OFFICERS IAS ACADEMY™

# OFFICERS' PULSE

## October 2025 (In Depth)

# CURRENT AFFAIRS MONTHLY

The **PULSE** of UPSC at your fingertips.

# Foreword

**Officers Pulse-In Depth provides detailed analyses of significant articles from a variety of sources including The Hindu, Indian Express, Business Standard, Yojana, Kurukshetra, Down to Earth, and others. These insights are extremely valuable for UPSC CSE Mains preparation. To ensure comprehensive preparation for both Prelims & Mains, we recommend studying Officers Pulse-In depth along with Officers Pulse-Digest.**

**Note: The keywords provided in the blue box below are crucial for Mains. They highlight essential themes and terminologies that can enhance the quality of answers.**

**Sample:**

***KEY WORDS***

- ***Monetary Policy Committee (MPC)*** – Six-member RBI body deciding repo-rate to maintain inflation target (4 ± 2 %).
- ***Core Inflation*** – Inflation rate excluding food and fuel, showing underlying price trends.
- ***Headline Inflation*** – Overall inflation measured by Consumer Price Index (CPI).
- ***Tolerance Band*** – Permissible inflation range around RBI's target for policy flexibility.
- ***Section 45ZN, RBI Act 1934*** – Mandates RBI to explain causes and remedies if inflation exceeds target for three quarters.
- ***Fiscal-Monetary Coordination*** – Synchronization of government spending and RBI policy for macro stability.
- ***Financial Inclusion*** – Ensuring affordable access to financial services for all sections, esp. vulnerable groups.

# CONTENTS

## 1) SELF RELIANCE IN NATURAL RESOURCES

***(GS-I: Distribution of key natural resources across the world (including South Asia and the Indian sub-continent); factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).***

### Background

A recent editorial highlighted that India's path to becoming a developed nation (Viksit Bharat) by 2047 hinges on achieving self-reliance (Atmanirbhar Bharat), particularly through boosting domestic production in the natural resources sector.

### Role of Natural Resources Sector

India's journey to Viksit Bharat 2047 depends on both innovation and self-reliance. This transformation involves leveraging domestic capabilities in areas like **mining, energy, manufacturing, and technology** to reduce dependence on imports, boost economic resilience, and improve strategic autonomy.

The natural resources sector including **oil, coal, minerals, and renewable energy**, has been identified as critical for self-reliance. Increased domestic production in this sector is seen as key to creating jobs, supporting livelihoods, and generating government revenue, without requiring additional budgetary support.

### Major Challenges existing in India:

1. **Heavy Import Dependence**: India imports about 88% of its oil, 90% of its copper, and over 86% of its gold requirement despite having known geological occurrences but limited economically viable reserves.
2. **Limited Exploration**: Exploration is mainly carried out by government agencies that lack sufficient bandwidth and resources to aggressively explore across the country. The current policy regime tied to auctions, discourages small entrepreneurial exploration, which is common globally.
3. **Lengthy and Complex Clearance Processes**: The approval and clearance system for mining projects in India is slow and cumbersome, often taking longer than in most other countries, due to multiple clearances required, delaying the transition from exploration to mining.
4. **Underperforming/Dormant State Assets**: Many existing government-owned assets in oil, copper, and gold are either dormant (e.g., Kolar Gold Fields) or underperforming (e.g., Hindustan Copper, Hutti Gold Mine) due to lack of investment and modern technology.
5. **Unequal Playing Field:** The natural resources sector is dominated by large public sector companies which receive fiscal support and preferential treatment, putting private sector entrepreneurs at a disadvantage.

### Current Measures pursued by the Government

India is aggressively pursuing self-reliance in natural resources by focusing on energy independence, critical minerals, sustainable resource management, and domestic production initiatives, supported by major policy reforms and strategic collaborations.

**Energy Self-Reliance**

- India has launched national missions to intensify exploration and production of domestic oil and gas, aiming to reduce its import dependence which currently exceeds 88% for oil and about 50% for natural gas.
- Recent policies include **Deep Water Exploration Mission** and a significant new hydrocarbon discovery in the Andaman Sea, signalling progress toward energy autonomy.

**Critical Minerals and Rare Earth Elements**

- India has prioritized self-reliance in strategic minerals like lithium and rare earths, with the launch of the **National Critical Mineral Mission** and the **Mines and Minerals (Development and Regulation) Amendment Bill, 2025** to enable enhanced private sector participation and overseas acquisitions.
- State-run companies like Oil India Limited and IREL (India) Limited (Indian Rare Earths Limited) have signed **MoUs** to jointly develop domestic capacities in critical minerals essential for defense, energy, and technology sectors.
- The Ministry of Mines has already **auctioned several mineral blocks** and aims to **diversify supplies** through both local extraction and international partnerships.

**Other Minerals**

- The government unveiled a **comprehensive strategy in 2025** to attract global firms to build smelters and refineries, including financial incentives such as capital investment grants and customs duty exemptions for imported machinery.
- Public sector company Hindustan Copper Limited (HCL) plans to triple its copper ore production capacity by 2031, supported by partnerships to establish a robust and self-sufficient supply chain.
- The policy framework is headed toward the formation of **strategic gold mining zones**, a **national level Gold Board**, and **Bullion Exchanges** to support the gold ecosystem.

**Sustainable Resource Management**

- Efforts for sustainable management include practices in energy, production, transportation, and waste disposal.
- India's strategies focus on eco-friendly alternatives such as solar, wind, biomass, and biogas, along with sustainable sourcing, waste reduction, recycling, and emission control in industries.

## Way forward

- **Domestic production** of strategic minerals (like lithium for batteries) and renewable energy is essential for meeting future energy needs and achieving climate goals.
- **Reviving underperforming or dormant assets**, such as old mines and oil fields, and opening them up to private sector investment can quickly ramp up production.
- **Levelling the playing field** between public and private companies will encourage entrepreneurial growth and innovation, particularly for younger entrants and new technologies.
- **Freeing up exploration** for young Indian entrepreneurs by moving away from the current auction-based system to allow risk-taking and innovation.

- **Accelerating the clearance process** via self-certification, backed by government audits, to reduce delays and foster investment.

## Conclusion

India's approach is thus multi-pronged: expanding domestic exploration, diversifying sources, empowering local communities, reforming regulatory frameworks, and forging global partnerships to ensure long-term self-reliance in natural resources. These steps will accelerate domestic production, reduce imports, increase government revenue without budgetary support, and generate millions of jobs. These reforms are essential for sustainable growth, transparency, and achieving the national vision of self-reliance and prosperity by 2047.

### *KEYWORDS*

- ***Viksit Bharat 2047***: Government vision for a developed India by 2047
- ***Atmanirbar Bharat:*** Campaign launched by the Indian government to boost domestic capabilities and manufacturing, improving self-reliance.
- ***Rare earth elements***: Group of 17 metals that are difficult and expensive to extract. They possess unique magnetic, luminescent, and electrochemical properties that make them crucial for modern technologies like smartphones, electric vehicle motors, and wind turbines.
- ***Dormant state assets***: Refers to mines or mineral reserves that are owned or controlled by the government but are inactive or non-operational for a prolonged period
- ***Gold Board of India***: Proposed Board by the Niti Aayog Committee, 2018 as an advisory multi stakeholder body to the government with representation from concerned Ministries, regulators and industry.

### *UPSC PYQ*

- Despite India being one of the countries of the Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. ***[2021]***
- Discuss the natural resource potentials of 'Deccan Trap'. ***[2022]***

## 2) CHINA'S CRUDE OIL STOCKPILING – GLOBAL IMPACT

***GS-II: Effect of policies and politics of developed and developing countries on India's interests AND GS-III: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.***

### Background

Despite adequate global oil supply and OPEC+ increasing production, **crude oil prices remain higher than expected.** The primary reason is China's large-scale oil stockpiling which is estimated at ~160 million barrels worth over $10 billion (Jan–Sep 2025) leading to absorbing excess global supply.

### Reasons Behind China's Oil Stockpiling

- China is prioritizing **energy security amid geopolitical risks such as western sanctions** on suppliers Russia and Iran and the uncertainty around Taiwan.
- A 2025 energy law mandates state and private refiners to maintain strategic reserves, **formalizing "social responsibility" storage.**
- **Opportunistic buying of discounted oil,** particularly from sanctioned countries, to hedge against future supply disruptions.
- To offset disruptions to petrochemical feedstock imports caused by US-China trade tensions (as China depends heavily on imports for petrochemical feedstocks from the US, with a large oil stockpile, it can balance its imports and reduce import dependence as those feedstocks can be manufactured locally from crude oil)
- **Expansion of storage capacity** enables China to stockpile while prices remain favourable.

### Implications of China's Strategic Oil Stockpiling

- **For the Global Oil Market:**
  - China's large crude purchases remove supply from global markets, supporting prices despite growing inventories worldwide.
  - The stockpiling complicates enforcement of sanctions by maintaining imports from discounted but sanctioned oil sources.
  - It buffers global oil price volatility by acting as a large demand sink for surplus crude.
- **For India:**
  - India, heavily reliant on oil imports, faces higher global prices partly due to China's stockpiling.
  - Highlights the necessity for India to expand strategic petroleum reserves for cushioning against supply disruptions.
  - **India's strategic reserves are smaller but growing to ensure energy security amid market uncertainties.**

### Comparison with India

- China's strategic oil reserves are estimated to cover several months of imports significantly exceeding the capacity maintained by India(**India's SPR = 5.33 million tonnes (~9.5 days) + proposed additional 12–13 days capacity).**
- India currently operates three strategic petroleum reserve sites **(located at Visakhapatnam, Mangaluru, and Padur)** with plans underway for further expansion.

- China integrates commercial and strategic reserves under government oversight, enabling flexible management, while India's approach is **more focused on government-controlled reserves.**
- Both countries emphasize strategic reserves to mitigate geopolitical and supply risks, but China pursues a larger and more aggressive stockpiling strategy.

## Conclusion

China's 2025 oil stockpiling, driven by strategy and market advantage, bolstered global prices and challenged sanctions. It highlights India's need to expand reserves to strengthen energy security and counter market volatility.

### *KEY WORDS*

- ***Oil Stockpiling:*** The practice of accumulating large quantities of crude oil in storage facilities to ensure energy security and stabilize domestic supply during disruptions.
- ***Strategic Petroleum Reserve (SPR):*** Government-managed storage of crude oil intended for emergency use during supply crises or price spikes.
- ***Petrochemical Feedstock:*** Raw materials derived from crude oil used in the production of plastics, fertilizers, and other chemical products.
- ***Opportunistic Buying:*** Purchasing commodities like oil when prices are low or discounted, often due to market oversupply or sanctions on sellers.
- ***Supply Disruptions:*** Interruptions in the normal flow of oil due to wars, sanctions, or natural disasters that reduce global availability.
- ***Market Volatility:*** Rapid and unpredictable changes in oil prices due to supply-demand fluctuations, speculation, or geopolitical events.
- ***Social Responsibility Storage:*** A policy concept in China's energy law requiring private refiners to share responsibility for maintaining national energy reserves.
- ***Energy Security Preparedness:*** A country's overall readiness to handle energy shortages or price shocks through strategic planning and reserves.

## 3) INDIA'S DIASPORA DIPLOMACY: NAVIGATING THE BOUNDARIES OF CULTURAL NATIONALISM ABROAD

***GSII-Indian Diaspora***

### Background

The Indian diaspora has recently come under the spotlight due to public displays of faith and culture that have sometimes challenged the boundaries of acceptable behaviour in host countries, such as firecracker celebrations during Diwali or Ganapati idol immersions abroad. Increased visibility has also come from anti-immigrant sentiments and nativist movements targeting people of Indian origin, highlighting community identity and cultural assertion abroad.

### Patterns Found

- There is a **growing trend of cultural exhibitionism** among sections of the Indian diaspora, especially during festivals.
- Diaspora activities, influenced by rising homeland political nationalism, now **reflect territorial nationalism** rather than universal rights, at times clashing with host state norms.
- **Diplomatic friction arises** when diaspora groups appear to engage in domestic politics or disregard local customs, sometimes resulting in legal action or public controversy.
- India maintains policies promoting cultural, not political, engagement, discouraging interference in host country affairs and urging loyalty to adopted countries.

### Implications for India

- The diaspora acts as an **informal cultural ambassador,** fostering stronger ties with foreign governments and societies.
- Display of cultural nationalism abroad can **enhance India's soft power** but also risks generating hostile reactions and diplomatic tensions.
- India's legislative changes (e.g., OCI, PIO cards, Citizenship Amendment Act) deepen ties but also raise questions about **dual loyalties and the scope of diaspora** involvement in Indian and host country politics.

### Challenges

- Cultural assertion can **provoke anti-immigrant backlash, social isolation, and legal repercussions for diaspora communities.**
- Host countries increasingly scrutinize diaspora actions, perceiving aggressive exhibitionism or political activity as interference.
- Balancing the celebration of Indian culture with respect for local regulations and sensitivities remains a persistent challenge.

### Way Forward

- India should **continue to promote cultural ties** while emphasizing adherence to local laws and respect for host country norms.
- Diaspora **organizations must adopt a sensitive approach,** focusing on community integration and cooperation rather than confrontation.
- Government policy should stress non-interference and encourage diaspora groups to act as bridges, not barriers, to bilateral relations.

## Conclusion

India's diaspora diplomacy must find equilibrium between promoting cultural pride and respecting the boundaries of host societies. Fostering mutual respect and legal compliance will help turn India's global diaspora into an asset rather than a source of friction, thus supporting both India's interests and the well-being of Indian-origin communities abroad.

### *KEY WORDS*

- ***Indian Diaspora:*** The community of people of Indian origin living outside India, including Non-Resident Indians (NRIs), Persons of Indian Origin (PIOs), and Overseas Citizens of India (OCIs).
- ***Cultural Assertion:*** The expression of one's cultural identity and traditions in public, often through festivals, religious observances, and community events abroad.
- ***Cultural Exhibitionism***: The overt or exaggerated display of cultural practices or symbols, sometimes perceived as challenging or insensitive to local norms.
- ***Soft Power:*** The ability of a country to influence others through culture, values, and diplomacy rather than coercion or economic pressure.
- ***Citizenship Amendment Act (CAA):*** Indian legislation (2019) that grants citizenship to certain religious minorities from neighbouring countries; it influences diaspora perceptions and discussions on identity.
- ***OCI (Overseas Citizen of India):*** A form of long-term residency status for people of Indian origin, allowing them to live and work in India indefinitely but without full citizenship rights.
- ***PIO (Person of Indian Origin):*** A status previously given to people of Indian ancestry living abroad, later merged with OCI for administrative simplicity.

### *UPSC PYQ*

'Indian diaspora has a decisive role to play in the politics and economy of America and European Countries'. Comment with examples***. (2020)***

## 4) CRITICAL MINERALS AND THEIR SIGNIFICANCE

***(GS-I: Geography- Distribution of key natural resources across the world (including South Asia and the Indian sub-continent.)***

### Background

The **Ministry of Mines** launched the **Critical Mineral Recycling Incentive Scheme (CMRIS)** recently under the **National Critical Minerals Mission (NCMM).**

Its main aim is to **develop a domestic recycling ecosystem** for **critical minerals** such as lithium, cobalt, nickel, and rare earths by recovering them from **secondary sources** like **e-waste, used batteries, and catalytic converters**.

### What are critical minerals?

Critical minerals are those set of minerals which are very much needed for national security, today's energy technologies and for the broader economy.
Examples of critical minerals: Lithium, nickel, cobalt, manganese, graphite, rare earth elements etc.

### Significance of critical minerals

1. **Economic Importance:**
   - Serve as the **foundation for modern industries** — from electronics and renewable energy to defense and automobiles.
   - Enable growth in **high-tech and clean-energy sectors**, supporting *Make in India* and *Atmanirbhar Bharat* initiatives.
   - Enhance **value addition** and **employment generation** through new manufacturing and processing industries.
2. **Energy Transition and Sustainability**
   - **Essential for green technologies** such as **solar panels, wind turbines, electric vehicle (EV) batteries**, and **energy storage systems**.
   - Help in achieving **India's Net Zero by 2070** and other climate commitments.
   - Promote the shift from **fossil fuel dependence** to **clean energy systems**.
3. **Strategic and National Security Importance**
   - Critical for **defense, aerospace, space, and communication technologies** (e.g., rare earth magnets, titanium, cobalt).
   - Reduce **strategic vulnerabilities** arising from import dependence and supply chain disruptions.
   - Enable **self-reliance in defense manufacturing**.
4. **Technological Competitiveness**
   - Key inputs for **semiconductors, AI hardware, 5G, robotics, and renewable technologies**.
   - Strengthen India's position in the **global technological value chain**.
5. **Geopolitical and Strategic Diplomacy**
   - Control and access to critical minerals determine **global power dynamics** , similar to how oil shaped geopolitics in the 20th century.
   - India's partnerships with **Australia, Argentina, Chile, and the US** enhance **resource security and global cooperation**.
6. **Environmental and Circular Economy Significance**

- Promotes **recycling, reuse, and sustainable resource management** (through schemes like **CMRIS**).
- Supports the creation of a **circular economy**, minimizing ecological degradation from mining.

## Challenges

1. **Geographical Concentration of Resources**
   - Most critical minerals are concentrated in a few countries:
   - *Lithium* – Lithium triangle(Chile, Bolivia, Argentina), Australia, China
   - *Cobalt* – Democratic Republic of Congo
   - *Rare Earth Elements (REEs)* – China (~90% of processing)
     This creates **supply chain vulnerabilities** and **geopolitical risks**.
2. **Processing and Refining Monopoly**
   - Even if other countries have reserves, **refining capacity is dominated by China**, leading to strategic dependence.
3. **Price Volatility and Market Uncertainty**
   - Limited suppliers and fluctuating demand for green technologies cause **unstable prices**.
4. **Environmental and Social Concerns**
   - Mining often leads to **ecological degradation, water pollution, deforestation**, and **displacement of local communities**.
   - Balancing **sustainability and resource extraction** is a global challenge.
5. **Technological Barriers**
   - Extraction and purification processes are **technically complex** and require **advanced, costly technologies**.
6. **Lack of Recycling Infrastructure**
   - Globally, only a small fraction of lithium, cobalt, and rare earths are **recycled from used batteries or e-waste**.

## Measures taken up by India

### NATIONAL CRITICAL MINERALS MISSION

- It was launched in January 2025.
- To secure India's critical mineral supply chain by ensuring mineral availability from domestic and foreign sources.
- Strengthening the value chains by enhancing technological, regulatory, and financial ecosystems to foster innovation, skill development, and global competitiveness in mineral exploration, mining, beneficiation, processing, and recycling.

### KABIL

- Khanij Bidesh India Ltd. (KABIL) is a joint venture company set up in 2019 with the participation of three Central Public Sector Enterprises namely, National Aluminium Company Ltd.(NALCO), Hindustan Copper Ltd.(HCL) and Mineral Exploration Company Ltd. (MECL).
- Its objective is to ensure a consistent supply of critical and strategic minerals to Indian domestic market. While KABIL would ensure mineral security of the Nation, it would also help in realizing the overall objective of import substitution.

**CRITICAL MINERAL RECYCLING INCENTIVE SCHEME (CMRIS)**

- The Critical Mineral Recycling Incentive Scheme (CMRIS) is a ₹1,500 crore Central Sector Scheme under the National Critical Minerals Mission (NCMM) to promote recycling of critical minerals from e-waste and used batteries.
- It aims to build a domestic secondary supply chain by establishing a 270 kiloton annual recycling capacity and recovering 40 kilotons of minerals by FY 2031.

**MINES AND MINERALS (DEVELOPMENT AND REGULATION) [MMDR] AMENDMENT ACT, 2023**

- Allows private sector participation in exploration of 24 critical minerals.
- Introduces exploration license (EL) for easier and faster access to potential mineral blocks.
- Enables auction of critical mineral blocks by the Centre to speed up development.

## Way forward

- India should strengthen domestic exploration and refining capacities through technology partnerships and private investment.
- Promoting recycling and circular economy models like CMRIS can reduce import dependence.
- Building strategic international alliances with resource-rich nations will secure long-term supply chains.
- Lastly, ensuring environmentally sustainable and transparent mining practices is essential for long-term resource security.

## Conclusion

Critical minerals are the backbone of the modern economy and the clean energy transition. For India, securing access to these resources is not only an economic necessity but also a strategic imperative for achieving energy security, technological self-reliance, and sustainable growth. With initiatives like the National Critical Minerals Mission, KABIL, and CMRIS, India is moving towards building resilient and diversified supply chains. However, long-term success will depend on a balanced approach that combines domestic exploration, international collaboration, and environmentally responsible mining and recycling, ensuring both self-reliance and sustainability in the critical mineral ecosystem.

### *KEYWORDS*

- ***Critical Minerals-*** Minerals essential for national security, modern industry, and energy transition but whose supply is at risk.
- ***National Critical Minerals Mission (NCMM)-*** Government mission to secure India's critical mineral supply chain and promote innovation & recycling.
- ***Critical Mineral Recycling Incentive Scheme (CMRIS)-*** Scheme to promote recycling of critical minerals from e-waste & used batteries.
- ***KABIL-*** Joint venture of NALCO, HCL, MECL to secure critical minerals.
- ***MMDR Amendment Act, 2023-*** Law enabling private exploration and auction of critical minerals.
- ***Rare Earth Elements (REEs)-*** 17 elements used in high-tech and defence, that are difficult to extract economically in large quantities.
- ***Circular Economy-*** Economic model promoting recycling and reuse.

## 5) MICROPLASTICS POLLUTION IN GOA'S ESTUARINE ECOSYSTEMS

***(GS-III Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.)***

### Background

A study by scientists from **CSIR-National Institute of Oceanography (NIO), Goa**, and **CSIR-National Institute for Ocean Research, Ghaziabad**, published in *Environmental Research*, has revealed alarming levels of **microplastic contamination** in Goa's estuarine ecosystems, posing risks to both **marine biodiversity** and **human health**.

### Research Highlights

1. **Widespread Contamination**
    - Researchers identified **4,871 polluting particles** in fish samples from Goa's coastal and estuarine regions.
    - **3,369 (≈70%)** were **plastic polymers** belonging to **19 different types**.
    - Greater contamination was found **on the seafloor and sediments** (benthic realm) compared to the **open sea (pelagic realm)**.
2. **Source of Pollution**
    - Main sources include:
        - **Degraded fishing nets and gear**.
        - **Urban wastewater** discharged into rivers and estuaries.
        - **Plastic waste** from packaging, textiles, and industrial sources.
    - Most microplastics were **polypropylene, polyethylene, and polystyrene**.
3. **Impact on Marine Life**
    - Fish species studied included mackerel, sardine, anchovy, clam, oyster, and crab.
    - Benthic fish (bottom-dwelling) were more affected than pelagic species.
    - Fish accumulated plastics in the **digestive tract and gills**.
    - Presence of **up to 8.8 microplastic particles per fish**.
    - Some species had **liver and gill damage**, metabolic stress, and **reduced reproductive capacity**.
4. **Human Health Implications**
    - Humans consuming seafood are exposed to **microplastics and related toxins**.
    - Associated health effects:
        - **Endocrine disruption**
        - **Neurotoxicity**
        - **Cancer risk**
        - **Reproductive and developmental disorders**
    - Fish species with high economic value (e.g., mackerel, sardine) pose potential risks to **food safety and livelihoods**.

### Risk Assessment and Environmental Implications

- **Bioaccumulation & Biomagnification**:
  Microplastics accumulate in small organisms and move up the food chain, amplifying toxicity in larger predators and humans.
- **Ecological Impact:**

  - Alters **nutrient cycles** and **sediment structure**.
  - Reduces **biodiversity** in estuarine ecosystems.
  - Interferes with **photosynthesis** in aquatic plants by blocking sunlight penetration.
- **Socioeconomic Impact:**
  - Threatens Goa's **fishing-dependent communities**.
  - Reduces **fish yield and market value**.
  - Poses long-term challenges for **sustainable coastal livelihoods**.

## Policy and Governance Perspective

**National Level**

- India's framework:
  - **Plastic Waste Management Rules, 2016 (amended 2022)** – bans certain single-use plastics.
  - **Swachh Bharat Mission & Namami Gange Programme** – address waste and water pollution.
  - **Coastal Regulation Zone (CRZ) Notification, 2019** – regulates activities near coastal ecosystems.

**Global Relevance**

- **UNEP**(UN Environment Programme) and **UNESCO-IOC** (UNESCO-Intergovernmental Oceanographic Commission) have highlighted marine plastic pollution as a **global environmental emergency**.
- Supports **UN Sustainable Development Goal 14** – *Life Below Water*.
- Findings are aligned with concerns raised in the **UNEA** (UN Environment Assembly) **Plastic Treaty negotiations .**

## Way Forward

1. **Improved Plastic Waste Management:**
   - Strengthen **collection, recycling, and reuse** at source.
   - Promote **biodegradable alternatives** and extended producer responsibility (EPR).
2. **Scientific Monitoring & Research:**
   - Establish a **national-level microplastic monitoring network** across coastal states.
   - Fund interdisciplinary research on microplastic impacts on food webs.
3. **Community Awareness & Fisher Education:**
   - Train local fishers to avoid plastic gear loss and promote **eco-friendly fishing nets**.
4. **International Cooperation:**
   - Collaborate under **UNEP's Global Partnership on Marine Litter (GPML)** for data sharing and technology transfer.
5. **Policy Integration:**
   - Include **microplastic indicators** in India's **State of Environment Reports**.
   - Link mitigation efforts with **Blue Economy and Coastal Zone Management policies**.

## Conclusion

Microplastics pollution in Goa's estuarine waters exemplifies the **intersection of marine ecology, human health, and environmental governance**. The findings underscore an urgent need for

**integrated coastal management**, **plastic waste reduction**, and **public health safeguards** to achieve **Sustainable Development Goals (SDG 12, 13, and 14)**.


### *KEY WORDS*

- ***Microplastics:*** Tiny plastic particles (<5 mm) resulting from plastic degradation that persist in the environment and enter food chains.
- ***Estuarine Ecology:*** The study of ecological interactions in estuaries, where freshwater mixes with seawater, supporting high biodiversity and productivity.
- ***Bioaccumulation:*** The gradual buildup of toxic substances, such as heavy metals or microplastics, in the tissues of living organisms over time.
- ***Marine Pollution:*** The introduction of harmful substances like plastics, chemicals, or oil into the ocean, adversely affecting marine ecosystems and species.
- ***Sustainable Fisheries:*** Fishing practices that maintain fish populations and ecosystem health while meeting present and future human needs.
- ***Plastic Waste Management Rules 2016:*** Indian regulations that mandate segregation, recycling, and extended producer responsibility (EPR) to curb plastic pollution.
- ***SDG 14 (Life Below Water):*** A UN Sustainable Development Goal that aims to conserve and sustainably use oceans, seas, and marine resources for sustainable development.

## 6) GREEN CRACKERS ARE CLEANER, NOT CLEAN

***(GS-III Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.)***

### Background

Firecracker-related air pollution has been a recurring environmental issue in India, especially post-Diwali, when air quality in cities like Delhi plummets to hazardous levels. To address this concern, the **CSIR–National Environmental Engineering Research Institute (CSIR–NEERI)** have developed "green crackers" as an **eco-friendly alternative** to traditional fireworks to reduce emissions and noise pollution. Introduced around **2018**, the initiative was aimed at balancing **cultural traditions** with **environmental health concerns**.

### What Makes a Cracker "Green"?

- **Reformulation of Chemicals:**
  - Conventional fireworks contain **barium nitrate**, **potassium nitrate**, **sulphur**, and **aluminium**, which emit toxic gases ($SO_2$, $NO_x$) and heavy metals.
  - Green crackers **replace barium nitrate** with **potassium nitrate or strontium salts**, and **limit aluminium** to reduce toxicity.
  - Use of **zeolite and iron oxide additives** helps **trap soot and reduce particulate matter (PM)** emissions.
- **Examples:**
  - **SWAS (Safe Water Releaser)**
  - **STAR (Safe Thermite Cracker)**
  - **SAFAL (Safe Minimal Aluminium)**

### Scientific Evaluation

- **Emission Reduction:**
  - NEERI tests show **30–40% lower PM and gas emissions** than conventional crackers.
  - **Barium content** in airborne $PM_{2.5}$ reduced by up to **60%**.
- **Residual Pollution:**
  - Soil samples still show **trace metals** (Al, Sr, Mg, Cu, Fe, Mn, Zn) post-burning.
  - Thus, pollution is **reduced**, not **eliminated**.
- **Ultrafine Particles (UFPs):**
  - Green crackers may emit **higher numbers of ultrafine particles (<100 nm)** that are more harmful due to **deep lung penetration**.

### Health and Environmental Impact

- **Air Quality:**
  - Short-term **PM spikes** worsen already poor winter air conditions in northern India.
- **Health Effects:**
  - Metal-rich $PM_{2.5}$ and gases aggravate **asthma, bronchitis, cardiac arrhythmia**, and **neurological disorders**.
  - Children, the elderly, and respiratory patients are most vulnerable.
- **Soil Contamination:**
  - Heavy metals remain in soil post-celebration, affecting local ecosystems.

## Implementation Challenges

- **Fake Products:**
  - Counterfeit "green crackers" sold with fake labels undermine emission control efforts.
  - NEERI's **QR code verification system** faces limited enforcement.
- **Public Awareness:**
  - Lack of understanding about the **difference between "green" and conventional crackers**.
- **Enforcement:**
  - Weak coordination between **pollution control boards, state governments, and local authorities.**

## Global Scenario

- Countries like **China, USA, and Japan** are researching **low-smoke or perchlorate-free fireworks**, but lack a **formal certification programme**.
- **India is the only country** with a **state-supported "green cracker certification" system**, led by CSIR–NEERI.
- Many nations (e.g., **UK, EU, China**) have restricted or banned fireworks in urban zones due to pollution concerns.

## Critical Evaluation

- **Advantages:**
  - Reduces particulate emissions and toxic metal content.
  - Encourages innovation in sustainable chemistry.
  - Raises public awareness about pollution impacts.
- **Limitations:**
  - Not completely pollution-free.
  - Persistent ultrafine particle and heavy metal emissions.
  - Effectiveness depends on large-scale adoption and strict enforcement.

## Way Forward

1. **Technological Improvement:**
   - Develop next-gen **metal-free or fully biodegradable fireworks**.
2. **Strict Enforcement:**
   - Regulate sale through **authentic QR-verified channels**.
3. **Public Awareness Campaigns:**
   - Encourage **community-based light and sound shows** instead of fireworks.
4. **Urban Air Quality Strategy:**
   - Treat cracker use as part of a **larger urban air pollution control framework**, not an isolated issue.
5. **Behavioural Shift:**
   - Promote **eco-conscious celebrations** in line with **Net Zero goals** and **Mission LiFE** (Lifestyle for Environment).

## Conclusion

Green crackers developed by CSIR-NEERI reduce particulate matter and toxic gas emissions by about 30%, offering a cleaner but not pollution-free alternative to traditional fireworks. Their success depends on strict enforcement, public awareness, technological improvements, and integration within broader urban air quality strategies.

### *KEY WORDS*

- ***Green Crackers*** – Fireworks designed to emit fewer pollutants by reformulating chemical ingredients.
- ***CSIR–NEERI*** – Research institute under CSIR that developed and certified India's green cracker technology.
- ***Barium Nitrate*** – A toxic oxidizer in traditional crackers replaced by safer alternatives like potassium nitrate.
- ***Potassium Nitrate / Strontium Salts –*** Substitute oxidizers that lower emission of toxic gases.
- ***Zeolite & Iron Oxide Additives*** – Materials used to trap soot and reduce particulate matter emissions.
- ***Mission LiFE (Lifestyle for Environment)*** – Government initiative promoting sustainable lifestyle choices.
- ***Net Zero Emission Goal*** – National commitment to balance emissions with absorption by 2070.

***UPSC PYQ***

How does the National Clean Air Programme (NCAP) aim to reduce air pollution in India? ***(2017)***

## 7) THE COST OF NEGLIGENCE: INDIA'S COUGH SYRUP CRISIS

***(GS-II Government policies and interventions for development in various sectors and issues arising out of their design and implementation | Services relating to Health, Education, Human Resources.)***

### Background

In Madhya Pradesh's Chhindwara district, several children suffered from acute kidney failure after taking **Coldrif** syrup, a common medicine for cold and fever. Tests later showed that the syrup was contaminated with **diethylene glycol (DEG)**, a toxic industrial chemical, unsafe for human use. Following this, the **Central Drugs Standard Control Organization (CDSCO)** ordered a nationwide recall of the product, suspended the licenses of the involved manufacturers, and launched an extensive inspection of cough syrup makers to ensure strict safety and quality compliance.

**Diethylene Glycol (DEG):**

- A highly toxic chemical primarily used in industrial products such as antifreeze, heat-transfer fluids, and various solvents.
- It is unsafe for human consumption, but has occasionally contaminated medicines when industrial-grade solvents are wrongly substituted for pharmaceutical-grade ones.
- DEG poisoning can lead to severe health complications, including abdominal pain, vomiting, diarrhoea, inability to urinate, headache, confusion, and in severe cases, acute kidney failure and death, especially among children.

### Potential of India's pharmaceutical market

- India's pharmaceutical industry, ranked third globally by volume and fourteenth by value, serves as the "Pharmacy of the World" by supplying affordable generic medicines to developing nations across Africa, Asia, and Latin America.
- From **2014 to 2024**, government efforts aimed to make essential medicines universally accessible, driven by the vision that **"every village should have access to life-saving drugs at the price of a cup of tea."**
- **With favourable government policies allowing 100% FI in Greenfield pharmaceutical** (new manufacturing facility from scratch)and medical device projects, the sector attracted nearly ₹12,822 crore in foreign direct investment (FDI) in 2023–24, reflecting global investor confidence in India's healthcare and pharma ecosystem.
- **India produces about 60% of global WHO vaccine supply, and is among the largest vaccine manufacturers globally,** contributing up to 70% of the WHO demand for Diphtheria, Tetanus and Pertussis (DPT) and Bacillus Calmette–Guérin (BCG) vaccines, and 90% of the WHO demand for the measles vaccine. **The nation is the largest provider of generic medicines globally, occupying a 20% share in global supply by volume, and is the leading vaccine manufacturer globally.**
- The combination of robust R&D, cost-efficient production, and a strong export orientation has made India a central player in the global pharmaceutical supply chain, particularly in vaccines, generics, and essential medicines.

### Persistent challenges and systemic Gaps:

- **Fragmented Enforcement:** Over 10,500 pharma units across states with uneven regulatory capacity hinder uniform quality control.
- **Profit-Driven Malpractice:** Illegal use of toxic solvents like diethylene glycol (DEG) for cost-cutting has caused multiple fatalities (Mumbai, 1986; Gambia, Indonesia, Uzbekistan, 2022).
- **Regulatory Overlap:** Dual control between Centre and States leads to weak coordination, delayed action, and poor market surveillance.
- **Weak Accountability:** Probes reveal poor documentation, inadequate testing, and limited legal action, undermining public health and India's global pharma reputation.

### Policy Initiatives Strengthening India's Pharmaceutical Sector

- **Pharma Vision 2030:** Aims to make India a global hub for safe, high-quality, affordable medicines; focuses on National Drug Quality Control Labs and WHO-GMP compliance.
- **Pradhan Mantri Bharatiya Janaaushadhi Pariyojana (PMBJP):** Over 15,400 Jan Aushadhi Kendras provide generic medicines up to 80% cheaper, ensuring affordable healthcare access.
- **Production Linked Incentive (PLI) Scheme:** ₹15,000 crore support for high-value pharma projects focused on domestic production of advanced drugs, including treatments for cancer and diabetes and ₹6,940 crore for Advanced Pharmaceutical Ingredients(API self-reliance . E.g., Penicillin G).
- **Bulk Drug Parks Scheme:** ₹3,000 crore to establish integrated manufacturing hubs in Gujarat, Himachal Pradesh, and Andhra Pradesh.
- **National Pharmacovigilance Programme:** Strengthens post-market surveillance to detect and prevent substandard or harmful drugs.

### Regulatory Framework Governing Pharmaceuticals in India

- **Drugs and Cosmetics Act, 1940 & Rules, 1945:** Govern import, manufacture, sale, and quality control of drugs and cosmetics.
- **Schedule M:** Mandates Good Manufacturing Practices (GMP) for quality, hygiene, and documentation standards.
- **CDSCO (under DCGI):** Central authority for drug approval, clinical trials, and import regulation.
- **State Drug Authorities:** Oversee licensing, inspection, and enforcement at the state level.

### Reforms and the way forward for India's pharmaceuticals regulation

- **One Nation One Drug Regulation:** Centralized licensing and inspection to replace fragmented Centre-State control.
- **Infrastructure Upgradation:** Modernize labs, adopt digital tracking and barcode systems for quality assurance.
- **Transparency & Accountability:** Publish inspection outcomes, protect whistleblowers, and ensure time-bound probes and stricter penalties.

- **Public Awareness:** Mass campaigns, drug safety helpline, and reporting systems for adverse reactions.
- **Global Collaboration:** Partner with WHO and import nations for joint audits and international drug safety registry.
- **Ethical Medical Practices:** Train healthcare professionals to ensure prescription integrity and promote use of quality generics.
- **Diplomatic Engagement:** Engage affected nations, enable independent audits, and support victim redressal to rebuild global trust.

## Conclusion

Strengthening regulatory coherence, transparency, and ethical standards alongside diplomatic accountability will reinforce India's image as a **reliable and responsible global pharmaceutical leader.**

### *KEY WORDS*

- ***CDSCO***– India's national drug regulatory authority ensuring the safety, efficacy, and quality of drugs and medical devices.
- ***DCGI–***Drugs control General of India , head of CDSCO
- ***Pradhan Mantri Bharatiya Janaaushadhi Pariyojana (PMBJP)–*** A government scheme that provides quality generic medicines at affordable prices through Janaushadhi Kendras across India.
- ***Production Linked Subsidies*** – A government initiative to boost domestic manufacturing and exports by offering financial incentives based on increased production and sales in key sectors, including pharmaceuticals

## 8) INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR (IMEC): A NEW TRADE PARADIGM

***(GS Paper III: "Infrastructure: Energy, Ports, Roads, Airports, Railways etc." "Effects of liberalization on the economy, changes in industrial policy, investment models (PPP, etc.).")***

India's trade relations have traditionally been dominated by partners like the U.S. and China. However, growing **trade frictions with the U.S.**, supply chain disruptions post-COVID, and the **Ukraine war** have prompted India to **diversify its trade engagements**. The **India–Middle East–Europe Economic Corridor (IMEC)**, launched on the sidelines of the G20 Summit (2023), is a strategic response to this need for diversification.

### Background and Geopolitical Context

- Origins: IMEC emerged out of the *I2U2 grouping* (India, Israel, UAE, U.S.), building on the positive environment created by the Abraham Accords (2020).
- Objective: Strengthen connectivity through integrated networks of railways, ports, energy pipelines, and digital cables connecting India to Europe via the Middle East.
- Signatories of MoU: India, UAE, Saudi Arabia, European Union members (Italy, France, Germany), and the U.S.

### Strategic and Economic Significance for India

| Dimension | Significance |
|---|---|
| Trade Diversification | Reduces India's reliance on the U.S. and China; strengthens trade with Europe and the Middle East. |
| Connectivity & Logistics | Reduces transport time and cost compared to existing routes via the Suez Canal. |
| Energy Security | Plans for a clean hydrogen pipeline and electricity grid integration with Middle Eastern energy exporters. |
| Digital Infrastructure | The undersea digital cable strengthens India's data and digital trade connectivity. |
| Geopolitical Influence | Positions India as a connector between East and West, balancing China's Belt and Road Initiative (BRI). |
| Strategic Autonomy | Promotes multipolarity and India's role as a bridge between the Global North and South. |

### Challenges and Geopolitical Constraints

1. **Security Instability in West Asia:**
    - The **October 7 Hamas attacks** and subsequent Israel–Gaza conflict have strained regional cooperation.
    - Threatens the feasibility of transnational infrastructure passing through Israel and Arab territories.
2. **Red Sea and Maritime Security:**
    - **Houthi attacks** in the Red Sea highlight vulnerabilities in sea lanes and potential disruptions to IMEC's maritime segment.

3. **Arctic Route Competition:**
    - The opening of **Arctic sea routes** (due to climate change) benefits northern economies and may divert trade away from the Mediterranean route.
4. **Political Coordination:**
    - Aligning the interests of multiple stakeholders (EU, Israel, Gulf countries, India) requires strong diplomatic management.
5. **Financing and Implementation:**
    - Large-scale infrastructure investments need sustained financial and technical commitments.

## Opportunities and Way Forward

- **Adaptive Strategy:** Reconfigure routes to bypass conflict zones; consider including **Egyptian and Saudi ports** for redundancy.
- **India–EU FTA (BTIA)**: Conclusion of trade negotiations will complement IMEC by reducing tariff and non-tariff barriers.
- **Multilateral Partnerships:** Use forums like **G20, I2U2, and QUAD** to secure investment, technology, and political backing.
- **Economic Synergies:** Focus on clean energy, digital infrastructure, and logistics as core pillars of India–Europe cooperation.
- **Regional Stability Efforts:** India can play a constructive role in **West Asian peacebuilding**, reinforcing economic connectivity with diplomacy.

## Conclusion

The **IMEC is not just an infrastructure project**, but a **strategic framework** symbolizing India's emergence as a global connector. Despite the current instability in West Asia, the **long-term logic of connectivity, trade diversification, and strategic autonomy** makes IMEC a critical pillar of India's foreign and economic policy. India and Europe, acting as "bookends of prosperity", can together build a resilient supply chain architecture linking Asia, the Middle East, and Europe.

### *KEY WORDS*

- ***The India-EU FTA (Broad-Based Trade and Investment Agreement or BTIA*)**- is a proposed trade pact that aims to remove barriers to trade in goods, services, and investment between India and the European Union
- ***G20 (Group of Twenty)*** A premier forum of 21 major economies (19 countries, the EU, and the African Union) that coordinates global economic policy, trade, and sustainable development.
- ***I2U2 (India–Israel–UAE–U.S. Group)–*** A West Asian strategic partnership focused on economic collaboration and joint investments in areas like energy, food security, and infrastructure.
- ***QUAD (Quadrilateral Security Dialogue)–*** A strategic alliance among India, the U.S., Japan, and Australia aimed at promoting a free, open, and secure Indo-Pacific region.

### *UPSC PYQ*

India's foreign policy is often said to be guided by the idea of strategic autonomy. In this context, discuss how India's engagement with multiple power centers and regional groupings serves its national interests."? ***[2023]***

## 9) GENDERED WELFARE AND WOMEN'S ECONOMIC EMPOWERMENT IN INDIA

***(GS Paper III:" Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment". "Inclusive growth and issues arising from it" "Mobilization of resources and development". Inclusive growth and issues arising from it.***

In recent years, **welfare politics in India has become increasingly gendered**, with states launching **cash transfer schemes targeted at women** (e.g., *Ladli Behna, Gruha Lakshmi, Lakshmir Bhandar, Mahalakshmi, Mukhyamantri Mahila Rojgar Yojana*). These schemes are enabled by India's **Direct Benefit Transfer (DBT) architecture** — the **JAM trinity (Jan Dhan, Aadhaar, Mobile)** — ensuring targeted delivery and transparency. While this has expanded **financial inclusion**, the key challenge is whether it leads to **genuine empowerment or merely welfare dependency**.

### Significance of Gendered Cash Transfers

- **Financial Inclusion-** 56 crore Jan Dhan accounts opened; 55% owned by women ; giving them a formal financial identity.
- **Economic Empowerment-** Income in women's names enhances decision-making power and household welfare outcomes.
- **Social Policy Efficiency-** DBT reduces monetary leakages and corruption compared to traditional subsidy systems.
- **Political Recognition-** Positions women as key political and economic stakeholders, influencing governance priorities**.**
- **Poverty Alleviation-** Direct transfers provide a safety net and help women start micro-enterprises or sustain consumption.

### Challenges and Limitations

**From Access to Agency Gap**

- The gender gap in active account ownership in India narrowed from 12 percentage points in 2021 to 7 percentage points by 2024.
- Most accounts used for **withdrawal, not savings or investment**.

**Digital Divide and Mobile Access**

- Women are **19% less likely to own mobile phones** according to Global System Mobile Communication Association 2024.
- Lack of privacy, shared phones, and fear of cyber fraud hinder financial autonomy.

**Patriarchal Control over Resources**

- Over **two-thirds of women still rely on male relatives** for financial transactions.
- Cultural norms often limit women's control over the cash received.

**Lack of Asset Ownership**

- Without secure **property or business ownership**, women cannot fully leverage credit or entrepreneurial opportunities.

**Political Instrumentalization**

- Cash transfer schemes risk becoming **electoral tools**, emphasizing short-term

popularity over sustainable empowerment.

## The Way Forward: From Access to Agency

| Policy Area | Suggested Actions |
|---|---|
| **Asset Ownership** | Promote **joint land titles and property rights** for women to enable credit and entrepreneurship. |
| **Digital Empowerment** | Subsidized **smartphones and affordable data plans** to strengthen the "mobile" pillar of JAM. |
| **Financial Literacy** | Expand **digital sakhis**, women-led community banking networks, and peer-support groups. |
| **Representation in Financial System** | Increase **female business correspondents** (currently <10%) for trust and accessibility. |
| **Tailored Financial Products** | Design microcredit, savings, and insurance suited to **women's informal and seasonal incomes**. |
| **Monitoring and Evaluation** | Track **impact beyond disbursement**—agency, savings, entrepreneurship outcomes. |

## Conclusion

India's gendered welfare model, anchored in DBT, has **transformed women from welfare recipients to financial citizens**. Yet, **true empowerment lies not in access alone, but in control, choice, and agency**. Policies must integrate **financial inclusion with social transformation** by building digital capacity, ensuring asset ownership, and deepening women's participation in economic life. Moving forward, the goal must be to ensure that **cash transfers become a bridge to empowerment, not a ceiling to aspiration.**

### *KEY WORDS*

- ***Digital sakhis*** - Digital Sakhis are rural women trained in digital and financial literacy to promote digital inclusion and women's empowerment in their communities.
- ***Ladli Behna Yojana (Madhya Pradesh):*** Provides monthly financial assistance to women to enhance their economic independence and social status.
- ***Lakshmir Bhandar Scheme (West Bengal):*** Gives **direct income support to women** as a **basic guaranteed income** for household expenses.
- ***Mahalakshmi Scheme (Telangana):*** A **comprehensive welfare initiative** providing **financial aid, LPG cylinder subsidy, and free travel** for women to promote empowerment and welfare.
- ***Mukhyamantri Mahila Rojgar Yojana (various states, e.g., Bihar/MP):*** *Aims* to generate employment and self-employment opportunities for women through **skill development and financial support**.

### *UPSC PYQ*

"The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. Discuss how Digital India has contributed to the empowerment of women." ***[2018]***

## 10) CONSTITUTIONAL MORALITY

***GS2 (Governance, Constitution, Polity, Social Justice & International Relations)***

**Constitutional Morality is essentially the soul of the Indian Constitution.** It's the principle that demands all citizens, governments, and institutions adhere to the core values—**like equality, liberty, and justice**, all that the Constitution promises, even when these values clash with popular beliefs or old customs. **It's what the Supreme Court uses to ensure the Constitution is a living, evolving document that protects everyone.**

### Why in News?

The concept is consistently relevant because the Supreme Court frequently uses it as the ultimate test of the validity and fairness of government actions and established social practices. It is the tool that facilitates Judicial Review and drives Transformative Constitutionalism.

**Scrutinizing Institutional Conduct**

Constitutional Morality is often invoked in news reports concerning the conduct of high-ranking officials and institutions, especially when political conflict arises.

- **Governor's Role:** Recent judicial scrutiny over the State Governor's actions, such as delaying assent to bills (Article 200), has centred on whether such conduct adheres to the spirit of parliamentary democracy and cooperative federalism. The Court questions if the action is merely political or a violation of institutional morality.
- **Accountability**: The principle sets a high bar for the Executive, ensuring that public servants maintain integrity and adhere to constitutional norms, as seen in debates regarding the appointment of ministers with criminal charges.

**Overturning Discriminatory Practices**

The biggest headlines involving this doctrine appear when the Court overrides outdated customs or laws in favour of Fundamental Rights. The doctrine creates a continuous tension between traditional 'social morality' and constitutional guarantees.

### Dr. Ambedkar's Framework (Basic Polity Context)

The concept was introduced by Dr. B.R. Ambedkar, the chief architect of the Constitution.

**Cultivating Democracy**

- Ambedkar recognized that in a country with a history of deep-rooted inequality (like the Caste System), simply having a written Constitution wouldn't guarantee democracy. He famously said, **"Constitutional morality is not a natural sentiment. It has to be cultivated."**
- Polity Link: This connects directly to the Preamble's ideals of Justice, Liberty, Equality, and Fraternity. **Constitutional Morality is the continuous effort needed to make these ideals a reality, moving beyond mere "rule of law" to "rule of the spirit of law."**

**Constitutional Morality vs. Social Morality**

This is the most crucial distinction:

- **Social Morality**: Refers to the prevalent, common, or majority beliefs and traditions (often temporary or biased).

- **Constitutional Morality**: Refers to the absolute, non-negotiable principles of the Constitution (like Fundamental Rights). When the two conflict, the Court uses Constitutional Morality to ensure the Constitution always prevails.

## Landmark Judgments

The Supreme Court uses this doctrine primarily to uphold the Fundamental Rights (Part III of the Constitution) against laws or traditions that violate individual dignity.

### Safeguarding Dignity and Autonomy

- LGBTQ+ Rights (Navtej Singh Johar Case, 2018): The Court struck down the old law criminalizing consensual same-sex relations (Section 377 IPC). It **ruled that societal prejudice cannot override the right to life and dignity (Article 21) and equality (Article 14).**
- Adultery Law (Joseph Shine Case, 2018): The Court removed the law that treated adultery as a crime, **arguing it violated the autonomy and equality of women,** treating them like their husband's property.

### Ensuring Equality in Public Places

The doctrine forces public institutions to adhere to principles of non-discrimination:

- **Sabarimala Entry Case (2018):** The Court allowed women of all ages to enter the temple, holding that **a religious practice cannot violate the fundamental right** to equality (Article 14) and freedom from discrimination (Article 15). **Religious liberty (Article 25) must be exercised without violating constitutional morality.**

## Way Forward

**Constitutional Morality** is the lifeline of India's transformative constitutional project. Its continued effectiveness hinges on the shared commitment of all stakeholders:

- **For the Judiciary**: It must use the doctrine with restraint and clarity, grounding its application in the explicit text and established principles of the Constitution to avoid charges of Judicial Overreach.
- **For the Executive and Legislature:** They must internalize this morality, ensuring that policymaking respects the dignity and rights of minorities, thus upholding the democratic system not just in form but in substance.
- **For Citizens:** The responsibility lies in actively participating in democratic life while respecting the rights of others, ensuring the moral compass of the Constitution is continuously cultivated and reinforced in public discourse.

## Conclusion

Constitutional Morality is the guiding spirit that sustains India’s democracy beyond written laws. It ensures that governance, institutions, and citizens uphold justice, equality, and liberty even when societal norms resist change. By aligning actions with the Constitution’s ethical core, India moves

toward a more inclusive and dignified societywhere the rule of law evolves into the rule of conscience, realizing Dr. Ambedkar's vision of true constitutional democracy.

### *KEYWORDS*

- ***Constitutional Morality*** – Adherence to the principles, spirit, and values enshrined in the Constitution beyond mere legal compliance.
- ***Spirit of the Constitution*** – The underlying ethos of justice, liberty, equality, and fraternity that guide governance.
- ***Dr. B.R. Ambedkar's Vision*** – Emphasized constitutional morality as essential for sustaining democracy in a diverse society.
- ***Rule of Law*** – Everyone, including the state, is subject to the law equally and fairly.
- ***Liberty and Dignity*** – Protection of individual rights against social or religious oppression.
- ***Equality before Law*** – No person shall be discriminated against on grounds such as caste, gender, or religion.
- ***Democratic Accountability*** – Ensuring those in power act within constitutional limits and uphold transparency.
- ***Judicial Review*** – The power of courts to ensure that laws and actions conform to constitutional principles.

***UPSC PYQ***

Constitutional Morality' is rooted in the Constitution itself and is founded on its essential facets. Explain the doctrine of 'Constitutional Morality' with the help of relevant judicial decisions. ***(2021)***

# MODEL QUESTIONS

1) How can Atmanirbhar Bharat in the natural resources sector accelerate India's progress to Viksit Bharat by 2047? Discuss major challenges and opportunities.
2) China's aggressive crude oil stockpiling in recent years has significant implications for the global energy market and for India's energy security. Discuss.
3) "India's diaspora is both a source of soft power and a potential source of diplomatic friction." Discuss
4) The availability and secure supply of critical minerals are vital for India's energy transition, economic growth, and national security. Discuss the significance of critical minerals for India and examine the steps taken by the government to ensure their sustainable and reliable supply.
5) Discuss the impact of microplastic pollution on estuarine ecosystems in India. Highlight its implications for biodiversity, human health, and sustainable fisheries. Suggest measures for effective mitigation in line with national and global frameworks.
6) "Green crackers represent an improvement, not a solution. Discuss with reference to India's air pollution challenge."
7) India aspires to be the "Pharmacy of the World," yet recurring drug safety failures undermine global trust. Discuss the policy and institutional reforms required to align India's pharmaceutical governance with international standards.
8) Examine how India's pursuit of strategic autonomy is reflected in its engagement with multiple power centres, with specific reference to the India–Middle East–Europe Economic Corridor (IMEC). Analyse its economic, strategic and geopolitical significance.
9) "Evaluate the impact of India's gendered welfare schemes on women's financial inclusion and economic empowerment. How can these schemes move from providing access to fostering genuine agency?"
10) "Constitutional Morality is the soul of the Indian Constitution, ensuring that its core values prevail over social moralities and traditions."