks.

Constitutional and Legal Provisions

- **Disaster Management Act, 2005:** The primary legal framework that mandates the creation of the NDMA (National) and SDMA (State). It provides the statutory basis for the "National Policy on Disaster Management."
- **Article 21 (Right to Life):** The Supreme Court has interpreted the right to a safe environment and protection from man-made/preventable disasters as an extension of the Fundamental Right to Life.
- **Entry 23, List III (Concurrent List):** "Social security and social insurance; employment and unemployment," often used in the context of disaster relief, though Disaster Management as a specific subject is handled through the residuary powers of the Union and coordinated federalism.

Conclusion

The shift from a "reactive" to a "proactive" disaster management paradigm is evident in the deployment of high-resolution tools like C-Flood and NAVIC-linked alerts. By bridging the gap between scientific data and local-level dissemination, India is moving toward a "Zero Casualty" goal for recurring natural hazards. The success of these systems, however, depends on the continuous technological upgrading of last-mile infrastructure and sustained community awareness programs.

UPSC Relevance

- **General Studies I:** Important Geophysical phenomena such as cyclones and floods; Geographical features and their location-changes in critical geographical features.
- **General Studies III:** Disaster and disaster management; Role of external state and non-state actors in creating challenges to internal security (infrastructure security); Science and Technology-developments and their applications and effects in everyday life.
- **Prelims:** Nodal agencies for various disasters (CWC for floods, IMD for cyclones), Satellite systems (NAVIC), and various disaster-related funds (SDRF/NDRF).

7. Strengthening Digital Sovereignty: UIDAI Launches Bug Bounty Programme

- **Structured Cybersecurity Initiative:** The Unique Identification Authority of India (UIDAI) has officially launched its first structured **Bug Bounty Programme**. This proactive measure aims to enhance the security architecture of the Aadhaar ecosystem by inviting external experts to identify and report potential technical vulnerabilities.
- **Engagement of Ethical Hackers:** A high-level panel consisting of **20 experienced security researchers and ethical hackers** has been curated for this initiative. These "white-hat" hackers are tasked with probing key digital assets, including the UIDAI official website, the *myAadhaar* portal, and the Secure QR Code application.



- **Risk-Based Reward Mechanism:** Vulnerabilities discovered by researchers are classified into four tiers—**Critical, High, Medium, and Low risk**. Monetary rewards and professional recognition are granted based on the severity and potential impact of the reported gap, aligning India's security protocols with global tech standards.
- **Strategic Partnerships:** The programme is being implemented in collaboration with **M/s ComOlho IT Private Limited**, a specialized cybersecurity solution provider. This partnership ensures a structured framework for "Responsible Disclosure," preventing the misuse of discovered flaws.
- **Layered Defense Strategy:** The Bug Bounty Programme functions as an additional tier in UIDAI's "Defense in Depth" strategy, supplementing existing measures such as regular security audits, continuous monitoring, and penetration testing (VAPT).
- **Focus on Data Integrity:** By stress-testing the world's largest digital identity platform (covering over 1.3 billion residents), the initiative serves to safeguard sensitive biometric and demographic data against evolving cyber threats and identity fraud.



Key Definitions and Cybersecurity Concepts

- **Bug Bounty Programme:** A crowdsourcing initiative where an organization rewards individuals for finding and reporting software bugs or vulnerabilities before they can be exploited by malicious actors.
- **Ethical Hacker (White-Hat):** A cybersecurity professional who uses their skills to find vulnerabilities in a system with the owner's permission, with the goal of improving security rather than causing harm.
- **Responsible Disclosure:** A vulnerability disclosure model where a researcher reports a flaw to the organization and gives them a reasonable period to patch it before making the information public.
- **Vulnerability Assessment and Penetration Testing (VAPT):** A comprehensive security testing process that identifies vulnerabilities in an IT environment (Assessment) and attempts to exploit them to test the effectiveness of defenses (Penetration).

Constitutional and Legal Provisions

- **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016:** The primary legislation governing the Aadhaar ecosystem. Section 28 specifically mandates UIDAI to ensure the security of identity information and authentication records.
- **Article 21 (Right to Privacy):** Following the *K.S. Puttaswamy v. Union of India (2017)* judgment, the "Right to Privacy" is a fundamental right. Protecting Aadhaar data is a direct constitutional obligation of the state to ensure the privacy of its citizens.
- **Digital Personal Data Protection (DPDP) Act, 2023:** This Act provides a comprehensive framework for the processing of digital personal data, emphasizing the "Data Fiduciary" (UIDAI in this case) responsibility to maintain high-fidelity security safeguards.
- **IT (Procedures and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009:** Under the IT Act, 2000, these rules provide the legal basis for maintaining the security and integrity of critical digital infrastructure.



Conclusion

The launch of the Bug Bounty Programme signifies a strategic shift from a "closed-door" security model to a collaborative, community-supported defense mechanism. As Aadhaar underpins India's Digital Public Infrastructure (DPI), maintaining its integrity is not just a technical requirement but a prerequisite for national security and public trust. This move positions UIDAI as a global leader in adapting to the "Zero-Trust" security paradigm required in the modern digital age.

UPSC Relevance

- **General Studies II:** Important aspects of governance, transparency, and accountability; e-governance applications and models; Role of statutory bodies (UIDAI).
- **General Studies III:** Challenges to internal security through communication networks; Role of media and social networking sites in security challenges; Basics of cybersecurity; Awareness in the fields of IT and Computers.
- **Prelims:** Nodal Ministry for UIDAI (MeitY), Statutory status of Aadhaar, DPDP Act 2023 provisions, and major cybersecurity terms.

8. Comprehensive Development of India's Frontiers: VVP and BADP Framework

- **Evolution of Border Development:** The Government has transitioned from the traditional Border Area Development Programme (BADP) to the more targeted Vibrant Villages Programme (VVP). While BADP covered 38,715 projects across 16 States and 2 UTs, VVP focuses on intensive, holistic development of villages directly abutting international borders to prevent migration and enhance security.
- **Vibrant Villages Programme Phase-I (VVP-I):** Approved for 46 blocks in 19 districts across the Northern Border (Arunachal Pradesh, Himachal Pradesh, Ladakh, Sikkim, and Uttarakhand). It emphasizes multi-sectoral convergence, including renewable energy, tourism, and livelihood generation, with over 2,662 projects sanctioned thus far.
- **Strategic Expansion via VVP-II:** A new Central Sector Scheme, VVP-II, has been approved with an outlay of ₹6,839 crore extending until FY 2028-29. This phase expands the coverage to blocks abutting all International Land Borders (ILBs) not covered in Phase-I, aiming to assimilate border populations and deter inimical activities.
- **Connectivity and Infrastructure:** A massive push for physical infrastructure is evident with the sanctioning of 112 roads and 35 Large Span Bridges (LSBs) worth ₹2,513.35 crore. These projects aim to provide all-weather connectivity to 135 previously unconnected villages, facilitating both troop movement and local tourism.
- **Integrated Check Posts (ICPs):** The Land Ports Authority of India (LPAI) has operationalized 15 ICPs across borders with Pakistan, Bangladesh, Nepal, Myanmar, and Bhutan. These serve as "Sanitized Zones" for cross-border trade and passenger movement, with recent additions in Sabroom (Tripura) and Darranga (Assam).





- **Security-Development Nexus:** The primary objective of these schemes is to create "model villages" that act as a first line of defense. By improving living conditions and providing livelihood opportunities in sectors like animal husbandry and fisheries, the government seeks to ensure that border populations remain "stakeholders" in national security.

Key Definitions and Institutional Entities

- **Vibrant Villages Programme (VVP):** A Centrally Sponsored Scheme (now evolving into Central Sector for Phase-II) designed to improve infrastructure and provide livelihood in border villages to reverse out-migration.
- **LPAI (Land Ports Authority of India):** A statutory body under the Ministry of Home Affairs responsible for creating, maintaining, and managing facilities for cross-border movement of passengers and goods.
- **Integrated Check Post (ICP):** A world-class facility housing customs, immigration, border security, and warehousing under one roof to facilitate seamless international trade.

Constitutional and Legal Provisions

- **Entry 1 & 2, List I (Union List):** Defense of India and Armed Forces. Border management is a core Union responsibility under the Seventh Schedule.
- **Article 275(1):** Provision for grants from the Union to certain States, often utilized for the development of Scheduled Areas and border regions to bring them at par with the rest of the country.
- **Land Ports Authority of India Act, 2010:** The legal framework that provides the mandate to LPAI to manage border trade infrastructure.

Conclusion

The shift from sporadic project-based development to a comprehensive "Vibrant Village" model reflects India's revised border management strategy. By treating border villages as strategic assets rather than remote peripheries, the state is effectively integrating internal security with rural development. The operationalization of 15 ICPs further complements this by transforming borders from "fences" into "gateways" for economic prosperity.

UPSC Relevance

- **General Studies II:** Government policies and interventions for development in various sectors; Infrastructure (ICPs and Roads).
- **General Studies III:** Security challenges and their management in border areas; Linkages of organized crime with terrorism; Science and Technology in border management.
- **Prelims:** Mapping of ICPs (e.g., Moreh, Petrapole, Dawki); VVP coverage states; Statutory status of LPAI.

9. International Year of the Woman Farmer 2026: Recognizing the Invisible Backbone of Agriculture

- **The Statistical Gap and Undercounting:** While the United Nations has designated 2026 as the International Year of the Woman Farmer, official Indian surveys like the Periodic Labour Force Survey (PLFS) often fail to capture the true scale of women's participation. This "invisibility" stems from the intermingling of agricultural work with unpaid care work and the intermittent nature of farm-based labor.



- **Feminization of Agriculture:** Data indicates a structural shift where the proportion of rural women classified as 'self-employed' rose from 60% in 2011-12 to 73% in 2023-24. For the first time in post-Independence history, the number of female hired workers in agriculture (21.7 million) has exceeded male workers (19.7 million), signaling a deep-seated feminization of the sector.
- **Prevalence in Allied Sectors:** Women are the primary workforce in livestock rearing, which is one of the fastest-growing agricultural segments. Approximately 40 million rural women are engaged in animal husbandry, spending nearly 2 hours daily per animal, yet their implicit daily earnings remain as low as ₹100.
- **Stagnating Wages and Gender Pay Gap:** Despite their central role, women's wages are historically low and have barely risen when corrected for inflation. In states like Tamil Nadu, women earn less than 50% of the male wage rate, with the all-India average for women's agricultural work hovering around ₹384 per day as of late 2025.
- **Asset Ownership Disparity:** A critical bottleneck in the economic empowerment of women farmers is the lack of land rights. While they constitute nearly half of the agricultural workforce, only 10% of rural women own the land they cultivate, which severely limits their access to institutional credit, subsidies, and government schemes.
- **The "Self-Employment" Mirage:** The rise in women's work participation rate (from 35% in 2011-12 to 46.5% in 2023-24) is largely driven by a lack of alternative wage employment. This forced self-employment in low-productivity agriculture reflects a "distress-driven" entry into the workforce rather than an expansion of high-value opportunities.



Key Definitions and Conceptual Framework

- **Feminization of Agriculture:** The increasing participation of women in agricultural activities, often due to the out-migration of men to urban areas for non-farm work.
- **Implicit Daily Earning:** A calculated value of labor for self-employed individuals, derived by dividing the total net income from an activity (like milk production) by the total hours of labor invested.
- **Care Work:** Unpaid activities including childcare, cooking, and household management that often mask the economic contribution of women in rural surveys.

Constitutional and Legal Provisions

- **Article 39(d) of the DPSP:** Mandates "Equal pay for equal work for both men and women." The persistence of the gender wage gap in agriculture is a direct challenge to this constitutional directive.
- **Hindu Succession (Amendment) Act, 2005:** Granted equal rights to daughters in ancestral property, a landmark law aimed at correcting the gender imbalance in agricultural land ownership.
- **Equal Remuneration Act, 1976:** Provides for the payment of equal remuneration to men and women workers and prevents discrimination on the ground of sex against women in the matter of employment.



- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):** A critical legal safety net that mandates at least 1/3 participation by women and ensures equal wages, though it primarily covers manual casual labor rather than skilled farming.

Conclusion

The recognition of women as "farmers" rather than just "farm-help" is the primary challenge for Indian policy in 2026. Addressing the dual burden of undercounting and underpayment requires a multi-pronged approach: securing land titles for women (Lado-Laxmi models), institutionalizing gender-disaggregated data collection, and enhancing the productivity of livestock and allied sectors where women's labor is most concentrated.

UPSC Relevance

- **General Studies I:** Role of women and women's organization; Poverty and developmental issues.
- **General Studies III:** Issues related to direct and indirect farm subsidies; Economics of animal-rearing; Inclusive growth and issues arising from it.
- **Essay:** Topics related to "Hidden contributors to the economy" or "Gender justice in rural India."

10. Impact of West Asian Conflict on India's LPG Security and Energy Dependence

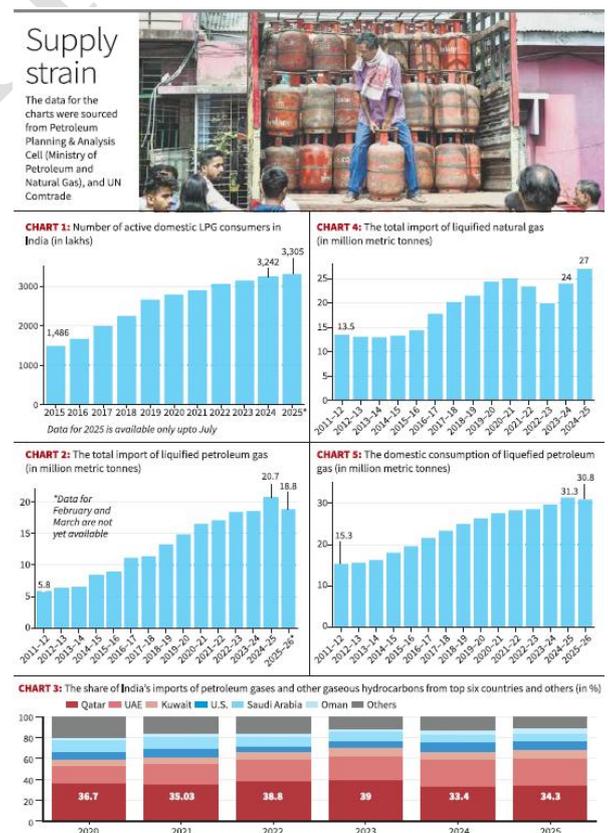
- **Rising Import Vulnerability:** India's reliance on foreign Liquefied Petroleum Gas (LPG) has reached a critical point, with nearly 60% of domestic requirements met through imports. The ongoing conflict between U.S.-Israel and Iran has directly threatened this supply chain, leading to a domestic price hike of ₹60 per cylinder on March 7, 2026.

- **Geographic Concentration of Supply:** India's LPG sourcing is heavily concentrated in the West Asian region. In 2025, Qatar accounted for 34% of imports, followed by the UAE (26%) and Kuwait (8.3%). This dependency makes India's energy security highly sensitive to regional instability and maritime disruptions.

- **Strait of Hormuz Bottleneck:** The closure of the Strait of Hormuz since March 1, 2026, has severely impacted shipments. As a vital energy artery between Iran and Oman, its blockade effectively chokes the primary route for gas imports from Qatar and other Persian Gulf suppliers.

- **Government Emergency Measures:** In response to the crisis, the Ministry of Petroleum and Natural Gas has mandated all domestic refineries and petrochemical complexes to maximize LPG production. Refining entities are currently barred from diverting output for other petrochemical uses, prioritizing the needs of Public Sector Oil Marketing Companies (OMCs).

- **Fiscal Pressure and Subsidy Cuts:** Despite a 27% reduction in LPG subsidy allocation in the 2026-27 Union Budget (down to ₹11,085 crore), the soaring global prices—with Brent crude crossing





\$100 per barrel—have forced the government to provide massive bailouts to OMCs like IOCL, BPCL, and HPCL to prevent a total consumer price shock.

- **Paradox of Clean Cooking Success:** The success of the Pradhan Mantri Ujjwala Yojana (PMUY) has increased LPG coverage to nearly 100%, doubling active consumers to 3,305 lakh in a decade. However, this transition to cleaner fuel has inadvertently deepened India's external energy dependence, as domestic production has not kept pace with the 120% rise in demand.

Key Definitions and Energy Infrastructure

- **LPG (Liquefied Petroleum Gas):** A flammable mixture of hydrocarbon gases (primarily propane and butane) used as fuel in heating appliances and vehicles. In India, it is the primary clean cooking fuel.
- **OMCs (Oil Marketing Companies):** State-owned entities (IOCL, BPCL, HPCL) responsible for the distribution and marketing of petroleum products in India.
- **Strait of Hormuz:** A narrow waterway connecting the Persian Gulf with the Gulf of Oman and the Arabian Sea. It is considered the world's most important energy chokepoint.
- **LNG (Liquefied Natural Gas):** Natural gas cooled to a liquid state for ease of non-pressurized storage or transport. It is vital for India's fertilizer and power sectors.

Constitutional and Legal Provisions

- **Article 297:** Provides that all lands, minerals, and other things of value underlying the ocean within the territorial waters, or the continental shelf, or the exclusive economic zone of India shall vest in the Union. This underscores the Union's role in energy security.
- **Essential Commodities Act, 1955:** Empowering the government to regulate the production, supply, and distribution of "essential" items like petroleum and its products during emergencies or supply disruptions.
- **The Petroleum Act, 1934:** The legal framework governing the import, transport, and storage of petroleum and other inflammable substances in India.

Conclusion

The current West Asian crisis serves as a stark reminder of the "energy trilemma"—balancing security, equity, and sustainability. While India has achieved remarkable success in providing clean cooking fuel to the masses, the volatility in the Persian Gulf highlights the urgent need for diversifying import sources (e.g., USA, Russia, or Africa) and accelerating the transition to alternative energy sources like Piped Natural Gas (PNG) and electric cooking (e-cooking) to reduce the strategic leverage held by a single geographic region.

UPSC Relevance

- **General Studies II:** Effect of policies and politics of developed and developing countries on India's interests (West Asia conflict); Indian Diaspora (workers in the Gulf).
- **General Studies III:** Energy security; Infrastructure: Energy; Issues related to subsidies; Mobilization of resources.
- **Prelims:** Mapping of West Asia (Strait of Hormuz, Qatar, UAE); PM Ujjwala Yojana; Petroleum Planning and Analysis Cell (PPAC).

11. Revision of National Accounts Statistics: Analyzing the 2022-23 GDP Series

- **Base Year Revision and Global Standards:** The National Statistical Office (NSO) has updated the base year for National Accounts Statistics (NAS) from 2011-12 to 2022-23. This revision, occurring after an 11-year gap, aligns India's growth measurement with the 2025 edition of the United Nations System of National Accounts (UNSNA).
- **Absolute Size Contraction:** In a significant departure from previous trends where rebasing often expanded the economy's measured size, the new series reveals a 3-4% reduction in the absolute size of the GDP at current prices. This is viewed by experts as a "correction" of the potential overestimations prevalent in the 2011-12 series.
- **Sectoral Composition Shifts:** The production structure shows a marginal increase in the shares of agriculture and industry, while the share of the services sector has declined. Within industry, manufacturing rose slightly to 14.7% of GDP, though its absolute sectoral size actually shrank by approximately 1.5-1.6%.
- **Institutional Share Re-alignment:** The share of the non-financial Private Corporate Sector (PCS) has declined (falling to 33.9% in 2022-23), while the household or informal sector's share has increased. This shift is particularly notable given the intense debates regarding the "overstated" role of the PCS in the previous decade's data.
- **Veracity and International Standing:** The revision follows a period of scrutiny where the IMF awarded India a 'C' grade for the quality of its National Accounts. While the new series seeks to address these "red flags," the full impact on India's goal of becoming a 5-trillion-dollar economy remains to be seen as the absolute base has lowered.
- **Methodological Transparency:** While the correction in growth rates and absolute size is welcomed by analysts, the government is yet to release full methodological details regarding the newer datasets and the "rates and ratios" applied, which is essential for a complete assessment of data integrity.



Key Definitions and Conceptual Framework

- **Gross Domestic Product (GDP):** The total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.
- **Gross Value Added (GVA):** Defined as GDP minus net taxes on products. It provides a picture of the supply side by measuring the value added in various sectors of the economy.
- **Base Year:** A specific year used as a benchmark for measuring real growth, helping to eliminate the effects of inflation by using constant prices.
- **System of National Accounts (SNA):** The international standard set of recommendations on how to compile measures of economic activity.

Constitutional and Legal Provisions

- **Article 77:** Conduct of Business of the Government of India, under which the Ministry of Statistics and Programme Implementation (MoSPI) operates.
- **Collection of Statistics Act, 2008:** The primary legal framework that empowers the NSO to collect data for estimating national income and other economic indicators.



- **Seventh Schedule (List I, Entry 94):** Statistics for the purpose of any of the matters in the Union List fall under the exclusive jurisdiction of the Parliament.

Conclusion

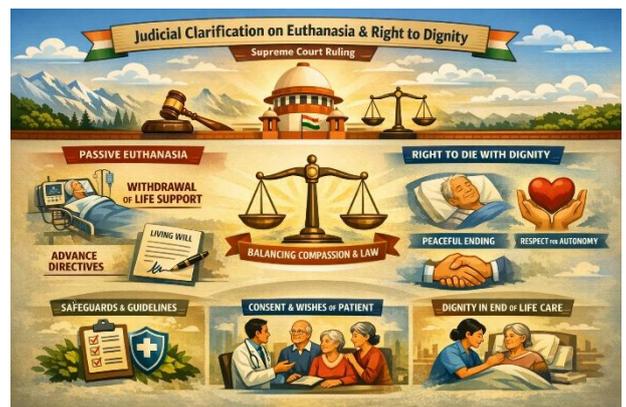
The 2022-23 rebasing is a critical exercise in "statistical hygiene." By reducing the absolute size of the GDP, the NSO has acknowledged previous discrepancies, thereby enhancing the credibility of India's economic narrative. However, the downward revision of the absolute GDP implies that reaching high-valuation milestones (like the 5-trillion-dollar target) may require a higher real growth trajectory than previously anticipated.

UPSC Relevance

- **General Studies III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment.
- **General Studies II:** Important aspects of governance, transparency, and accountability (Data integrity and institutional roles).
- **Prelims:** Concepts of GDP, GVA, NSO, base year effects, and international standards like UNSNA.

12. Judicial Clarification on Euthanasia and Right to Dignity: Supreme Court Ruling

- **Fundamental Distinction in Conduct:** Justice J.B. Pardiwala clarified that the difference between active and passive euthanasia is not just "act versus omission" but the source of harm. Active euthanasia involves an "external agency" (e.g., lethal injection) that disrupts the natural path, whereas passive euthanasia allows the underlying fatal condition to take its natural course.
- **Causality and Medical Ethics:** In passive euthanasia, the doctor does not create a new risk of death but chooses to stop artificially prolonging life. The court noted that the underlying affliction is independent of the doctor's actions, and withdrawing treatment in such cases does not violate the physician's "duty of care" if medical efforts have become futile.
- **Primacy of Dignity over State Interest:** The Supreme Court held that the state's interest in preserving life is not absolute. At a "tipping point" where bodily invasion increases and prognosis for recovery decreases, the state's interest must become subservient to the individual's right to a dignified death.
- **Constitutional Ideal of Dignity:** The judgment emphasized that dignity is a sacred possession that does not lose sanctity during the process of death. Compelling a patient in a Persistent Vegetative State (PVS) to endure a slow, agonizing death through medical technology is incompatible with constitutional values.
- **Rejection of Medical Stoicism:** The court criticized the practice of leveraging technological advancements solely to keep brain-dead or PVS patients alive temporarily, asserting that such "invasive and futile" interventions can overpower the individual's inherent right to dignity.
- **Protection of Incompetent Patients:** The ruling specifically extends the protection of dignity to those who are unconscious or incompetent, ensuring that their rights are not diminished by their inability to express their current will.





Key Definitions and Legal Concepts

- **Active Euthanasia:** A positive, overt act designed to extinguish life through an external intervention. It is currently illegal in India.
- **Passive Euthanasia:** The withdrawal (stopping) or withholding (not starting) of life-sustaining treatment, allowing the patient to die of their natural illness.
- **Persistent Vegetative State (PVS):** A disorder of consciousness where a patient is awake but shows no signs of awareness of themselves or their environment.
- **Duty of Care:** The legal and moral obligation of medical professionals to adhere to a standard of reasonable care while performing any acts that could foreseeably harm others.

Constitutional and Legal Provisions

- **Article 21 of the Constitution:** Protects the "Right to Life and Personal Liberty." The Supreme Court in *Common Cause v. Union of India (2018)* and this subsequent ruling has interpreted this to include the "Right to Die with Dignity."
- **Doctrine of Subservience:** The legal principle established in this case where the State's interest in "Parens Patriae" (parent of the nation) must yield to individual dignity when recovery is medically impossible.
- **Indian Penal Code (IPC) / Bharatiya Nyaya Sanhita (BNS):** Active euthanasia remains classified as culpable homicide or murder, as it involves a "positive act" to end life, distinguishing it from the legally permitted withdrawal of life support.

Conclusion

The Supreme Court has effectively humanized the legal approach to death by shifting the focus from mere biological survival to the quality of dignity. By distinguishing the "source of harm," the judiciary has provided doctors with a clearer ethical framework to navigate the withdrawal of futile treatments without fear of legal reprisal. This judgment reinforces that the Right to Life under Article 21 is not a mandate for the State to compel suffering through technology, but a guarantee of dignity until the very end.

UPSC Relevance

- **General Studies II:** Important Supreme Court judgments; Evolution of Fundamental Rights; Role of the Judiciary in interpreting the Constitution.
- **General Studies IV (Ethics):** Ethical dilemmas in end-of-life care; Medical ethics vs. Legal mandates; Concept of compassion in judicial decision-making.
- **Essay:** Human Dignity; Technology vs. Ethics; Individual Rights vs. State Interest.