

## Today's Prelims Topics

### Birsa Munda

#### Context

Chief minister Hemant Soren and Governor Santosh Gangwar paid tributes to revolutionary tribal icon Birsa Munda on his 125th death anniversary.

#### About Birsa Munda

- Born on **November 15, 1875**, in **Khunti district, Jharkhand**, into the **Munda tribe** of the Chotanagpur Plateau.
- Grew up amid **colonial exploitation**, especially the imposition of the **zamindari system**, which replaced the traditional **Khuntkatti** land system, dispossessing tribal communities.
- Tribals faced **high rents, forced labour, and loss of land**, turning many into landless labourers.



#### Religious and Social Reform

- Initially educated at a **German Mission School** after converting to **Christianity**.
- Left the school after realising it was a tool for **religious conversion**.
- Founded a new faith called '**Birsait**', encouraging a return to **indigenous traditions**.
- Followers, known as '**Birsait**', resisted British rule and opposed feudal oppression.
- Earned the title '**Dharti Aba**' (**Father of the Earth**) for his spiritual leadership and advocacy for tribal identity.

#### Role in the Freedom Struggle

- Led the **Munda Rebellion** (1899–1900), also known as '**Ulgulan**' (The Great Tumult).
- Rebellion was a response to **British land policies** and **Forest Laws** restricting tribal access to traditional resources.
- Called for the establishment of '**Munda Raj**', or self-rule, and launched **guerrilla attacks** against British forces.
- Promoted the slogan: "**Abua raj seter jana, maharani raj tundu jana**" ("Let the queen's rule end, and our rule begin").

#### Impact and Legacy

- The rebellion influenced the **Chotanagpur Tenancy Act of 1908**, which restricted the transfer of tribal lands to non-tribals and recognised tribal rights over land, water, and forests.
- Arrested by British authorities in **March 1900**, and died under mysterious circumstances in **Ranchi Jail on June 9, 1900**.
- His rebellion was short-lived but left a **lasting legacy** in tribal rights movements.

#### Commemoration and Recognition

- **November 15** is observed as '**Janjatiya Gaurav Diwas**' (**Tribal Pride Day**) across India.
- The same date marks **Jharkhand Foundation Day**, as the state was formed on Birsa Munda's birth anniversary in **2000**.
- A **museum in Ranchi** is dedicated to his life and legacy.
- Inspired the **PM-JANMAN (PM Janjati Adivasi Nyaya Maha Abhiyan)**, aimed at empowering and delivering justice to tribal communities.

Source: [TimesofIndia](https://timesofindia.indiatimes.com)



## Asafoetida (Heeng)

### Context

CSIR-IHBT has reported the **first successful flowering and seed setting of asafoetida (heeng) at Palampur, Himachal Pradesh**, marking a significant milestone in its acclimatisation and domestication on Indian soil.

### What is Asafoetida?

- **Botanical Name:** *Ferula assa-foetida*, a perennial herb.
- **Common Name:** Heeng in India.
- **Source:** Derived from the **oleo-gum resin** of the plant's taproot.
- **Usage:** Widely used as a **spice and medicinal agent** in Indian cuisine and Ayurveda.
- **Ancient Mentions:** Found in **Charaka Samhita, Mahabharata, and Panini's texts**.

### Cultivation Zones

- **Native Habitat:** Cold arid regions of **Iran, Afghanistan, and Central Asia**.
- **Ideal Conditions:**
  - Sandy, well-drained soil.
  - Low rainfall (<300 mm).
  - Temperature range: -4°C to 40°C.
- **Potential Indian Zones:**
  - **Lahaul-Spiti, Kinnaur, Uttarkashi**, and similar high-altitude valleys.

### Key Features of Asafoetida

- **Long Maturation:** Requires **5 years** to mature before flowering and resin extraction.
- **Resin Yield:** Oleoresin forms **40–64%** of the dried gum extracted from its roots.
- **Drought Tolerant:** Survives harsh winters and minimal water; remains dormant in extreme cold.
- **Medicinal Uses:** Treats **digestive issues, bloating, abdominal pain**, and helps stimulate metabolism.
- **Cultural Role:** Used in **rituals, cooking, and traditional medicine**.

### Significance of Indigenous Cultivation

- **Self-Reliance Goal:** India was **100% import-dependent**, but now moves towards **domestic production**.
- **Breakthrough in Adaptation:** Successful **flowering and seed set** at **Palampur, Himachal Pradesh** (1300 m altitude), showing adaptability beyond cold desert zones.
- **National Importance:**
  - **Heeng Germplasm Resource Centre** established in 2022.
  - Development of **tissue culture labs** to scale up cultivation efforts.

Source: [TheHindu](#)

## NATO

### Context

NATO has urged a **400% boost in defence spending** to tackle rising threats from **Russia**, with a proposed **3.5% of GDP for military** and **1.5% for related infrastructure**, ahead of the **June 24–25 NATO Summit**.

### About NATO

Aspect	Details
<b>Founded</b>	1949, with the signing of the North Atlantic Treaty (Washington Treaty) to counter Soviet expansion in post-World War II Europe.
<b>Headquarters</b>	Brussels, Belgium
<b>Nature</b>	Military & political alliance of 32 countries from Europe & North America.
<b>Core Principle</b>	Collective Defense (Article 5): An attack on one NATO country is considered an attack on all. Invoked only once after the 9/11 attacks (2001).
<b>Founding Members (12)</b>	Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, Netherlands, Norway, Portugal, UK, USA.
<b>Latest Expansion</b>	Finland joined NATO in 2023.
<b>Ukraine's NATO Bid</b>	Applied in 2022, received security assurances at Vilnius Summit (2023).
<b>Non-NATO EU Members</b>	Austria, Cyprus, Ireland, and Malta.

- Article 5 of the NATO treaty states that an attack on one member is considered an attack on all members, ensuring mutual defense.
- India is not a member of NATO** but engages with NATO on strategic and security issues through diplomatic channels.

Source: [TheHindu](https://www.thehindu.com/news/international/nato-summit-2024/article66444444.html)

## Permanent Magnet

### Context

India's rare earth magnet imports surged amid China's export curbs, raising alarm for EV and auto sectors, prompting supply concerns, diplomatic action, and a push for self-reliance.

### What are Permanent Magnets?

- Permanent magnets generate a magnetic field without any external power source.
- Once magnetized, they retain their magnetic strength for a long time.
- Typically made from metals like iron, nickel, cobalt, or rare earth elements such as neodymium and samarium.

### What are Rare Earth Permanent Magnets?

- These are permanent magnets made using rare earth elements (17 elements in total).
- Key rare earth elements include neodymium, samarium, and dysprosium.
- They possess exceptionally strong magnetic properties.

**FACT:** India's first facility to produce rare earth permanent magnets is in Visakhapatnam.

### Advantages over Ordinary Magnets

- Rare earth magnets produce much stronger magnetic fields than ordinary ferrous magnets.
- Enable compact, lightweight, and high-performance motors.
- Known for high magnetic field strength and large torque output.
- Widely used in electronics, automobiles, and military equipment.
- Crucial for advanced technologies like hypersonic weapons and directed energy systems.
- Helps tackle rising e-waste in India.

### Technology Used in Indian Plant

- Based on indigenous reduction-diffusion technology.
- Produces:
  - Samarium-Cobalt (SmCo) magnets
  - Neodymium-Iron-Boron (NdFeB) magnets

### Significance for India

- Reduces dependence on foreign supply chains for rare earth metals.
- Strengthens the Make in India initiative.
- Supports demand in key sectors: electronics, defense, and aerospace.

### Concerns with E-waste Collection & Recycling

- Weak institutional and management systems.
- Only about 22% of e-waste is currently collected.
- Recycling mainly focuses on extracting gold and silver, not rare earths.

Source: [IndianExpress](https://www.indianexpress.com)

## Upper Siang Project

### Context

Protests over displacement have delayed India's 11.2 GW Upper Siang project, pushing NHPC to fast-track site selection due to its strategic importance near the China border.

### About Upper Siang Project



- It is a multipurpose hydroelectric project aimed at flood mitigation, maintaining the Siang River's natural flow, and electricity generation with a capacity of 11,000 MW.
- It is located in the Upper Siang District, Arunachal Pradesh, near the Siang River (Brahmaputra).
- **Reservoir capacity:** 9 billion cubic metres (BCM).
- **Installed capacity:** 11,000 MW.
- Jointly developed by **NHPC (National Hydroelectric Power Corporation)** and **NEEPCO (North Eastern Electric Power Corporation Limited)**.
- Designed to mitigate flooding from upstream water releases by China and maintain river flow during lean seasons.
- **However, the project has raised concerns among the local Adi tribe in Upper Siang and Siang districts, who fear displacement and loss of farmland and homes.**

### About Siang River

- **Origin:** Chema Yungdung Glacier, Tibet
- Known as **Tsangpo in Tibet**
- Major cities along the Tsangpo in Tibet: Lhasa, Shigatse
- Enters India in Upper Siang district of Arunachal Pradesh near Tuting
- Known as **Siang River in India**
- Flows through East Siang district in Arunachal Pradesh
- Major city along Siang River: Pasighat
- Travels nearly 52 kilometers in India before reaching Assam
- Joins Lohit and Dibang rivers in Assam
- Combined rivers form the Brahmaputra River
- Brahmaputra flows through Assam and Bangladesh before emptying into Bay of Bengal

Source: [IndianExpress](https://www.indianexpress.com)

## Nickel

### Context

The study, published in Nature bypassed the traditional multistep process to extract nickel and developed a single metallurgical step conducted in one furnace.

### More in News

- The traditional process includes **calcination, smelting, reduction, and refining**.
  - **Producing just one tonne of nickel** from traditional process results in **more than 20 tonnes of carbon dioxide emissions**.
- This new method is significantly more **energy-efficient (up to 18%)** and drastically **reduces direct carbon dioxide emissions (up to 84%)** compared to traditional multi-step nickel extraction.

### Uses of Nickel

- Plants, animals and fungi need nickel for functioning of **Enzyme Urease**.
  - E.g. Fungus *Cryptococcus Neofarmans* use Urease to spread and Colonise
- It is used as a colouring agent in cosmetics, paints, and some plastics.
- It is used in electroplating, adding a thin layer of nickel to other metals for better appearance and durability.
- It is found in batteries like nickel-metal hydride and rechargeable nickel-cadmium, used in devices such as laptops and power tools.

### Diseases caused by Nickel

- Nickel is carcinogenic. It may cause lung fibrosis, kidney and cardiovascular diseases and cancer of the respiratory tract.

### Nickel Ore distribution in India

- The Sukinda valley in Jajpur district, Odisha, has important deposits of nickel in the form of limonite.
- In Jharkhand's East Singhbhum district, nickel is found as a sulphide, along with copper.
- **Indonesia and Australia have the largest nickel reserves in the world.**

Source: [The Hindu](#)



## Places in News

### Croatia



**News?** PM Modi will visit **Cyprus and Croatia** during his trip to **Canada** for the **G-7 Summit**.

#### About it

- **Location:** Southeastern Europe, on the **Adriatic Sea**.
- **Capital:** **Zagreb**.
- **Borders:** Slovenia, Hungary, Serbia, Bosnia & Herzegovina, and Montenegro.
- **Currency:** **Euro** (joined Eurozone in **2023**).
- **Memberships:**
  - **European Union (EU):** Joined in **2013**.
  - **NATO:** Member since **2009**.
  - **Schengen Area:** Joined in **2023**.
- **Geography:** Known for its **Dinaric Alps**, over **1,000 islands**, and the **Dalmatian Coast**.
- **Economy:** Tourism-driven; famous for cities like **Dubrovnik** (a UNESCO World Heritage Site).
- **Historical Note:** Part of former **Yugoslavia**; gained independence in **1991**.
- **India-Croatia Relations:** Friendly diplomatic ties, cooperation in **trade, culture, and education**.

Source: [TheHindu](https://www.thehindu.com)



## Editorial Summary

### Census and remaking of people

#### Context

The Union Home Ministry has announced the next Census will be conducted in two phases and that the reference date for Census enumeration would be March 1, 2027.

#### Significance of the Census

- **Political Representation:** Determines the redistribution of seats in Parliament and State Assemblies through delimitation, ensuring fair representation.
- **Resource Allocation:** Influences revenue sharing between the Centre and states based on population dynamics and development needs, guided by the Finance Commission recommendations.
- **Policy Formulation:** Provides accurate demographic data essential for framing effective policies in health, education, housing, employment, migration, and social welfare schemes.
- **Social Justice and Inclusion:** Facilitates affirmative actions and reservation policies for Scheduled Castes, Scheduled Tribes, and potentially Other Backward Classes through precise enumeration.
- **Infrastructure Development:** Guides urban planning, rural development, infrastructure expansion, and efficient service delivery by mapping urban-rural dynamics and migration trends.
- **National Integration:** Shapes national identity and unity by influencing the political community's perception and reinforcing shared governance and resources allocation.

#### Processes Pending Due to Census Delay

- **Delimitation Exercise:** Redistribution of parliamentary and assembly seats delayed due to lack of updated population data.
- **Finance Commission Recommendations:** Sixteenth Finance Commission's formula for revenue-sharing delayed or based on outdated data, complicating equitable resource distribution.
- **Caste Census:** Delay in capturing comprehensive caste data, affecting reservation policies and social equity measures.
- **Gender Quota Implementation:** Pending delimitation impacts the effective implementation of the one-third women's reservation in legislatures.
- **Policy Adjustments in Migration and Urbanization:** Absence of updated data delays targeted interventions in managing urban growth, migration, housing, and employment policies.

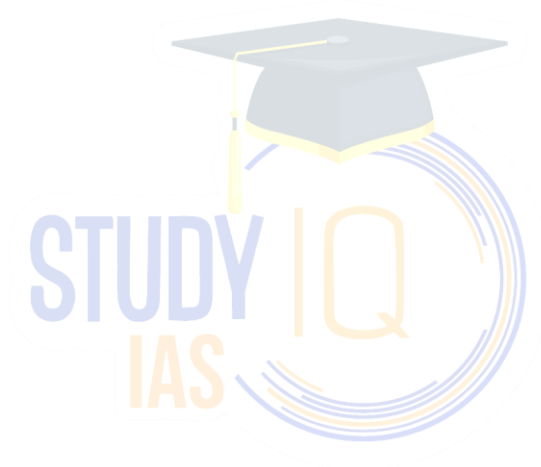
#### Key Issues Arising from Census and Delimitation

- **Regional Inequities:** Redistribution of seats based solely on population might shift political influence from economically developed, lower-fertility southern/western states to populous northern/central states.
- **Caste Enumeration Controversy:** Counting all castes separately may trigger social tensions, political mobilizations, and demands for increased quotas beyond the 50% ceiling.
- **Economic and Demographic Divergence:** Disparity between population growth and economic development can skew political representation away from economically progressive states.
- **Politicization of Demographic Data:** Data collection and categorization processes can be exploited politically, exacerbating identity politics and regional rivalries.
- **Technological Implementation Risks:** First digital census faces risks related to data privacy, accuracy, cybersecurity threats, and logistical challenges.

### Way Forward

- **Balanced Criteria for Delimitation:** Incorporate economic parameters, developmental indices, and demographic factors alongside population size to balance political representation fairly.
- **Transparent and Inclusive Approach:** Ensure transparency and consensus-building in caste census implementation, managing social implications sensitively.
- **Enhanced Federal Dialogue:** Facilitate active consultations between the Centre and states, addressing grievances on revenue-sharing and representation proactively.
- **Robust Digital Infrastructure:** Strengthen cybersecurity, data protection frameworks, and ensure accuracy and efficiency in digitized data collection processes.
- **Holistic Policy Interventions:** Employ census data to proactively address socio-economic disparities, migration patterns, urban pressures, and inclusive growth strategies.
- **Strategic Political Communication:** Maintain political neutrality and clarity in census communication to minimize polarization and foster national unity amid changing demographics.

Source: [The Hindu: The Census and the remaking of a people](#)



## Empowering women in agriculture for food security

### Context

- The United Nations General Assembly has declared **2026 as the International Year of the Woman Farmer**.
- The resolution celebrates the essential role of women in global agriculture while raising awareness of their challenges, which include property rights and market access.

### Significance of Women in Agriculture

- **Substantial Contribution to Food Production:** Women account for **60% to 80% of food production** in developing countries and nearly **39% of agricultural labour** in South Asia.
- **Vital Role in Household Food Security:** Women farmers directly contribute to family nutrition, food availability, and community food security through local and subsistence agriculture.
- **Contribution to Rural Economy:** Women's involvement boosts local economies by ensuring steady agricultural production, contributing significantly to rural economic resilience.
- **Custodians of Biodiversity and Traditional Knowledge:** Often maintain traditional agricultural practices, preserving indigenous seeds, biodiversity, and promoting climate-resilient farming techniques.
- **Critical Role in Climate Adaptation:** Women actively adapt farming practices to environmental changes, significantly contributing to resilience at community levels.

### Challenges Faced by Women Farmers

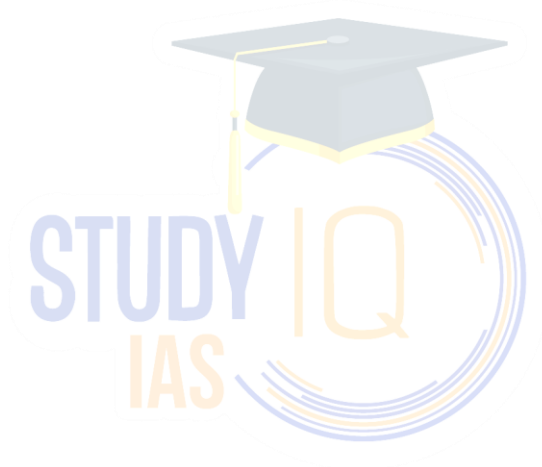
- **Land Ownership and Property Rights:** Women in India represent only about **8.3%** of landowners, significantly limiting their control over resources and their ability to secure credit and institutional support.
- **Limited Access to Finance:** Due to **lack of property collateral**, women farmers struggle to obtain substantial loans, constraining their ability to invest in farming technology and infrastructure.
- **Restricted Access to Technology and Information:** Lower access to mobile phones, internet, and agricultural advisories hampers women's capability to adopt advanced farming practices and climate-adaptive techniques.
- **Increased Vulnerability to Climate Change:** Climate change disproportionately affects women farmers, escalating their **household and agricultural responsibilities**, and intensifying their exposure to agricultural and livelihood risks.
- **Inadequate Representation and Participation:** **Limited decision-making power and inadequate representation in agricultural policy** formation impede their ability to advocate effectively for their needs.

### Way Forward

- **Ensuring Gender-Equitable Land Rights:** Policies must actively promote property ownership among women, facilitating land registration and inheritance rights to empower their economic position.
- **Enhancing Financial Access and Inclusion:** Expand access to credit and financial services tailored specifically for women, leveraging self-help groups, cooperatives, and microfinance models.
- **Scaling Up Access to Agricultural Technology:** Enhance digital literacy and technology access through targeted interventions, like **Climate Adaptation Information Centres and mobile advisories**, to enable women farmers to make informed decisions.
- **Strengthening Agricultural Value Chains:** Support **women-led agricultural cooperatives, value chains, and enterprises**, ensuring market linkages, fair prices, and sustainable agricultural practices.

- **Inclusive Policy Design and Implementation:** Implement **gender-sensitive agricultural policies based on granular, gender-disaggregated data**, ensuring the unique needs of women farmers are recognized and addressed effectively.
- **Capacity Building and Empowerment Initiatives:** Continuously enhance skills and knowledge of women farmers through government schemes like **Mahila Kisan Sashaktikaran Pariyojana**, promoting skill upgrades and sustainable farming practices.
- **Encourage Community-Based Climate Adaptation:** Expand successful **models like ENACT (Enhancing Climate Adaptation of Vulnerable Communities)**, which leverage women's active participation in adopting climate-resilient practices, diversification, and community seed production.

Source: [The Hindu: Empowering women in agriculture for food security](#)



## The case for an India-led bloc against terrorism

### Context

Western-dominated counter-terrorism institutions are proving ineffective against the continuing threat of state-sponsored terrorism, particularly from Pakistani groups, therefore India introduced a novel "T20" (**Twenty Against Terrorism**) coalition.

### What is T20 – Twenty Against Terrorism?

- It is a proposed India-led international coalition comprising 20 countries from the **Global South**, designed specifically to confront terrorism comprehensively, proactively, and effectively.
- **Objective:**
  - Address frequent, asymmetrical, and politically complex terror threats common in developing countries.
  - Act as a dedicated global platform representing nations consistently impacted by terrorism.
- **Potential Members:** Countries facing frequent terror threats, including India, Indonesia, Nigeria, Kenya, Egypt, Mali, Fiji, Philippines, Ethiopia, Kazakhstan, Sri Lanka, and Vietnam.
- **Core Functions:**
  - Intelligence sharing through joint task forces.
  - Capacity building, counter-radicalisation programmes, and collaborative training.
  - Joint diplomatic initiatives to name and shame terror sponsors.
  - Address emerging threats: cyber-terrorism, drone warfare, crypto-financed extremism.
  - Foster resilience through development-linked de-radicalisation.

### How T20 is Different from Existing Groupings

Feature	Existing Platforms (UN, FATF, GCTF)	T20 – Twenty Against Terrorism
<b>Membership Composition</b>	Dominated by major powers, largely Western-centric.	Exclusively Global South, countries directly facing terror regularly.
<b>Operational Focus</b>	Often reactive, bureaucratic, politically influenced.	Proactive, agile, operationally swift, tailored to regional realities.
<b>Decision-Making</b>	Influenced by geopolitical rivalries, leading to diluted actions.	Unified by shared experience, collective action, swift consensus.
<b>Security Paradigm</b>	Western security frameworks, episodic attack response.	Continuously addressing terror as a persistent security challenge.
<b>Mandate Clarity</b>	Broad, diffuse mandates often lacking actionable clarity.	Specific, clear, practical mandate: intelligence sharing, resilience-building, real-time coordination.
<b>Diplomatic Approach</b>	Tends towards diplomatic caution and neutrality.	Willing to publicly identify, condemn, and diplomatically isolate state sponsors of terrorism.
<b>Response Speed</b>	Slower response times due to procedural constraints.	Quick, coordinated responses due to streamlined, collaborative mechanisms.
<b>Inclusivity &amp; Relevance</b>	Often excludes countries disproportionately affected by terrorism.	Prioritizes inclusion, giving voice and platform to affected nations usually marginalised in global forums.

### Strategic Significance for India

- **Leadership Without Military Baggage:** Positions India as a global leader in counter-terrorism without military entanglements or perceived interventionism.

- **Strengthens India's Global South Credentials:** Reinforces India's image as a responsible global actor that champions collective interests of developing nations.
- **Enhances Diplomatic Clout:** India gains diplomatic leverage in international security debates, influencing narratives on terrorism.
- **Operational Advantages:** India can leverage its extensive experience dealing with cross-border terrorism and digital capacities to effectively lead and host T20's secretariat, training hubs, and information centres.

### Conclusion

**T20 – Twenty Against Terrorism** offers a targeted and innovative approach to global counter-terrorism, significantly distinct from existing platforms. By focusing on the unique and sustained challenges faced by the Global South, it fills critical gaps in global counter-terrorism architecture, placing India at the forefront of a vital global initiative.

**Source:** [Indian Express: A new T 20 for win](#)

