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Current Affairs  
Compilation  
for UPSC  
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Guiding Dreams, Empowering Future  
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**EXCLUSIVE CURRENT AFFAIRS BULLETIN**

## Structure & Timeline of Census

The Census 2027 will be conducted in two distinct phases, ensuring systematic data collection across housing and population dimensions:

- **Phase 1: House Listing and Housing Census (HLO)**

Conducted from April 1 to September 30, 2026, this phase focuses on housing conditions, household assets, and basic amenities.

- **Phase 2: Population Enumeration (PE)**

Scheduled in February 2027, it captures demographic, socio-economic, and cultural details of individuals.

- **Reference Date:** Most regions: **1 March 2027 (00:00 hours)**, Snow-bound areas: **1 October 2026**.

## Phase 1: House Listing and Housing Census

Phase 1 forms the **foundation of the census**, focusing on housing and living conditions rather than individuals. Enumerators physically visit every household, ensuring comprehensive coverage across all **36 States and Union Territories**.

- Each State/UT is allotted a 30-day enumeration window
- Data collected includes:
  - Type and condition of house
  - Availability of drinking water, electricity, sanitation
  - Ownership of assets and household facilities
- A structured **33-question schedule** is used to ensure uniformity

## State-wise Enumeration

# INDIA CENSUS

## 2026-27 (PHASE 1)

### Background

India has initiated the **Census 2027 process from April 1, 2026**, marking the first census after a 16-year gap (last conducted in 2011). The exercise was originally scheduled for 2021 but was delayed due to the COVID-19 pandemic. It is considered the **largest administrative and statistical exercise in the world**, covering every household across the country. This census introduces major structural and technological reforms, making it highly relevant for both Prelims and Mains.

### Strategy

The census follows a **staggered state-wise schedule** to manage administrative efficiency across India's vast geography.

- **Early Phase (April–May 2026):**

Karnataka, Goa, Odisha, Sikkim, Mizoram, Andaman & Nicobar, Lakshadweep, Gujarat, Uttarakhand

- **Mid Phase (May–June 2026):**

Madhya Pradesh, Andhra Pradesh, Haryana, Bihar, Telangana, Maharashtra, Rajasthan, Uttar Pradesh, Delhi

- **Late Phase (June–September 2026):**

Kerala, Tamil Nadu, Assam, Manipur, Jammu & Kashmir, Ladakh, Puducherry

- **Special Case:**

West Bengal schedule yet to be announced

### Self-Enumeration (Major Reform)

A key innovation in Census 2027 is the introduction of self-enumeration, allowing citizens to submit their details online before the enumerator's visit.

- Available for a **15-day window before field enumeration**

- **Process:**

- Login using mobile number
- Fill household details digitally
- Generate Self Enumeration ID (SE ID)
- Share ID with enumerator
- No documents required

►► Continued on P2



► From P1

## Digital Census Transformation

For the first time, India is conducting a **fully digital, paperless census**, marking a major technological shift in governance.

- Data collection via **mobile applications**
- Offline data capture with later synchronization
- Use of GPS tagging and geo-referencing
- Real-time monitoring dashboards

## Legal and Constitutional Framework

The census is conducted under a strong statutory and constitutional framework:

- **Census Act, 1948** – provides legal authority
- **Census Rules, 1990** – operational guidelines
- **Article 246** – places census under Union jurisdiction
- **Entry 69, Union List** – empowers central government

## New Features & Innovations

Census 2027 introduces several transformative features:

- Inclusion of **caste enumeration** (first comprehensive attempt since 1931)
- Fully **digital data collection system**
- **Self-enumeration portal** for citizens
- Multi-language support (16 languages)
- Improved data validation and monitoring

## Budget, Scale and Workforce

The scale of Census 2027 reflects its national importance:

- Estimated cost: **11,718 crore**
- Workforce: **31 lakh+ enumerators and supervisors**
- Coverage: ~6.39 lakh villages, Thousands of urban settlements.

## Significance for Governance and Policy

The census serves as the **backbone of India's policy framework**, influencing multiple domains:

- Basis for **welfare schemes targeting** (housing, water, sanitation)
- Essential for **delimitation of constituencies (Article 82)**
- Crucial for implementation of **Women's Reservation**
- Supports **resource allocation and fiscal planning**
- Enables socio-economic research and development planning

## Challenges and Concerns

Despite its strengths, the census faces several challenges:

- Digital divide affecting rural participation
- Data privacy and security concerns
- Risk of inaccuracies in self-enumeration

- Administrative complexity across diverse regions

## Conclusion

Census 2027 Phase 1 represents a paradigm shift in India's data governance framework, combining digital innovation with administrative scale. By introducing self-enumeration, caste data collection, and real-time monitoring, it enhances both efficiency and inclusiveness. The data generated will play a decisive role in shaping public policy, electoral representation, and socio-economic planning for the next decade, making it a cornerstone of India's developmental trajectory.



## Prelims Practice Question

**Q. Consider the following statements regarding Census 2027 in India:**

1. Phase 1 deals with housing and household amenities.
2. Census 2027 is India's first fully digital census.
3. Self-enumeration allows citizens to submit data online before enumerator visits.

Which of the above statements are correct?

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

**Answer: (c) 1, 2 and 3**

# Iran Grants India Hormuz Passage amid Middle East Tensions



## Context

- The geopolitical situation in West Asia escalated in 2026 due to military tensions involving Iran, the United States, and Israel.
- In response to rising conflict, Iran exercised control over the Strait of Hormuz, one of the world's most critical maritime chokepoints.
- Iran selectively restricted passage to certain countries while allowing access to friendly nations including India.

## About Strait of Hormuz

- The Strait of Hormuz is a narrow waterway located between Iran and Oman that connects the Persian Gulf with the Arabian Sea.
- It is one of the most strategically significant maritime chokepoints in the world.
- Approximately 20 percent of global petroleum trade passes through this route.
- The strait has limited navigable shipping lanes, making it highly vulnerable to disruption during conflicts.

## Importance for India

- India relies heavily on imports of crude oil and natural gas, a significant portion of which transits through the Strait of Hormuz.
- Around 40 to 50 percent of India's crude

- oil imports pass through this route, making it critical for energy security.
- Liquefied Natural Gas and LPG supplies are also heavily dependent on this maritime corridor.
- Any disruption in this route can lead to inflation, energy shortages, and macroeconomic instability in India.

## Recent Developments

- Iran allowed passage to Indian ships after diplomatic engagement and classification of India as a friendly nation.
- Several Indian vessels that were stranded due to tensions were able to resume movement.
- Despite the permission, ships continued to face operational risks such as GPS interference and security threats.
- The global shipping traffic in the region declined significantly during the crisis.

## Geopolitical Significance

- The incident highlights Iran's strategic

leverage over global energy supply chains.

- It reflects the emergence of bloc-based geopolitics where access to trade routes is influenced by political alignment.
- It demonstrates the increasing weaponization of geography in international relations.
- The development underscores the importance of maintaining balanced diplomatic relations in a multipolar world.

## Impact on Global Economy

- The disruption in the Strait of Hormuz led to a sharp increase in global oil prices.
- Shipping insurance premiums and freight costs increased due to heightened risks.
- Global supply chains experienced uncertainty and volatility.
- Energy-importing countries faced economic pressure due to rising fuel costs.

▶▶ Continued on P2

►► From P3

## India's Response

- India adopted a diplomatic approach to ensure safe passage of its vessels through the region.
- The government monitored the situation closely and coordinated with stakeholders to minimize disruptions.
- India emphasized strategic autonomy by maintaining balanced relations with both Iran and Western nations.
- Efforts were made to diversify energy sources and reduce dependence on a single route.

## Challenges

- India remains vulnerable due to its high dependence on imported energy resources.
- Alternative routes and suppliers are limited in the short term.
- Geopolitical instability in West Asia continues to pose long-term risks.
- The safety of Indian seafarers and vessels remains a concern during

such crises.

## Way Forward

- India should accelerate diversification of energy imports by engaging with regions such as Africa and Latin America.
- There is a need to expand strategic petroleum reserves to cushion against supply shocks.
- Investment in renewable energy can reduce long-term dependence on imported fossil fuels.
- India should strengthen maritime security cooperation and naval capabilities in the Indian Ocean region.
- Development of alternative trade corridors such as the International North-South Transport Corridor should be prioritized.

## Conclusion

The decision by Iran to allow India passage through the Strait of Hormuz provided immediate relief to India's energy security concerns.

However, the episode highlights the structural vulnerabilities associated with dependence on critical maritime chokepoints. A long-term strategy focusing on diversification, resilience, and strategic autonomy is essential for safeguarding national interests.

## Prelims Practice Question

**Q. Consider the following statements regarding the Strait of Hormuz:**

1. It connects the Persian Gulf with the Arabian Sea.
2. It lies between Iran and Oman.
3. It is one of the most important global oil transit chokepoints.

Which of the statements given above are correct?

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

**Answer: (c) 1, 2 and 3**

# S-400 Deliveries Expedited for

# AIR DEFENCE



## Background

- India signed a deal with Russia in 2018 worth ~\$5.43 billion for 5 S-400 squadrons.
- The S-400 is a long-range surface-to-air missile (SAM) system developed by Russia.
- It is part of India's effort to modernise defence forces amid tensions with China and Pakistan.

## Present Developments

- India is expected to receive remaining 2 S-400 units in 2026.
- Delivery expedited due to strategic urgency despite earlier delays.
- 3 squadrons already operational in India.
- Delays were caused due to Russia-Ukraine war disruptions.

## Technical Features and

## Capabilities

- Range up to 400 km interception capability.
- Tracks over 300 targets simultaneously.
- Can neutralize aircraft, ballistic missiles, cruise missiles, and drones.
- Equipped with advanced radar and multi-layer defence.
- Highly mobile system.

►► Continued on P5



# BIOPHARMA SHAKTI SCHEME

## Financial Outlay & Infrastructure

- Total allocation: ₹10,000 crore over 5 years (from FY 2026–27).
- Establishment of 3 new NIPERs.
- Upgradation of 7 existing NIPERs into Centres of Excellence.
- Creation of 1,000+ accredited clinical trial sites.
- Development of advanced biomanufacturing facilities.
- Focus on translational research and scale-up production.

## Regulatory Enhancements

- Strengthening of CDSCO with Scientific Review Cadre.
- Alignment with global approval timelines.
- Support to New Drugs and Clinical Trials (Amendment) Rules, 2023.
- Recognition of non-animal testing

methods.

- Strengthened biosimilar approval guidelines.
- Reduces import dependency and counters global tariff pressures.

## India's Pharmaceutical Landscape

- 3rd largest producer by volume; 11th by value.
- Supplies ~20% of global generics.
- Major vaccine supplier: DPT, BCG, Measles.
- Sector turnover: ₹4.72 lakh crore (FY25).
- Over 10,500 manufacturing units.
- Export CAGR: ~7%.
- Medical devices exported to 187 countries.

## Biologics & Biosimilars

- Biologics: Derived from living systems (cells, bacteria).
- 200–1000 times larger than chemical drugs.

▶ Continued on P6

## Scheme Overview

- Announced in Union Budget 2026–27.
- Full form: Strategy for Healthcare Advancement through Knowledge, Technology, and Innovation (SHAKTI).
- Aim: Position India as a global leader in biologics and biosimilars.
- Focus on adopting Non-Animal Methodologies (NAMs).
- Shift from generic drugs to high-value biopharmaceuticals.
- Aligned with National Biopharma Mission (2017): Target \$100 billion biotech sector and 5% global pharma share.
- Targets Non-Communicable Diseases (NCDs): cancer, diabetes, autoimmune disorders.
- NCDs account for ~63% of deaths in India.

▶ From P4

## Strategic Significance for India

- Provides strong air defence shield.
- Enhances deterrence in two-front war scenario.
- Strengthens network-centric warfare capability.
- Protects major cities and strategic assets.

## Deployment and Operational Aspects

- Deployment in Punjab, Sikkim, and western sectors.
- Strengthens coverage along borders.
- Remaining systems will ensure full coverage.

## Link with Defence Modernisation

- Part of large defence procurement push.
- Complements Rafale, Akash, and BMD systems.



- Shows shift towards integrated air defence.

## Challenges and Concerns

- Risk of CAATSA sanctions.
- Dependency on Russian technology.
- Integration issues.
- Delays due to geopolitical conflicts.
- High cost and maintenance.

## Way Forward

- Promote indigenous defence systems.

- Develop integrated air defence network.
- Diversify imports.
- Focus on Atmanirbhar Bharat.
- Use AI and space-based surveillance.

## Conclusion

The S-400 strengthens India's defence preparedness but highlights the need for self-reliance and technological integration.

## Prelims Practice Question

Q. With reference to the S-400 system:

1. It is a long-range SAM system.
2. It can engage aircraft and ballistic missiles.
3. It is jointly developed by India and Russia.

Which are correct?

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

Answer: (a) 1 and 2 only

► From P3

- Examples: Insulin, monoclonal antibodies, vaccines, gene therapies.
- Biosimilars: Highly similar to original biologics.
- Cost reduction: 30–70%.
- Not identical due to biological variability.
- India's biosimilars market:
  - 40% CAGR growth.
  - 40+ products under development.
  - Export value: ~\$51 million.

### Non-Animal Methodologies (NAMs)

- Replace/Reduce/Refine animal testing (3Rs principle).
- Techniques:
  - Organ-on-chip
  - Organoids (stem cells)
  - 3D bioprinting
  - AI-based in silico models
  - Ex vivo systems

- Advantages:
  - Better human predictability
  - Avoids failures like 2006 Northwick Park trial
  - 10–26% cost reduction
  - ~20% faster drug development
  - Enables precision medicine
- Current gap: Only ~90 labs in India use NAMs.

### Strategic Significance

- Reduces dependence on imports.
- Enhances export competitiveness.
- Strengthens global supply chain role.
- Supports ethical research practices.
- Boosts innovation ecosystem.

### CONCLUSION

Biopharma SHAKTI is a paradigm shift from volume-driven generics to innovation-led biologics. By integrating NAMs, strengthening regulatory frameworks, and investing in infrastructure, India is positioning itself as a cost-efficient, ethi-

cal, and globally competitive biopharma hub capable of addressing both domestic health burdens and international market demands.

### UPSC PYQ (2019)

Q. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India? (2019)

1. Genetic predisposition of some people
2. Taking incorrect doses of antibiotics to cure diseases
3. Using antibiotics in livestock farming
4. Multiple chronic diseases in some people

Select the correct answer using the code given below.

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

Ans: (b)

## India's 1st National Repository for Deep-Sea Fauna

India has designated the "Bhavasagara" Referral Centre at the Centre for Marine Living Resources and Ecology (CMLRE), Kochi, as the National Repository for Deep-Sea Fauna under Section 39 of the Biological Diversity Act, 2002. This gives India an institutional base for preserving, studying, and documenting deep-sea biodiversity and strengthens marine science within the wider Blue Economy framework.

### What a National Repository Means

- A national repository is a formally recognised institution where biological material is kept in safe custody for scientific reference, verification, and future research.
- Under Section 39 of the Biological Diversity Act, the Central Government may designate institutions as repositories for different categories of biological resources in consultation with the National Biodiversity Authority.



- These repositories keep voucher specimens in safe custody.
- If a new taxon is discovered, the discoverer has to notify the designated repository and deposit voucher specimens there.
- Therefore, the Bhavasagara centre will become the official custodian for newly

discovered deep-sea species from Indian waters.

### Why This Development Matters

- Deep-sea ecosystems remain among the least explored biological zones on Earth, even though they contain unique species, fragile habitats, and possible

biotechnological value.

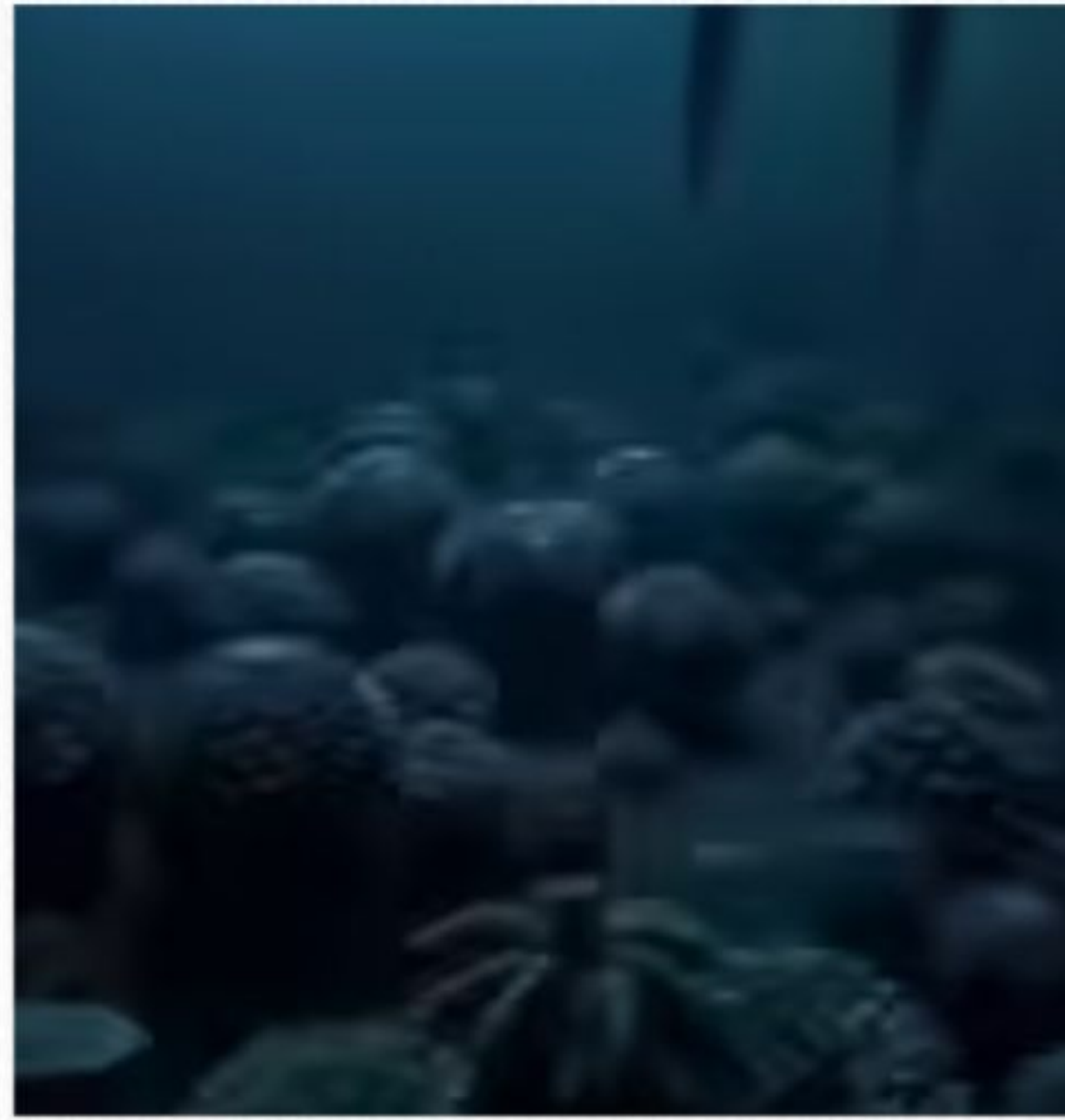
- India has a vast maritime geography with a coastline of about 7,517 km, island territories, and a large Exclusive Economic Zone, giving it major responsibility in marine biodiversity conservation.
- A repository reduces the risk of loss, misidentification, and fragmentation of marine specimens collected over many years.
- It also improves scientific credibility because researchers can verify species identification through preserved voucher specimens and associated metadata.
- In civil services preparation, this topic links environment, biodiversity, ocean governance, marine science, and Blue Economy policy.

## Present Holdings and Scientific Value

- The Bhavasagara centre currently houses more than 3,500 taxonomically identified and geo-referenced voucher specimens.
- These collections include marine invertebrates such as cnidarians, molluscs, and arthropods, along with vertebrate specimens.
- Geo-referenced specimens are especially valuable because they preserve not only the organism but also the location details of collection, which helps in mapping biodiversity patterns.
- The centre also maintains associated DNA sequence information, which improves taxonomic accuracy and helps modern biodiversity research.
- CMLRE's specimen collections have been built from marine expeditions in the Indian Ocean, including surveys conducted from 2010 to 2023.

## Role of Voucher Specimens

- Voucher specimens are preserved biological samples that serve as permanent reference material for scientific identification and validation.
- They are extremely important in taxonomy because future researchers can re-examine them if species classification changes or if disputes arise.
- In deep-sea studies, voucher specimens become even more significant because



many organisms are rare, difficult to access, and collected from remote habitats.

- Such repositories create a verified biological record of India's marine life and help avoid duplication or errors in biodiversity databases.

## Institutional Importance of CMLRE

- The Centre for Marine Living Resources and Ecology is a specialised marine research institution under the Ministry of Earth Sciences.
- Its work includes ecosystem studies, marine biodiversity assessment, environmental monitoring, and resource-linked scientific surveys in the Indian Ocean region.
- By hosting the repository, CMLRE gains stronger national importance in deep-sea taxonomy and marine specimen management.
- This also improves India's scientific infrastructure for Deep Ocean Mission-related activities and future exploration programmes.

## Link with Blue Economy

- Blue Economy refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and ecosystem health.
- Marine biodiversity knowledge is essential for a sustainable Blue Economy because conservation must go together with exploration, fisheries, shipping, seabed activities, and climate resilience.
- A repository of deep-sea fauna helps India make science-based policy decisions instead of exploitation without ecological understanding.

- It supports balanced development by ensuring that resource use does not ignore fragile deep-ocean ecosystems.

## Broader Significance for India

- India's marine policy is moving beyond coastal management toward deeper ocean science and deep-sea biodiversity protection.
- A national repository strengthens baseline knowledge, which is necessary before any large-scale seabed or deep-ocean activity is expanded.
- It can support environmental impact studies, academic research, species discovery, conservation planning, and international scientific cooperation.
- It also helps India build sovereign scientific capability in a domain where global strategic competition over oceans is increasing.

## Conclusion

India's recognition of the Bhavasagara Referral Centre as the first National Repository for Deep-Sea Fauna is a major step in marine biodiversity governance, scientific taxonomy, and deep-ocean conservation. It strengthens India's legal, scientific, and institutional capacity to preserve deep-sea species, support the Blue Economy with ecological caution, and build long-term knowledge of life in the Indian Ocean.

## UPSC PYQ

**Q: With reference to India's first National Repository for Deep-Sea Fauna, consider the following statements:**

1. It has been designated under the Biological Diversity Act, 2002.
2. It is housed at the Centre for Marine Living Resources and Ecology, Kochi.
3. It functions under the Ministry of Environment, Forest and Climate Change.
4. It will maintain voucher specimens related to deep-sea fauna.

**Which of the statements given above are correct?**

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

**Answer: (a) 1, 2 and 4 only.**

# Khelo India Tribal Games (KITG) 2026

**K**helo India Tribal Games (KITG) 2026 is India's first national multi-sport event dedicated exclusively to tribal athletes, and it will be hosted in Chhattisgarh from 25 March to 3 April 2026. It is an important current affairs topic because it connects sports governance, tribal inclusion, cultural preservation, grassroots talent development, and social justice.

## Background of Khelo India

- Khelo India is a flagship Central Sector Scheme of the Ministry of Youth Affairs and Sports.
- It aims to strengthen sports culture at the grassroots level and improve India's performance in competitive sports.
- It provides a structured system for talent identification, training, competition, sports infrastructure, and athlete support.
- Under the scheme, identified athletes receive financial support of Rs 5 lakh per year for 8 years.
- The scheme supports athletes generally in the age group of 8 to 25 years.
- It covers both mainstream sports and traditional indigenous sports.
- So far, thousands of Khelo India Athletes have been identified for long-term development.

## Why tribal games are important

- Tribal communities have rich traditions of physical culture, endurance, agility, and indigenous sporting practices, but their access to organised national sports systems has been limited.
- A dedicated tribal games event gives visibility to talent that may otherwise remain unnoticed in remote and underdeveloped regions.
- It also helps reduce regional and social inequalities in access to sports opportunities.
- Such initiatives promote inclusion by taking sports governance beyond cities and dominant social groups.
- It strengthens confidence and representation of Scheduled Tribe youth at the national level.



## Importance of Chhattisgarh as host

- Chhattisgarh has a significant tribal population and a strong tribal cultural identity, making it a suitable host for the first edition of the games.
- Hosting the event in Chhattisgarh gives visibility to tribal regions that are often discussed only in terms of backwardness, conflict, or underdevelopment.
- It also helps create sports infrastructure, administrative capacity, and public attention in tribal-majority areas.
- For UPSC preparation, this shows how sports can be used as a tool of regional development and social integration.

## Role in inclusive development

- KITG 2026 is not only a sports event; it is also a social inclusion measure.
- It brings tribal youth into formal structures of training, discipline, recognition, and state support.
- It creates pathways for scholarships, coaching, national camps, and future representation in elite competitions.
- This aligns with the broader goal of inclusive development where welfare is linked with dignity, participation, and opportunity.

## Indigenous sports dimension

- The inclusion of mallakhamb and kabaddi as demonstration sports is significant because it recognises Indian traditional sporting practices within a national competitive framework.
- This prevents sports policy from becoming too narrowly focused only on Olympic disciplines.
- It also preserves cultural identity while linking it with modern sports administration.

• For civil services examination, this topic can be linked with cultural preservation, tribal identity, and mainstreaming of indigenous knowledge systems.

## Talent identification and long-term effect

- The Talent Identification and Development Committee is one of the most important features of the games.
- It ensures that the event does not remain symbolic, but becomes a channel for long-term athlete development.
- By observing performance during the competition, the committee can identify athletes with national and international potential.
- This creates a bridge between tribal participation and elite sports performance.

## conclusion

Khelo India Tribal Games 2026 is a landmark step in taking Indian sports policy toward inclusion, representation, and grassroots talent development. By creating a national platform exclusively for tribal athletes and linking them with the larger Khelo India ecosystem, the initiative combines sports excellence with social justice, cultural recognition, and nation-building.

## Prelims Practice Question

**Q:** With reference to the Khelo India Tribal Games (KITG) 2026, consider the following statements:

1. It is India's first national multi-sport event dedicated exclusively to tribal athletes.
2. It will be hosted in Chhattisgarh.
3. It is being organised only by the State Government without Union Government support.
4. The event includes both medal sports and demonstration sports.

Which of the statements given above are correct?

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

**Answer:** (a) 1, 2 and 4 only.

# India Targets 60 Percent Non Fossil Power Capacity by 2035

## Why in News

- India updated its Nationally Determined Contributions (NDCs) under the Paris Agreement.
- New climate targets set for the 2031–2035 period.

## Climate Targets for 2035

### A. Energy Transition Target

- 60% of installed electricity capacity from non-fossil sources.
- Non-fossil sources include:
  - Solar
  - Wind
  - Hydropower
  - Biomass
  - Nuclear energy

### B. Emissions Reduction Target

- Reduce emissions intensity of GDP by 47%.
- Base year: 2005.

### C. Carbon Sink Target

- Create additional carbon sink of 3.5 to 4 billion tonnes of CO<sub>2</sub> equivalent.
- Achieved through:
  - Forest cover expansion
  - Tree cover increase

## Current Status

### A. Non-Fossil Capacity

- Installed capacity from non-fossil sources: ~52%.
- Actual electricity generation from non-fossil sources: ~25%.

### B. Emissions Reduction

- Achieved 36% reduction in emissions intensity (2005–2020).

### C. Carbon Sink Progress

- Carbon sink created (2005–2019): 1.97 billion tonnes CO<sub>2</sub> equivalent.

### D. Forest Cover

- Forest and tree cover (2021): 24.6% of geographical area.
- National target: 33% forest cover.

## Earlier NDC Targets for 2030

- 50% non-fossil electricity capacity.
- 44% reduction in emissions intensity.
- Carbon sink: 2.5 to 3 billion tonnes CO<sub>2</sub> equivalent.

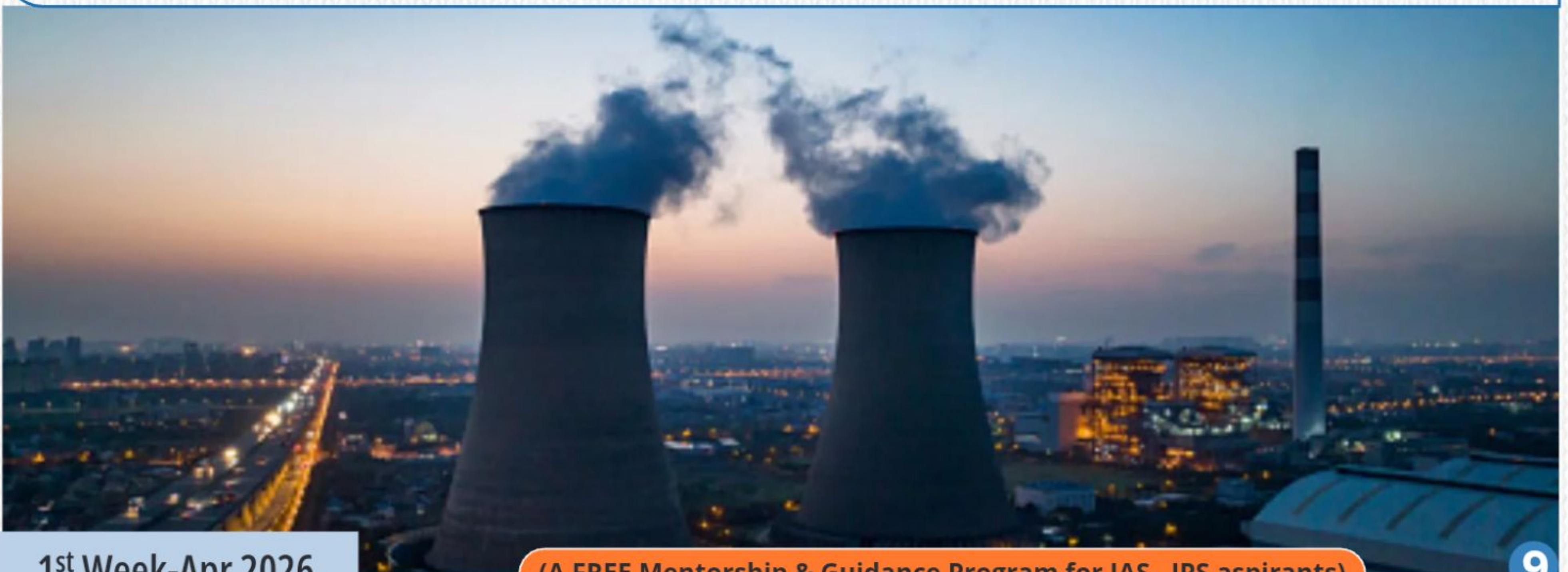
## Paris Agreement Context

- Countries must submit updated NDCs every 5 years.
- India required to submit updated NDC by 2025.
- Targets apply for 2031–2035 period.

## PRELIMS PYQ (2016)

[2016] The term 'Intended Nationally Determined Contributions' is sometimes seen in the news in the context of

- Pledges made by the European countries to rehabilitate refugees from the war-affected Middle East
- Plan of action outlined by the countries of the world to combat climate change
- Capital contributed by the member countries in the establishment of Asian Infrastructure Investment Bank
- Plan of action outlined by the countries of the world regarding Sustainable Development Goals



# BAB-EL-MANDEB STRAIT

## Overview

- Bab-el-Mandeb Strait: Critical maritime chokepoint.
- Connects Red Sea with Gulf of Aden.
- 10–12% of global seaborne oil trade
- Major global container shipping routes

## Recent disruption:

Houthi attacks since late 2023, Freight costs increased by 300–400%, Ships rerouted via Cape of Good Hope (Africa).

## Geographical Features

- Location: Between Yemen (Arabian Peninsula) and Djibouti & Eritrea (Horn of Africa), Length: ~31 km, Minimum width: ~26 km, Between Ras Menheli (Yemen) and Ras Siyyan (Djibouti).

## Divided by Perim Island into:

- Eastern Channel (Bab Iskender): 3–5 km wide, 29–30 m deep

## Western Channel (Dact-el-Mayun):

20–25 km wide, ~310 m deep

## Other features:

- Seven Brothers Islands near Djibouti coast

## Strategic & Economic Importance

**Connects:** Indian Ocean-Red Sea- Suez Canal -Mediterranean Sea

**Trade significance:** ~30% of global container traffic, 12% global oil trade (4–5 million barrels/day).

**Third busiest oil chokepoint:** After Strait of Hormuz and Strait of Malacca

**Economic vulnerability:** Disruptions can cost ~\$9 billion/day (Suez-like scenario)

**Critical infrastructure:** Submarine cables (power + fibre optics), High intelligence and surveillance interest.

## Security Challenges

**Houthi Threat:** Iran-backed Houthis, 100+ drone/missile attacks since Oct 2023, Targeting Israel-linked vessels.



**Naval Mines:** ~90 mines cleared (2015–2018), Continued risk persists.

**Piracy: Origin:** Somalia coast, Declined but still active (exp., 2024 hijack case)

**Insurance Risks:** High-risk zone (>1% probability per transit), Increased insurance premiums.

**Operational Impact:** Rerouting adds 10–14 days to journey.

## International Response

Operation Prosperity Guardian (Combined Maritime Forces, US-led) and EU's Operation Aspides protect shipping since 2024 Red Sea Crisis.

Djibouti Code of Conduct counters piracy; recent IRGC actions in 2026 suspended Hormuz navigation, raising fears of Bab-el-Mandeb escalation.

Foreign military bases proliferate: US/France in Djibouti, China in Djibouti, Russia-linked vessels spotted.

## Geopolitical tensions:

- IRGC actions (2026) impacted Hormuz navigation, Spillover risks to Bab-el-Mandeb
- Foreign Military Presence: USA, France, China bases in Djibout, Russian naval activity observed

## India's Interests

India imports 85% oil via this route; disruptions inflate costs, impact Rupee, and affect \$70 billion annual Suez trade.

INS Kochi, Chennai deployed for security; MoUs with Djibouti, Seychelles enhance presence; Chabahar port offers alternate

access.

Bab-el-Mandeb remains a flashpoint where Houthi disruptions expose global trade fragility, amplifying costs for energy-importing nations like India while drawing naval coalitions and rival powers into proxy tensions. Securing this 26-km chokepoint demands multilateral patrols, anti-mine ops, and diplomatic de-escalation to prevent cascading economic shocks from Asia to Europe.

## CONCLUSION

Bab-el-Mandeb Strait epitomizes the strategic fragility of global maritime trade, where geopolitical conflicts, asymmetric warfare, and chokepoint vulnerabilities intersect. Ensuring its security requires coordinated naval presence, resilient supply chain strategies, and diplomatic stability, as disruptions here can cascade into global energy shocks, inflation, and economic instability—especially for import-dependent nations like India.

## UPSC PYQ (2019)

**What is/are the importance/importances of the 'United Nations Convention to Combat Desertification'? (2019)**

**It aims to promote effective action through innovative national programmes and adaptive synergistic approaches at all levels.**

**It fosters cooperation between developed and developing countries, especially around issues of land use patterns.**

**It addresses issues of global climatic change, highlighting the need for a global cooperative effort.**

**Select the correct answer using the code given below.**

(a) 1 only

(b) 2 only

(c) 1 and 3 only

(d) 1, 2 and 3

**Ans: (a) 1 only**



# HUDSONIAN GODWIT

## Overview

- Hudsonian Godwit (*Limosa haemastica*) is a long-distance migratory shorebird.
- Faces ~95% population decline over four decades.
- Proposed for international protection at CMS COP15 (2026, Brazil).
- Classified as Vulnerable on IUCN Red List.
- Decline due to climate change, habitat loss, and ecological disruption.

## Bird Profile

- Size: ~38 cm length.
- Distinct long, slightly upturned bill.

## Breeding plumage:

- Barred chestnut underparts
- Mottled brown upperparts
- Black-and-white tail
- Broad white wing stripe
- Black wing linings

## Habitat:

- Marshes, prairie pools, mudflats
- Tundra edges near treeline
- Shallow marshy lakes
- Flooded pastures, rice fields
- Coastal tidal flats

## Migration Pattern

- One of the longest migratory routes: ~30,000 km annually.
- Includes non-stop ~11,000 km flights over open ocean.
- Breeding regions:
  - Arctic: James Bay, Mackenzie River Delta, Alaska
- Wintering regions:
  - Patagonia (Chile & Argentina): Chiloé Island, Bahía Lomas, Punta Rasa
- Stopovers:
  - Central United States for refueling
- India:
  - No confirmed regular presence; rare Asian flyway deviations possible

## Conservation Status

- IUCN Status: Vulnerable
- Population decline:
  - From ~500,000 (1980s) to <50,000 currently
- Listed in:
  - North American Bird Conservation Initiative watch list
  - Canada & US Shorebird Conservation Plans
  - Protected under Migratory Bird Treaty Act

(USA)

- Proposed inclusion in CMS Appendices I/II at COP15
- CMS COP15 (March 2026, Campo Grande, Brazil):
  - 40+ species considered for protection

## Major Threats

- Climate Change:
  - Ecological mismatch in Arctic breeding zones
  - Chick hatching no longer synchronized with peak insect availability
- Habitat Loss (South America):
  - Aquaculture (salmon & oyster farming) in Chile's intertidal zones
- Wetland Loss (North America):
  - Agricultural changes reducing shallow water stopover habitats

## CMS Convention (Bonn Convention)

- Full form: Convention on Conservation of Migratory Species
- Under UNEP
- Adopted: 1979 | Effective: 1983
- Objective: Conservation of migratory species across borders

## Appendices:

- Appendix I:
  - Endangered migratory species
  - Strict protection measures
  - ~188 species listed
  - Examples: Great Indian Bustard, Siberian Crane, Olive Ridley Turtle, Leatherback Turtle
- Appendix II:
  - Species requiring international cooperation
- COP (Conference of Parties):
  - Reviews conservation progress
  - COP15 emphasized habitat restoration and migration corridor protection

## Strategic Importance

- Highlights fragility of migratory species ecosystems
- Demonstrates need for:
  - International cooperation

▶▶ Continued on P12

# New Butterfly Species Named After Zubeen Garg

## Why in the news?

A new butterfly species discovered in Arunachal Pradesh's Leparada district has been named *Euthalia zubeengargi* in honour of Zubeen Garg, a cultural icon of Assam, whose death on September 19, 2025 triggered widespread public reaction.

## What Is the Newly Discovered Butterfly Species?

- Scientific Name: *Euthalia zubeengargi*
- Common Name Proposed: Basar Duke
- Genus: *Euthalia*
- Habitat: Semi evergreen forests
- Elevation Range: 600 to 750 metres
- Location: Leparada district, Arunachal Pradesh

## Why Is the Discovery Important?

- Only Two Male Individuals recorded
- One Collected Specimen
- One Photographed in Wild
- Indicates Rare or Highly Localised Species



- Found in Forest Ecosystem of Eastern Himalayas

## Prelims PYQ [2016]

Q. Recently, for the first time in our country, which of the following States has declared a particular butterfly as 'State Butterfly'?

- Arunachal Pradesh
- Himachal Pradesh
- Karnataka
- Maharashtra



## ►► From P11

- Habitat connectivity
- Climate-resilient conservation
- Relevance to India:
  - Wetland conservation (Ramsar sites)
  - Wildlife Protection Act framework
  - Flyway conservation (Central Asian Flyway)

## CONCLUSION

The Hudsonian Godwit exemplifies the vulnerability of migratory species to climate-induced ecological mismatches and

habitat fragmentation across continents. Its proposed CMS listing underscores the urgency of coordinated global conservation, reinforcing the need for integrated flyway protection, wetland restoration, and climate-adaptive strategies, critical lessons for India's biodiversity governance.

## UPSC PYQ (2022)

Q. With reference to the 'Changthang' region of Ladakh, consider the following statements: (2022)

The region is the coldest inhabited region in India.

Black-necked cranes visit the region every year.

Demoiselle cranes breed in the region every year.

Which of the statements given above is correct?

- 1 and 2 only
- 2 only
- 1 and 3 only
- 1, 2 and 3

Ans: (a) 1 and 2 only

# Delhi Digital Fraud Bust

## Background & Context

India's rapid digitalisation through platforms like UPI and online banking has increased financial inclusion but also created vulnerabilities. Delhi has emerged as a hotspot for cyber fraud cases, with organised syndicates targeting citizens using advanced technological tools.

## Why in News

Recent operations by Delhi Police exposed large cyber fraud networks involving multi-state linkages, fake call centres, and digital arrest scams. These cases highlight the growing sophistication and scale of cybercrime in India.

## Nature of Fraud

- Phishing scams through fake SMS and email links
- Fake KYC update requests to steal banking details
- Online loan app frauds targeting vulnerable groups
- Investment scams using fake trading platforms
- Digital arrest scams involving impersonation of officials

## Modus Operandi

- Fraudsters impersonate police, CBI, ED or bank officials
- Use of spoofed phone numbers and SIM box technology
- Victims pressured through fear tactics and legal threats

threats

- Money transferred via mule accounts and layered transactions
- Use of VPNs to hide identity and operate across borders

## Scale and Impact

- Significant rise in cyber fraud cases in urban centres
- Huge financial losses running into thousands of crores
- Low recovery rate of stolen funds
- Erosion of trust in digital payment systems
- Increased psychological stress among victims

## Government Response

- Indian Cyber Crime Coordination Centre (I4C) strengthening
- National Cyber Crime Reporting Portal (NCRP)
- Blocking of fraudulent apps and websites
- Public awareness campaigns on cyber safety
- Coordination between central and state agencies

## Challenges

- Low digital literacy among users
- Rapid evolution of fraud techniques
- Jurisdictional issues across states and countries
- Difficulty in tracking encrypted communications
- Limited cyber policing capacity

## Way Forward

- Strengthening AI-based fraud detection systems
- Improving digital literacy and awareness
- Enhancing international cooperation
- Capacity building in cyber policing
- Strict regulation of fintech and digital platforms

## Conclusion

Delhi digital fraud cases reflect the growing complexity of cybercrime in India. While digital payments drive economic growth, ensuring cyber-security, awareness, and institutional capacity is essential to maintain trust and safeguard citizens. UPSC Prelims Practice Question

With reference to cyber fraud in India, consider the following statements:

1. Digital arrest scams involve impersonation of law enforcement agencies.
2. Mule bank accounts are used to transfer illegally obtained money.
3. Cyber crimes are limited to within national borders.

Which of the statements given above are correct?

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

Answer: (a) 1 and 2 only

## Background

India imposed a ban on select single-use plastic items in 2022 under the Plastic Waste Management Rules. The objective was to reduce plastic pollution and promote sustainable alternatives. However, implementation across cities has been uneven.

Why in News

Recent reports highlight weak enforcement of the plastic ban in several cities, with continued usage of banned items and lack of monitoring.

## Important Points

- Ban covers items like plastic straws, cutlery, plates, and packaging materials
- Minimum thickness norms introduced for plastic carry bags
- Urban areas show poor compliance despite regulations
- Lack of affordable alternatives affects implementation
- Informal sector heavily dependent on plastic usage
- Municipal bodies face capacity and resource constraints
- Public awareness remains limited
- Extended Producer Responsibility (EPR) introduced for accountability
- Plastic waste continues to harm ecosystems and marine life
- Microplastics pose long-term health risks
- Penalties imposed but enforcement inconsistent

## Single-Use Plastic Ban Enforcement Gaps in Cities



- Behavioural resistance among consumers and vendors

## Challenges

Key challenges include weak governance, lack of monitoring, insufficient alternatives, and continued dependence on plastics in the informal economy. Coordination gaps between central and local authorities further worsen implementation.

Way Forward

Strengthening enforcement, promoting eco-friendly alternatives, increasing public awareness, and improving waste management systems are essential. Effective implementation of EPR and stricter penalties can improve compliance.

## Conclusion

The success of the single-use plastic ban depends on strong enforcement, behavioural change, and development of sustainable alternatives.

## UPSC Prelims Question

With reference to single-use plastic ban in India, consider the following:

1. It is implemented under Plastic Waste Management Rules.
2. It bans all types of plastic products.
3. It includes Extended Producer Responsibility.

Which are correct?

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

Answer: (a) 1 and 3 only