
Prelims Exam Topics

SACRED GROVES

Context

The Kerala State Biodiversity Board (KSBB) has launched a pilot restoration programme aimed at reviving the ecological health of "Kavus" (sacred groves) across the state.

About the programme

- The initial phase of the Kerala State Biodiversity Board (KSBB) restoration project focuses on five strategically selected sacred groves: Ezhikkara in Ernakulam, Pattanchery in Palakkad, Villiappally in Kozhikode, Iritty in Kannur, and Uduma in Kasaragod.

About Sacred Groves

- Sacred groves, also known as sacred forests, are areas of forest that are protected and preserved by local communities due to their religious, cultural, and ecological significance.
- **Legal Status:** Many sacred groves are protected under the **Biological Diversity Act, 2002**, and are managed by local Biodiversity Management Committees (BMCs).
- **Significance of Sacred Groves**
 - **Ecological Significance**
 - Important habitats for a wide range of plant and animal species that have been conserved by local communities sustainably.
 - Often associated with ponds, streams or springs, which provide for water to the local community.
 - The vegetation cover of the sacred groves enhances the soil stability and prevents soil erosion in the area.
 - **Sociocultural Significance**
 - Hold religious and cultural significance for local communities and are often associated with deities or ancestral spirits.
 - Act as repositories of traditional knowledge.
 - **Distribution of Sacred Groves in India**
 - In India, Sacred Groves are found all over the country and abundantly along the Western Ghats.
 - According to some studies, the total number of sacred groves in India could be in the range of 100,000 – 150,00.

INDIA'S FIRST GREEN METHANOL PROJECT

Context

Prosopis juliflora, ranked among the “top 100 invasive species in the world” is being repurposed as the primary feedstock for India’s first green methanol production plant.

About India’s First Green Methanol Project

- **Location:** The project is sited at the **Deendayal Port Authority (DPA)** in Kandla, Gujarat.
- **Capacity:** The facility is designed to produce **five tonnes of methanol a day**.
- **Partnerships:** Built by Pune-based **Thermax Energy** using gasification technology from Vadodara’s **Ankur Scientific**; the plant will be owned by the DPA.
- **Feedstock:** While *juliflora* is the primary source due to its high density and energy profile, the plant is also certified to use agricultural residues like bagasse and cotton stalk.

About *Prosopis juliflora*

- **Regional Names:** Known as *Gando Baval* in Kutch, *Vilayati Keekar* in North India, and *Seemai Karuvelam* in Tamil Nadu.
- **Introduction History:** First introduced by the British in the 1920s to "green" Delhi and later used by the Gujarat Forest Department in 1961 to prevent salt desert encroachment in the Rann.
- **Ecological Impact:** Over decades, it has crowded out native grasses across Banni Grasslands (Kutch), Delhi Ridge (North India), Tamil Nadu (South India).

Green Methanol

- Green methanol is a sustainable version of methanol produced through renewable methods rather than from fossil fuels. While conventional methanol is typically derived from coal gasification or natural gas, green methanol utilizes renewable feedstocks.
- There are two primary ways to produce green methanol:
 - **Bio-methanol:** Produced by gasifying sustainable biomass, such as agricultural residue, forest waste, or invasive species like *Prosopis juliflora*.
 - **e-Methanol:** Produced by synthesizing green hydrogen (from water electrolysis using renewable energy) with captured carbon dioxide.

ECOLOGICAL CARRYING CAPACITY AND TIGER DISPERSAL

Context

While Madhya Pradesh has the fastest rise in tiger numbers, it faces the "carrying capacity" challenge where shrinking natural corridors hamper the dispersal of surplus tigers.

Why the Crisis in Madhya Pradesh

- **Rapid Population Surge:** Between 2014 and 2022, Madhya Pradesh saw a **155% jump** in tiger numbers (from 308 to 785), far exceeding the national average growth of 65%.

- **Infrastructure Barriers:** Forest connectivity has been severely compromised by the rapid development of roads, railways, irrigation projects, mining, and large-scale deforestation.
- **Trapped "Surplus" Tigers:** Due to broken corridors, young or dispersing tigers cannot move safely between forests, forcing them into human-dominated areas where they face retaliation or accidental death.
- **Human-Wildlife Conflict:** National human fatalities from tiger attacks rose by **87%** between 2014 and 2025; while MP has managed better than some states, retaliatory killings by electrocution are on the rise.
- **The Cattle Dependency:** In areas like Bandhavgarh, researchers linked **47%** of tigers to livestock kills, creating a volatile situation where tigers depend on domestic cattle for survival outside of traditional prey bases.

About Carrying capacity

- It is the maximum population size of a biological species that can be sustained indefinitely by a specific environment.
- It is not a fixed number but a dynamic equilibrium that shifts based on available resources and environmental conditions.
- **Overshoot and Collapse:** If a population grows too quickly and "overshoots" its carrying capacity, it can degrade the environment (e.g., overgrazing), leading to a sudden drop in the population (dieback).
- **Social Carrying Capacity:** the level of particular animal population (e.g., tiger presence) that human populations are culturally, economically, and politically willing to tolerate.

FIBRE-OPTIC DRONES

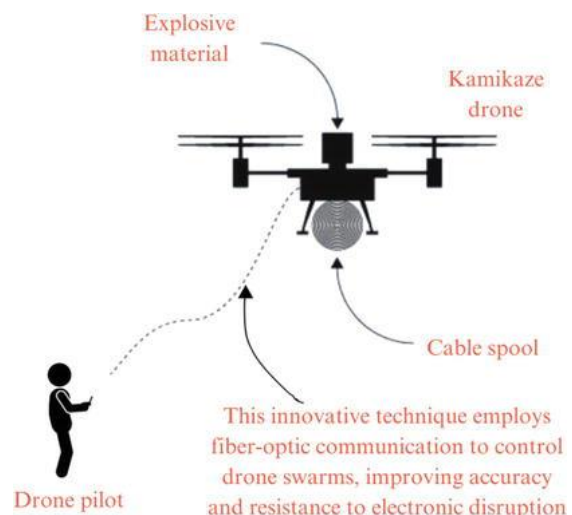
Context

- The use of fibre-optic drones by groups like Hezbollah in conflicts with Israel marks a shift towards **low-cost, hard-to-counter drone technologies**

About Fibre-Optic Drones

Unlike conventional drones, these are controlled through a **thin fibre-optic cable (like fishing line)** directly linking operator and drone, avoiding radio signals.

- **Anti-Jamming Capability:** Immune to electronic warfare (e.g. cannot be jammed as no radio frequency is used), overcoming a major limitation of traditional drones.
- **Low Visibility:** Small size and low-altitude flight make them **hard to detect and track** by radar systems.



- **Range:** Cable length can extend up to ~50 km (limited flexibility compared to satellite-controlled drones).
- **Production Cost:** Built using **commercial off-the-shelf drones + fibre cable + explosives**, making them easy to mass-produce.
- **Strike Capability:** Direct human control allows accurate targeting
- **Operational Limitation:** Cable can **tangle or break due to wind or obstacles**, limiting effectiveness in complex terrain.

Threats Posed by Fibre-Optic Drones

- **High Tactical Lethality:** Capable of precise attacks on troops and vehicles (e.g. Hezbollah strikes on Israeli soldiers causing casualties).
- **Proliferation Risk:** Easy and cheap production increases likelihood of use by **non-state actors and terrorist groups** globally.
- **Swarm Potential:** Can be deployed in multiple numbers (overwhelming defences and increasing success rate).
- **Challenge to Modern Warfare Doctrine:** Forces militaries to rethink defence systems (shift from missile defence to drone interception and cable disruption).

ELECTION OF THE UN SECRETARY-GENERAL

Context:

- The process to appoint the next Secretary-General of the United Nations is underway amid global conflicts, financial stress and questions about the UN's effectiveness in maintaining peace.

How Secretary-General is Appointed

- **Step 1: Initiation of Process:** A joint letter by the Presidents of the General Assembly and Security Council invites nominations from member states.
- **Step 2: Nomination of Candidates:** Candidates must be formally nominated by at least one UN member state (self-nomination not allowed) and submit vision statements and profiles.
- **Step 3: Public Campaign & Dialogues:** Candidates present their ideas in **interactive dialogues with all member states and civil society**, increasing transparency.
- **Step 4: Security Council Deliberations:** The 15-member Security Council holds closed-door discussions to shortlist candidates.
- **Step 5: Straw Polls (Key Stage):**
 - Multiple secret ballots are conducted where members mark candidates as “encourage”, “discourage” or “no opinion”
 - Permanent members use special ballots to signal veto intentions
 - Candidates with vetoes or low support drop out gradually

- **Step 6: Final Recommendation:** The Security Council recommends **one candidate** (requires at least 9 votes and no veto by permanent members).
- **Step 7: General Assembly Appointment:** The General Assembly formally appoints the candidate through a majority vote (usually by consensus).

Role of Secretary-General

- **Chief Administrative Officer:** Heads the UN Secretariat and manages day-to-day functioning of the organisation.
- **Global Diplomat:** Acts as the “**world’s chief diplomat**”, representing the UN in global affairs and negotiations.
- **Peace & Security Role:** Can bring threats to international peace before the Security Council and facilitate conflict resolution.
- **Mediation & Envoys:** Appoints special envoys (e.g. for West Asia conflict) to handle sensitive diplomatic negotiations.
- **Norm Setting & Advocacy:** Speaks on global issues (climate change, inequality, development) shaping international discourse.

Why This Time It is More Important

- **Global Conflict Surge:** Ongoing crises (e.g. Gaza, Ukraine, Sudan, Iran) demand stronger mediation and conflict prevention.
- **UN Institutional Crisis:** Financial stress due to delayed contributions has led to **staff cuts and operational challenges**.
- **Security Council Paralysis:** Frequent vetoes by major powers have reduced UN effectiveness in decision-making.

SUPREME COURT EXAMINES MTP ACT TIME LIMITS

Context

During a recent hearing concerning a minor who is a survivor of rape, the Supreme Court raised concerns that rigid gestational limits under India’s abortion law could infringe upon the survivor’s fundamental rights.

MTP Act: Key Features

- **Full Form:** Medical Termination of Pregnancy Act, 1971 (amended in 2021)
- Regulates access to legal abortion services in India
- **Gestational Limits:**
 - Up to 20 weeks → approval from one registered medical practitioner
 - Between 20–24 weeks → allowed for specific categories (such as minors and rape survivors) with the opinion of two doctors

- Beyond 24 weeks → permitted only in cases of substantial foetal abnormalities, subject to approval by a Medical Board

Issue at hand

- A minor rape survivor requested termination after crossing the legally permitted gestational limit
- Authorities hesitated due to statutory restrictions
- This created a tension between legal provisions and the survivor's rights, including bodily autonomy and psychological well-being

Constitutional perspective

- Article 21 guarantees the right to life, which has been interpreted to include dignity, personal autonomy, and reproductive freedom

Supreme Court's observations

- Pregnancy resulting from rape can lead to deep and prolonged trauma, particularly for minors
- Compelling a survivor to continue such a pregnancy may violate her right to dignity and autonomy under Article 21
- The State and medical authorities should not override the informed decision of the survivor or her guardian

Court's suggestions

- Consider relaxing or revising gestational limits in exceptional cases like rape involving minors
- Ensure timely decision-making to prevent further harm
- Reform the MTP framework to make it more sensitive and responsive to the needs of survivors

MHA REVISES CITIZENSHIP RULES; STRICTER NORMS ON DUAL PASSPORTS FOR MINORS

Context

The Ministry of Home Affairs has notified amendments to the Citizenship Rules, 2026, with the aim of updating the Overseas Citizen of India (OCI) system. The changes focus on digitisation, improved efficiency, and streamlined procedures.

Key Highlights of the Revised Rules

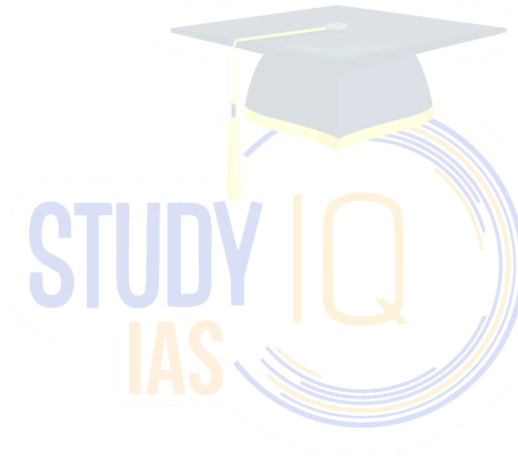
- **Introduction of e-OCI Cards:** A digital version of OCI cards has been introduced to enable paperless identity verification for overseas Indians.
- **Compulsory Online Applications:** All applications must now be filed electronically, removing the need for physical paperwork and duplication.
- **Integration of Biometric Data:** Applicants are required to provide consent for biometric data collection, which may support future registrations and faster immigration processing.

Major Changes and Provisions

- **Rules for Minors' Passports:** Children holding Indian passports cannot simultaneously possess passports of another country, addressing concerns related to dual citizenship.
- **Simplified OCI Registration:** Applications for OCI status must be submitted online through Form XXVIII, making the process more efficient.
- **Centralised Digital Registry:** A unified electronic database of OCI cardholders has been established to manage records, including cancellations and renunciations.
- **Online Renunciation and Cancellation:** These procedures are now fully digitised, requiring submission of Form XXXI and surrender of physical cards for digital confirmation.

Implementation

The new rules come into effect from the date of their publication in the Official Gazette. Adherence is mandatory, and failure to comply may lead to OCI cards being rendered invalid.



Mains Exam Topics

THE CHALLENGE OF FISCAL STABILITY

Context

According to the Ministry of Finance's Monthly Economic Review (April 2026), several states with persistent revenue deficits and heavy debt obligations could face fiscal strain. This limits their ability to respond to economic shocks and increases the likelihood of violating the 'golden rule' of fiscal management.

Key Insights on India's Fiscal Outlook

At the Union Level

The central government continues to follow a cautious fiscal approach. It relies on modest tax buoyancy estimates (around 0.8) and has established an Economic Stabilisation Fund to cushion external shocks without disturbing fiscal deficit goals.

At the State Level

- **Prevalence of Revenue Deficits:** Among 18 major states, 9 are running revenue deficits. These include Himachal Pradesh, Punjab, Kerala, Andhra Pradesh, Rajasthan, Haryana, Karnataka, Maharashtra, and Chhattisgarh.
- **High Interest Burden:** Debt servicing consumes a significant share of state revenues, reducing financial flexibility. Punjab is the most stressed, allocating nearly 23% of its revenue receipts to interest payments.
- **Fiscal Deficit Patterns:** Thirteen states have budgeted fiscal deficits at or above 3% of GSDP. However, in some cases like Odisha, higher deficits are linked to increased capital spending rather than fiscal distress.
- **States with Revenue Surplus:** Eight states, including Odisha, Jharkhand, Uttar Pradesh, Goa, Gujarat, Uttarakhand, Telangana, and Bihar, are expected to maintain revenue surpluses.
- **Impact of the 16th Finance Commission:** FY 2026–27 marks the beginning of the new Finance Commission cycle, bringing uncertainties such as altered devolution shares and the removal of revenue deficit grants.
- **Rising Debt Levels:** State liabilities now range between 35% and 45% of GSDP. Financially stressed states may seek higher central assistance, complicating the Centre's fiscal consolidation efforts.

Concerns Around India's Fiscal Position

Issues at the Union Level

- **Possible Fiscal Slippage:** Although the fiscal deficit target is set at 4.3% for 2026–27, estimates suggest it could rise to around 4.5% due to emergency expenditures.
- **Growth Slowdown Risks:** Lower-than-expected GDP growth could weaken tax collections. While the government projects 7–7.4% growth, institutions like the IMF estimate around 6.5%.

- **Rising Energy Costs:** High crude oil prices significantly increase import bills. To protect consumers, the government may need to expand subsidies, putting pressure on fiscal resources.
- **Inflationary Pressures:** Supply disruptions, especially in key shipping routes, have raised logistics costs. This has contributed to higher wholesale inflation, which in turn reduces consumer demand.

Issues at the State Level

- **Unstable Revenues:** Rising oil prices force states to cut VAT on fuel, reducing their revenues.
- **Demand Compression:** Cost-push inflation reduces discretionary spending, slowing the growth of State GST collections.
- **Violation of the Golden Rule:** Several states are borrowing to meet routine expenses like salaries and subsidies instead of investing in capital assets, which undermines fiscal sustainability.
- **Dependence on Central Support:** Financially strained states may increasingly seek central assistance or relaxed borrowing limits, creating additional pressure on the Union government.

Golden Rule of Fiscal Financing

- **Concept:** Governments should borrow only for capital investments and not for routine expenditures.
- **Core Principle:** Over time, current expenses should be financed through current revenues, ensuring fairness between present and future generations.
- **Importance:**
 - Promotes intergenerational equity
 - Encourages growth through infrastructure investment
 - Enforces fiscal discipline and prevents excessive borrowing for short-term schemes

Measures to Improve Fiscal Stability

For the Union Government

- **Energy Strategy Diversification:** Expanding government-to-government energy agreements with countries outside West Asia can reduce import costs.
- **Focus on Capital Expenditure:** Sustained investment in sectors like green hydrogen and semiconductors is essential for long-term growth.
- **Coordination with RBI:** Maintaining currency stability is crucial to control inflation and manage import costs.

For State Governments

- **Broaden Revenue Sources:** Reducing dependence on fuel taxes and strengthening other revenue streams through digitization can improve stability.
- **Promote Green Energy:** Shifting to electric mobility and solar-based systems can reduce fuel-related expenditure.

- **Responsible Borrowing:** States must adhere to fiscal discipline under FRBM norms and prioritize investments that generate economic returns.
- **Performance-Based Reforms:** Improving governance and tax administration can help states access performance-linked grants under the 16th Finance Commission.

Conclusion

Rising energy prices and fiscal stress at the state level present significant challenges. While the Centre's Economic Stabilisation Fund offers short-term relief, long-term fiscal health depends on states adhering to responsible borrowing practices and prioritizing productive investments aligned with the golden rule of financing.

