



# INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

## INDIAN OCEAN TUNA COMMISSION

Tuna refers to a group of saltwater fish belonging to the Thunnini tribe. These fish are known for their streamlined bodies, powerful swimming ability, and wide distribution in warm seas.

27 NOV - 2 DEC 2023

# WEEKLY CURRENT AFFAIRS

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## GENERAL STUDIES – 2

Topics: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

### 1. BIHAR’S DEMAND FOR SPECIAL CATEGORY STATUS (SCS)

**Context:**

Bihar Chief Minister Nitish Kumar’s Cabinet passed a resolution seeking Special Category Status (SCS) for Bihar, following findings from the “Bihar Caste-based Survey, 2022,” indicating significant poverty.

**What is Special Category Status (SCS)?**

It is a special recognition that functions as a provision for the betterment and protection of the people of backward regions. It is a classification given by the Centre to assist in the development of those states that face geographical and socio-economic disadvantages.

**Special Category Status:**

- It was introduced in 1969 on the recommendations of the Fifth Finance Commission. Status was first accorded to Jammu and Kashmir, Assam and Nagaland in 1969
- Articles 371 to 371-J in Part XXI of the constitution contain special provisions for twelve states namely Maharashtra, Gujarat, Nagaland, Assam, Manipur, Andhra Pradesh, Telangana, Sikkim, Mizoram, Arunachal Pradesh, Goa and Karnataka.
  - Telangana, the newest State of India, was accorded the status as it was carved out of another State - Andhra Pradesh

**Criteria for SCS (considered before granting):**

- Hilly and difficult terrain.
- Low population density or a sizeable share of tribal population.
- Strategic location along international borders.
- Economic and infrastructural backwardness.
- Non-viable nature of state finances.

**Difference between Special Status VS Special Category Status:**

Aspect	Special Status	Special Category Status
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<b>Granting Authority</b>	Provided through an Act	Granted by the National Development Council, an administrative body of the government.
<b>Example</b>	Jammu and Kashmir enjoyed special status under Article 370 before 2019	North-East states enjoy special category status
<b>Applicability</b>	Special status is subject to <u>constitutional provisions</u> , and it can be altered or revoked through constitutional amendments.	Special category status is typically not enshrined in the constitution, making it less rigid and more subject to administrative decisions.
<b>Provisions for States</b>	Applicable to states listed under specific Articles such as Articles 371, 371-A to 371-H, and 371-J.	Primarily applicable to states facing geographical or socio-economic disadvantages, based on criteria set by the National Development Council.
<b>Focus of Empowerment</b>	Empowers legislative and political rights.	Primarily deals with <u>economic, administrative, and financial aspects</u> , offering fiscal benefits and assistance in development projects.

**Benefits associated with the Special Category Status:**

- **Centre’s support:**
  - Under this status, the government pays **90% of the funds in schemes that the Centre sponsors**.
    - **Regular states get 60-75%** of the funds from the Centre under the same schemes and they have to manage the rest.
  - In case of **unspent money**, the states with SCS have the **provision to carry it forward**.
  - These states also enjoy a significant **concession on excise, customs duties, income tax, and corporate tax**.
- **Objectives met:**
  - The recognition essentially benefits certain **backward states having hilly terrains, strategic international borders, and economic**

**and infrastructural backwardness.**

- The key objectives are:
  - To meet the aspirations of the **people of backward regions** of the states
  - To protect the **cultural and economic interests of the tribal people** of the states
  - To deal with the **disturbed law and order condition** in some parts of the states
  - To protect the **interests of the local people** of the states.

**Why Bihar is Demanding SCS:**

Factors	Details
<b>Economic Backwardness</b>	<b>About one-third of Bihar’s population lives in poverty.</b> The state has a low per-capita GDP of around ₹54,000, marking it as one of India’s poorest states.
<b>Impact of Bifurcation</b>	Bihar’s bifurcation led to <b>industrial decline</b> , with many industries moving to Jharkhand, resulting in fewer employment opportunities.
<b>Natural Challenges</b>	The state faces regular floods in the north and droughts in the south, impacting agriculture and livelihoods.
<b>Need for Welfare Funding</b>	Bihar’s Chief Minister highlighted the need for SCS to secure <b>approximately ₹2.5 lakh crore</b> for various welfare measures over five years.
<b>Lack of Resources</b>	Bihar argues its <b>lack of natural resources</b> and continuous water supply for irrigation contributes to its under-development.
<b>Other States’ Demands</b>	States like <b>Andhra Pradesh and Odisha also want SCS.</b> Andhra Pradesh cites revenue loss after bifurcation, and Odisha points to natural disasters and a large tribal population (nearly 22%). However, the Central government, <b>referring to the 14th FC report</b> , has consistently rejected their requests, stating that no state should receive this status.

**Is Bihar’s Demand Justified?**

- **Criteria Met:** Bihar meets most SCS criteria, but lacks hilly terrain and geographically difficult areas, crucial for infrastructural development.
- **Raghuram Rajan Committee (2013):** Placed Bihar in the “least developed category” and suggested a new methodology based on a ‘multi-dimensional index’ for fund allocation, which can be revisited for

addressing socio-economic backwardness.

**Concerns**

- The SCS puts an **additional economic burden when the increased devolution** is already flowing to the State as recommended by the FFC.
- It affects **the central state’s financial relations** and hinders competitive federalism among the states.

**Conclusion:**

Bihar, despite meeting most criteria, **lacks hilly terrain, raising the need for revisiting standards.** Also, Raghuram Rajan Committee suggested **exploring alternative funding models** based on a multi-dimensional index. Addressing Bihar’s needs requires **urgent support for poverty alleviation**, targeted aid for disaster management and agriculture, and policies to attract industries and generate employment. Providing SCS status can be one of the solution, however, it needs to be explored without straining central finances and upholding competitive federalism.

**Insta Links:**  
[Special Provisions to some states](#)

[Topics: Salient features of the Representation of People’s Act.](#)

## 2. MODEL CODE OF CONDUCT (MCC) AND ITS CHALLENGES

**Context:**

The [article](#) discusses the challenges in enforcing the Model Code of Conduct (MCC) during election campaigning in India, and if there is a need for legalising it.

**Recent use of MCC by ECI:**

The ECI has recently taken **action against various political leaders, including Assam Chief Minister Himanta Biswa Sarma, Congress leaders Rahul Gandhi and Priyanka Gandhi, AAP leader Arvind Kejriwal**, and Telangana Chief Minister K. Chandrashekar Rao and his son. Notably, the ECI withdrew permission for the Telangana **government’s cash credit to farmers** due to [MCC violations](#).

**What is MCC?**

**Model code of conduct** is the guidelines (not legally binding) issued by the Election Commission of India for the conduct of political parties and candidates during elections mainly with respect to speeches, polling day, polling booths, election manifestos, processions and general conduct. It **aims to ensure free and fair elections.**

**The function of MCC:**

It helps the EC in keeping with the **mandate it has been given under Article 324** of the Constitution, which gives it the **power to supervise and conduct free and fair elections** to the Parliament and State Legislatures.

**Origin:**

As per the **Election Commission of India**, the model code of conduct was first observed during **the 1960 polls (Kerala State Election)** and since **1991** it has become **an integral part of Indian election**. The MCC comes into force **from the date the election schedule** is announced **until the date that results are out**.

**Some of the major provisions of MCC are:**

Provisions	Description
Prohibitions	Criticism of political parties is limited to <b>policies, programmes, past records, and work</b> .
	Prohibited activities include <b>using caste and communal feelings for votes</b> , criticizing candidates based on unverified reports, bribing or intimidating voters, etc.
Meetings	Parties must <b>inform local police of the venue and time</b> for meetings to enable adequate security arrangements.
Processions	Coordination between parties planning processions to avoid clashes.
	<b>Carrying and burning effigies</b> representing members of other political parties is not allowed.
Polling Day	Only voters and those with <b>a valid pass from the EC</b> are allowed in polling booths.
	Authorized party workers at polling booths should have <b>suitable badges or identity cards</b> .
	Identity slips provided to voters <b>should be on plain (white) paper</b> without symbols, candidate names, or party names.
	<b>Prohibition of print media advertisements</b> on polling day and one day prior unless pre-certified by screening committees
Observers	<b>EC appoints observers</b> to whom candidates can report problems with election conduct.

Party in Power	Ministers must <b>not combine official visits with election work</b> or use official machinery for election purposes.
	<b>Avoid advertising at public expense</b> or using official media for publicity that may improve election chances.
	<b>Restriction on government advertisements</b> featuring political functionaries during the election period
	Other parties <b>must have access to public spaces and rest houses</b> without monopoly by the party in power.
Election Manifestos	<b>Manifestos</b> shall not contain anything <b>against constitutional ideals and principles</b> .
Opinion Polls	Regulation of <b>opinion polls and exit polls</b> during the period notified by the ECI

**Limitations with the MCC:**

Limitations	Description
Ineffectiveness in Curbing Malpractices	MCC <b>fails to prevent electoral malpractices</b> like hate speech, fake news, money power, booth capturing, voter intimidation, and violence.
New Age Technological Challenges	Tools like <b>live webcasting, and campaign campaign-related promotions going 'Viral'</b> , have made implementation of MCC a complex task.
	<b>Digital companies like Facebook</b> are run by companies located overseas. <b>Holding them accountable</b> has been difficult for ECI
	Tracing <b>money trails and poll expenditures</b> is difficult if done through cryptocurrencies
Lack of Legal Enforceability	MCC is <b>not legally binding</b> ; it relies on moral persuasion and public opinion for compliance.
Interference with Governance	MCC imposes <b>limitations on policy decisions</b> , public spending, welfare schemes, transfers, and appointments.
	ECI is criticized for <b>applying the MCC too early or too late</b> , impacting development activities and public interest.
Lack of Awareness	<b>Provisions of MCC are not widely known or understood by voters</b> , candidates, parties, and government officials.
No Power to Disqualify	Currently, under MCC, the <b>ECI does not have the power to disqualify candidates who commit electoral malpractices</b> . At best, it may direct the registration of a case

<b>Deregister party</b>	The EC also <b>does not have the power to deregister any political party</b>
<b>Complaints of Unfairness and lack of objectivity against ECI</b>	It is alleged that <b>complaints against the government's party and officials</b> , as well as allegations of the <b>Enforcement Directorate interfering in elections</b> , have been ignored.

**Is MCC legally enforceable?**

No, the Model Code of Conduct (MCC) **lacks statutory backing** but has gained strength due to **strict enforcement** by the ECI in recent years. Also, some of the provisions of MCC can be enforced through other statutes like [IPC 1860](#), [CrPC 1973](#), and [RPA 1951](#).

In 2013, the **Standing Committee on Personnel, Public Grievances, Law and Justice**, recommended making the model code of conduct legally binding to address some of the limitations of MCC

**Issues with Statutory Backing for MCC:**

Issues	Description
<b>Dent ECI power to act fast</b>	This may diminish the Election Commission of India's (ECI) ability to <b>swiftly handle election code violations</b> during the poll period. <b>ECI has been opposing</b> legally binding MCC on this ground.
<b>Increased litigation</b>	Every alleged offence <b>may require court intervention</b> , leading to increased litigation and potential delays, especially given the slow pace of legal proceedings in the current system.
<b>EC's existing authority</b>	The ECI already has the authority to take <b>necessary actions for free and fair elections</b> , invoking corresponding provisions in other statutes like the IPC, CrPC and RPA
	The <b>EC can bar candidates or leaders from campaigning for specified periods</b> , showcasing its ability to enforce certain MCC provisions without legal binding.
<b>Not feasible</b>	The ECI argues that <b>the short time-frame of elections (around 45 days) makes legal enforcement impractical</b> , as judicial proceedings typically take longer.

**Way forward**

- Experts say that **MCC should be provided with statutory backing**. It should be made a part of the [Representation of the People Act, 1951](#) to make the MCC more powerful.
- **Establishment of special fast-track courts** to solve

the MCC violation cases at a faster rate.

- **Public awareness about MCC** needs to be developed. The use of **apps like cVIGIL** should be encouraged to reduce violations during polls.
- **Stakeholders** including Internet companies should come up with a **code for Social Media and the Internet**
- **For dealing with digital media:** In March 2019 Facebook, WhatsApp, Twitter, Google, ShareChat and TikTok presented a '**voluntary code of ethics**'. Among other things, that involves insisting on **transparency in political ads**.

**Conclusion**

Despite MCC not having statutory backing, but of late the **Code has come to acquire teeth because of its strict enforcement by the EC**. MCC has an indisputable legitimacy and parties across the political spectrum have generally adhered to its letter and spirit.

**Mains Links**

**Q. Discuss the role of the Election Commission of India in the light of the evolution of the Model Code of Conduct. (UPSC 2022)**

**Prelims links:**

**Q. Consider the following statements: (UPSC 2017)**

1. The Election Commission of India is a five-member body.
2. Union Ministry of Home Affairs decides the election schedule for the conduct of both general elections and bye-elections.
3. The Election Commission resolves the disputes relating to splits/mergers of recognised political parties.

Which of the statements given above is/are correct?

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

**Ans: D**

[Topics: Statutory, regulatory, and various quasi-judicial bodies.](#)

## 3. WOMEN IN THE INDIAN JUDICIARY

**Context:**

The representation of women in the Indian judiciary, particularly in higher positions, **remains limited, raising questions about gender equality** in the legal system.

**Status of women in the Judiciary:**

1. **Representation in the Supreme Court:** Only 10 women have been appointed to the Supreme Court since 1989. Currently, out of 33 Supreme Court judg-

- es, **only three are women.**
- Representation in High Courts:** Among the total 25 High Courts in India, none currently has a female Chief Justice, **except for Gujarat High Court.** The Department of Justice reports that out of 782 working high court judges, **only 107, or 13%, are women.**
  - Representation in Lower Judiciary:** A 2018 study revealed that while women’s representation is relatively higher at 27% in the lower judiciary, it decreases significantly in higher appointments.
  - The India Justice Report 2022 found **that only 13% of High Court judges and 35% of Subordinate Court judges are women.**

**Reasons for Low Representation of Women in the Judiciary:**

Reasons	Explanation
Judicial Rules	<b>Article 233 mandates 7 years of continuous practice for District Judge eligibility.</b> Minimum age and maximum age criteria limit women’s opportunities. Marriage and family responsibilities pose challenges for women in this age group.
‘Leaking Pipe’ Syndrome	Women face obstacles transitioning from lower to higher judiciary levels. <b>Family responsibilities, personal choices, work-life conflict,</b> and inadequate support contribute to mid-career dropouts.
Opaque Recruitment Process (Collegium System)	The Collegium System lacks transparency, making eligibility and selection criteria unclear. Critics argue appointments depend on <b>favourable evaluations and personal networks.</b>
Lack of Supportive Infrastructure	<b>Insufficient facilities, from toilets to maternity leave,</b> contribute to high attrition rates among women lawyers. - Many courts lack separate toilets for women.
Patriarchy in Society	<b>Deep-seated patriarchy in society contributes</b> to the underrepresentation of women in the judiciary. Hostile atmospheres within courtrooms <b>affect women’s experiences.</b>
No Women Reservation	<b>The absence of reservation policies for women in the High Courts</b> and Supreme Court limits opportunities for women judges. Only some states have implemented reservations.

**CJI SA Bobde’s Perspective:**

**Former Chief Justice of India SA Bobde** highlighted that the issue is not institutional but about finding the right woman for judicial appointments. He mentioned that some women

advocates declined judge offers citing domestic responsibilities, indicating the need for a shift in perceptions and support structures.

**Benefits of Increased Women Participation**

- Increased **inclusiveness** and **better representation** of a significant yet vulnerable section of society.
- The gender diversity bench **reflects a bias-free judiciary.**
- The presence of women judges sends a message of **openness and accessibility** to courts.
- It makes courts **more approachable for women.**
- An **empathetic approach** especially towards dealing with crimes against women.
- A diverse bench **brings diverse experiences and perspectives.**
- The presence of women judges will **encourage younger women to pursue a career in legal and judicial systems.**

**Impacts of Low Representation of Women in the Judiciary:**

- Prejudice in Judgments:** Lack of gender perspective leads to prejudiced judgments.
  - In August 2020, the **High Court of Madhya Pradesh** granted bail to a molester on the condition that he will get a rakhi tied by the victim
- Deficiencies in Legal Reasoning:** Insufficient representation hampers the legal system’s understanding of diverse social circumstances.
  - In June 2020, while **granting bail to a rape accused,** the Karnataka High Court observed that the **“after-rape behaviour of the victim** is not how a rape victim ‘ideally behaves’“
- Trust Deficit:** Low representation raises questions about the **legitimacy of courts as representatives of society.**

**Way forward:**

Suggestions	Description
<b>1. Gender Sensitization:</b>	Include gender sensitization <b>in legal education,</b> such as the All India Bar Examination.
	<b>The correct patriarchal mindset</b> in recommending and approving names for elevation
<b>2. Reservation</b>	Consider <b>horizontal reservation</b> for women in the superior judiciary without compromising merit
	Former Chief Justice of India N.V. Ramana backed <b>50% representation for women in the judiciary</b>
<b>3. Gender Bias Task Forces</b>	Establish a committee to make the judiciary more <b>open and address gender dynamics.</b>

<b>4. Mentorship System</b>	Implement a mentorship system for senior women judges and lawyers to guide younger peers. <b>Conduct regular, informal meetings for discussions on challenges</b> faced by women in the judiciary.
<b>5. Moulding the Rule</b>	Recognize <b>societal and familial pressures</b> on women and adapt rules accordingly. Consider <b>lowering the minimum age requirements</b> for district judge appointments.

**Conclusion**

Women have been **facing systematic prejudices** in Indian society and a major reason for this is the **lack of representation of women**. An **enabling environment must be created** by the government and the judiciary to **encourage women’s participation in the judiciary**.

Former Chief Justice of India N.V. Ramana: “It is your right. It is not a matter of charity...Enough of this thousands of years of suppression”. The CJI paraphrased Karl Marx to say, “Women of the world, unite! You have nothing to lose but your chains.”

**Insta Links**

- [Women in Judiciary](#)

**Mains Links:**

Q. Discuss the desirability of greater representation to women in the higher judiciary to ensure diversity, equity, and inclusiveness. (UPSC 2021)

**GENERAL STUDIES – 3**

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

**1. GLOBAL AGRIFOOD SYSTEMS**

**Context:**

A recent FAO report (The State of Food and Agriculture 2023) exposes the **hidden costs of unsustainable global agrifood systems**, exceeding \$10 trillion and constituting 11% of GDP in middle-income countries like India.

**Major points of the report:**

Key Points	Description
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<b>Economic Impact</b>	In middle-income countries like India, these costs of unsustainable agrifood systems manifest as <b>higher poverty, environmental harm, and health-related impacts</b> such as undernourishment and unhealthy dietary patterns, which account for <b>nearly 11% of GDP</b>
<b>Unsustainable Practices</b>	The report attributes escalating costs to “ <b>unsustainable business-as-usual activities and practices</b> ,” urging a transformation in agrifood systems.
<b>Monocropping and Chemical-Intensive Farming</b>	<b>Mainstreaming monocropping and chemical-intensive farming</b> practices, as seen in <b>India’s Green Revolution</b> , contributed to environmental harm and compromised nutritional needs.
<b>Privatization and Deregulation</b>	The privatization and deregulation of agricultural inputs, along with a <b>focus on rice and wheat procurement</b> , increased <b>indebtedness</b> among farmers in India.
<b>Global Trade Impact</b>	Global trade relations historically influenced food production systems in the Global South, <b>impacting farmers’ income and local food security</b> .
<b>Recommendations</b>	
<b>Systemic Shift from Local to Global</b>	The report emphasizes a <b>systemic shift from local to global value chains</b> , suggesting that local efforts, such as crop diversification, are essential.
<b>Crop Diversification Solutions</b>	<b>Diversified multi-cropping systems rooted in agroecology</b> principles as a solution to <b>revitalize degraded land</b> , improve soil health, and enhance biodiversity.  <b>E.g., ‘akkadi saalu’:</b> It involves intercropping with a combination of legumes, pulses, oilseeds, trees, shrubs, and livestock
<b>Economic Modeling</b>	Transitioning to <b>diversified farming practices</b> can improve farm incomes in the short and long run.
<b>Systematic Transition</b>	The transition from <b>high-input monoculture to diversified cropping should be systematic</b> , allowing farmers to adjust gradually and addressing challenges related to seeds, market access, and farm labour.
<b>Collaboration and Scaling Up</b>	Scaling up these practices requires <b>collaboration among institutions, policymakers, and social groups</b> to provide economic incentives for farmers and facilitate the transition.

Previously, in the [Status of Women In Agri-food Systems](#), FAO had suggested:

- **Women need more access to and control over live-stock**, water, seeds, land, technology, and finance.
- **Eliminating discrimination** by engaging with men and boys.

**Some best practices from India:**

- **In Tamil Nadu, women involved in fishing-related work** had wider social networks and a greater adaptive capacity to seasonal stresses.
- **The MGNREG Scheme** stipulates the **provision of crèche facilities** for young children for women involved in the schemes.
- In northern India, **participatory village committees addressing water access**, health and nutrition issues have facilitated shifts in discriminatory norms, enabling women to speak in front of men and take on public roles.

**What is an agrifood system?**

An agrifood system encompasses the **entire process of producing, processing, distributing, and consuming** food. It includes agricultural activities, food production, supply chains, and the socio-economic factors influencing food choices, aiming to ensure sustainable and equitable access to nutritious food for the population.

**Need for adopting a sustainable agrifood system:**

Need	Description
1. <b>Rising Demand for Food</b>	The <b>increasing global demand necessitates sustainable systems</b> for consistent food production to meet the needs of a growing population.
2. <b>Environmental Degradation</b>	Widespread environmental harm from unsustainable practices underscores the <b>urgency to transition to sustainable methods</b> to mitigate further harm to the environment.
3. <b>Climate Change Challenges</b>	Sustainable practices are <b>crucial to adapting to these challenges and reducing the sector’s contribution</b> to climate change.
4. <b>Recognition of Sustainable Practices in India</b>	<b>GIAHS</b> -recognized practices in India, like <b>Pokkali rice and Kuttanad Farming</b> , highlight <b>climate-resilient and sustainable agricultural methods</b> , showcasing the importance of adopting such practices globally.

**Government Initiatives for sustainable Agrifood system:**

1. **Agriculture Infrastructure Fund**: Created to build **farm gates and agriculture marketing infrastructure** in rural areas. It provides **interest subsidies and credit guarantees** to entrepreneurs, reducing post-harvest losses.
2. **Water Use Efficiency Scheme**: Launched to increase

**water use efficiency at the farm level**. Establishes a dedicated **micro-irrigation fund** for implementing micro-irrigation technologies.

3. **Crop Varieties Development**: Developed **262 abiotic stress-tolerant varieties** of different crops.
4. **Food-Based Safety Net Programs**: Operates the world’s largest food-based safety net programs -- Targeted Public Distribution System (TPDS)
5. International Year of Millets:
6. **Promotion of Millets**: The UN recognized India’s proposal to celebrate the year 2023 as the **‘International Year of Millets.’**

**Insta Links:**  
[Scheme for Women Farmers](#)

**Mains Links:**  
 Q. How far is the Integrated Farming System (IFS) helpful in sustaining agricultural production? ( UPSC 2019)

Q. What are the reformative steps taken by the Government to make the food grain distribution system more effective? (UPSC 2019)

**Prelims Links**  
**Q. What are the significances of a practical approach to sugarcane production known as the ‘Sustainable Sugarcane Initiative’? (UPSC 2014)**

1. Seed cost is very low in this compared to the conventional method of cultivation.
2. Drip irrigation can be practised very effectively in this.
3. There is no application of chemical/inorganic fertilizers at all in this.
4. The scope for intercropping is more in this compared to the conventional method of cultivation.

Select the correct answer using the code given below:  
 (a) 1 and 3 only  
 (b) 1, 2 and 4 only  
 (c) 2, 3 and 4 only  
 (d) 1, 2, 3 and 4

**Ans: B**

[Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.](#)

## 2. DECARBONISING ROAD TRANSPORT

**Context:**  
 The air quality crisis in many Indian cities, exacerbated by transport and construction, demands urgent mitigation strategies, including decarbonising road transport.

### What is Decarbonising Transport?

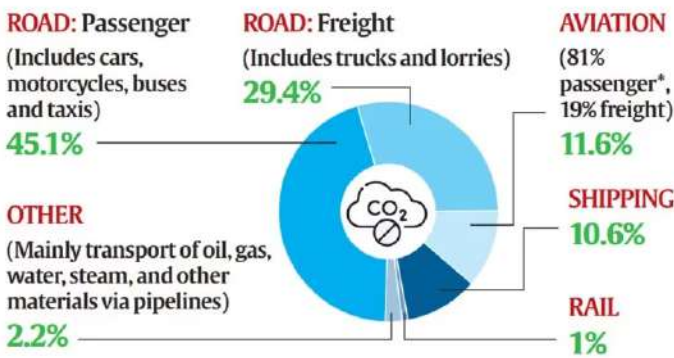
Decarbonising Transport refers to the process of **reducing or eliminating carbon dioxide (CO2) and other greenhouse gas emissions** from the transportation sector.

**Examples:** Promoting electric vehicles, using alternative fuels, improving energy efficiency, and investing in public transport and active mobility.

### Status of transport and emissions in India:

- Globally, the transport sector contributes **around 25% of CO<sub>2</sub> emissions and 15% of Greenhouse Gas (GHG) emissions** from fuel combustion
- The road freight sector is a **major contributor to emissions**, consuming **over one-fourth of Indian oil imports** and contributing to over **90% of road transport CO<sub>2</sub> emissions**.
- Key studies on Delhi's pollution**, namely Urban Emission (2015) and TERI (2018), highlight a significant factor in urban smog are PM<sub>2.5</sub> and PM<sub>10</sub> particles. These tiny particles, majorly stemming from **vehicles and construction activities**

### TRAVEL EMISSIONS: WHERE, HOW MUCH



\*Of passenger emissions, 60% are from international flights, 40% from domestic.  
Source: Our World In Data, based on International Energy Agency (IEA) and International Council on Clean Transportation (ICCT)

### Need for decarbonization of the transport sector in India:

Key Points	Details
<b>For Air Quality Improvement</b>	India has <b>35 out of the 50 most polluted</b> cities globally. Electrification of road transport can <b>reduce NOx and PM<sub>2.5</sub></b> , crucial for improving air quality in densely populated cities.
<b>Reduced Dependence on Fossil Fuels</b>	Electrification <b>reduces dependence on fossil fuels</b> , promoting cleaner and more sustainable energy sources. Diversifying energy sources enhances energy security.
<b>Global Climate Change Mitigation</b>	In 2021, research suggested that <b>electric vehicles in India emitted 19-34% fewer GHG emissions</b> than gasoline cars.

<b>Economic Growth</b>	India is the <b>fourth-largest car manufacturer globally</b> . The government aims for <b>30% electrification of total mobility by 2030</b> . Electric mobility fosters <b>job creation and innovation in battery manufacturing</b> , renewable energy, and charging infrastructure.
<b>Urban Planning and Livability</b>	Electric vehicles contribute to decongesting cities by promoting <b>shared mobility and compact urban design</b> .

### Key Challenges in the Electrification of Road Transport in India:

Challenges	Description
<b>Coal Power Generation</b>	Heavy reliance on <b>coal power plants</b> without pollution control measures can result in significantly higher emissions of SO <sub>2</sub> .
<b>Carbon Emissions due to EVs</b>	The <b>manufacturing process of lithium-ion batteries</b> , the weight of EVs, and the energy required contribute to higher lifecycle carbon emissions.
<b>Critical elements</b>	The production of lithium-ion batteries, a crucial component for EVs, depends on <b>specific minerals and rare earth elements</b> .
<b>Import dependence</b>	India is <b>almost entirely dependent on imports from a small pool of countries</b> (Chile, Argentina, Bolivia, Australia and China) to cater to its demand for Li for the production of Li-ion batteries.
<b>Financing Issues</b>	<b>Higher initial costs</b> hinder widespread adoption and demand for EVs in the market. <b>State subsidies cornered by few:</b> Much of the subsidy or tax breaks end up in the hands of the middle or upper middle classes, who are typically the buyers of battery electric four-wheelers
<b>Poor Infrastructure</b>	<b>Poor charging network:</b> Only about 2,000 public charging stations are currently operational across the country. <b>Different charging demands:</b> For example, e-2W and 3W models in India are suited to slow charging, unlike cars and buses.
<b>Low Market Penetration</b>	India's market penetration <b>stands at around 1%</b> , dominated by electric two-wheelers.

### Indian Government initiatives for promoting EVs:

Initiatives	Description
<a href="#">National Electric Mobility Mission Plan (NEMPP)</a>	Focus on R&D, pilot projects, and market creation to achieve significant EV adoption.
<b>Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India (FAME India) Scheme I and II</b>	Incentives for manufacturers, buyers, and charging infrastructure development.
<a href="#">Production-linked incentive (PLI) Scheme – National Programme on Advanced Chemistry Cell (ACC) Battery Storage</a>	Aimed at promoting domestic manufacturing of advanced chemistry cell batteries.
<b>Go Electric Campaign</b>	Awareness and outreach campaign to promote electric mobility.
<b>National Mission on Transformative Mobility and Battery Storage</b>	Strategic mission focusing on transformative mobility and battery storage solutions.
<a href="#">Vehicle Scrappage Policy</a>	Government policy encourages the scrapping of old vehicles to promote the adoption of newer, cleaner vehicles, including electric ones.
<a href="#">Ministry of Power Guidelines on Charging Infrastructure</a>	Guidelines requiring <b>at least one charging station within a 3 km grid and every 25 km</b> on both sides of highways
<b>Ministry of Housing and Urban Affairs Amendments to Model Building Bye-laws</b>	Amendments mandating the <b>allocation of 20% parking space in residential and commercial buildings for EV charging</b> facilities.
<b>Department of Science and Technology Grand Challenge on EV Charging Infrastructure Standards</b>	Focuses on setting industry standards for charging infrastructure in the country.

### International Case Studies:

Case Studies	Details
<b>Electric Mobility Roadmap</b>	<b>United Kingdom:</b> It released a <b>Transport Decarbonization Plan</b> with commitments to achieve <b>zero-emission cars and vans</b> by 2030.
	<b>Norway:</b> Targets <b>100% electric vehicle sales</b> in light-duty vehicles (LDVs) and public bus segments by 2025.
	<b>South Korea:</b> Provides a <b>one-time purchase subsidy</b> for electric cars.

<b>Countries Switching to EVs</b>	<b>Norway:</b> Achieved <b>80% of passenger vehicle sales</b> as all-electric vehicles in 2022. <b>China:</b> 22% of passenger vehicle sales are electric.
<b>Decarbonising Transport initiative of the ITF (International Transport Forum)</b>	Promotes <b>carbon-neutral mobility</b> to help stop climate change.
<b>Forum for Decarbonizing Transport</b>	Launched by <b>NITI Aayog and WRI India</b> , the project aims to bring down the peak level of GHG emissions (transport sector) in Asia.

To Read the recommendations of the NITI Aayog report on “Towards Decarbonising Transport 2023” [Click Here](#)

#### Way Forward:

1. Advocate for **all government vehicles to be 100% electric**.
2. Introduce instruments like **Viability Gap Funding** for charging stations.
3. **Bring EVs under RBI’s priority-sector lending guidelines** to boost retail financing.
4. Introduce **innovative EVs such as double-decker buses** for efficient mass transportation.

#### Conclusion:

India needs to have a **comprehensive policy to decarbonize the transport sector** to meet its nationally determined contributions (NDCs) i.e., reduce emissions intensity of its **GDP by 45% by 2030**

#### Insta Links:

[Decarbonizing Transport Project](#)

#### Mains Links:

Evaluate the potential benefits and challenges of decarbonizing the transport sector in India. (10M)

[Topics: Security challenges and their management in border areas; linkages of organized crime with terrorism.](#)

## 3. NORTH EAST INSURGENCY: UNLF SIGNED PEACE DEAL WITH CENTRE

#### Context:

The UNLF (United National Liberation Front) is the oldest valley-based, **Meitei insurgent group in Manipur** signed a peace agreement with the central government

**About UNLF:**

It was **formed on November 24, 1964**, with the goal of **secession from India**. Led by **Arembam Samarendra Singh** initially, it has two factions presently, with the armed wing known as the **Manipur People’s Army**. The UNLF has operated in the valley areas of Manipur **and some Kuki-Zomi hill districts**, receiving training from **the NSCN (IM)**, a Naga insurgent group. Proscribed under the **Unlawful Activities Prevention Act**, it has faced setbacks, operating from Myanmar’s regions.

In 1986, Mizo National Front (MNF) **transformed into a mainstream political party**. The **Mizoram Accord of 1986** marked the end of insurgency in the state.

For Insurgency in Manipur: [Click Here](#)

**Other agreements signed recently:**

Agreement	Details
<a href="#">Assam-Meghalaya Inter-State Boundary Agreement (2022)</a>	The agreement aims to resolve disputes in six sectors. Assam receives about 181 sq. km, and Meghalaya gets about 18 sq. km of the disputed areas.
<a href="#">Karbi Anglong Agreement (2021)</a>	A tripartite agreement involving five Assam insurgent groups, the Centre, and the state government. Five militant organizations ( <b>KLNL, PDCK, UPLA, KPLT, and KLF</b> ) laid down arms, with over 1,000 armed cadres transitioning to mainstream society.
<a href="#">Bodo Accord (2020)</a>	Signed by the central government, Assam government, and Bodo groups (including NDFB factions), it redraws and renames the <b>Bodoland Territorial Area District (BTAD)</b> as the Bodoland Territorial Region (BTR) in Assam.
<a href="#">Bru-Reang Agreement (2020)</a>	<b>A quadripartite agreement involving the Centre, Mizoram, Tripura governments, and Bru leaders.</b> Aims to settle Bru community members, indigenous to Northeast India, in Tripura, with the Home Ministry covering settlement expenses.
<a href="#">NLFT-Tripura Agreement (2019)</a>	NLFT, banned since 1997, reached an agreement resulting in the <b>surrender of 88 cadres with 44 weapons</b> . The National Liberation Front of Tripura operated from camps across the international border.
<a href="#">Roll Back of Armed Forces Special Powers Act (AFSPA)</a>	The government withdrew AFSPA from a significant part of the Northeast, including the <b>entire Tripura and Meghalaya</b> . In Arunachal Pradesh, AFSPA remains enforced in <b>only three districts</b> .

**Status of insurgencies in North-East:**

Last year, the Union Government reported that **there has been an 80% decline in civilian deaths and 6,000 militants** have surrendered in North East India since 2014.

**Factors Leading to Insurgency in Northeast India:**

Factors	Details
<b>Multi-ethnicity</b>	Northeast India (NEI) is <b>highly ethnically diverse</b> , home to around 40 million people, <b>including 213 of the 635 tribal groups</b> listed by the Anthropological Survey of India.  Government attempts at integration without understanding tribal nuances fuel insurgencies. <b>Inter-tribal rivalries</b> exacerbate ethnic insurgencies.
<b>Historical</b>	The region’s complex history of colonialism, post-independence border disputes, and socio-economic challenges have fueled the rise of various insurgent groups seeking autonomy, identity preservation, and socio-economic development.  E.g., <b>Naga National Council (NNC)</b> declared independence from India on August 14, 1947, under the leadership of Phizo.
<b>Lack of Economic Development</b>	Lagging development in NEI results in limited employment opportunities. <b>Insurgent groups exploit economic hardships</b> , attracting disenfranchised youth.
<b>Sense of Isolation, Deprivation, and Exploitation</b>	<b>Geographic distance from New Delhi</b> and limited Lok Sabha representation breed disillusionment. Reduced voice in corridors of power fuels discontent, making armed rebellion attractive.
<b>Demographic Changes</b>	Refugee influx from <b>former East Pakistan (now Bangladesh)</b> alters the region’s demographics.
<b>Internal Displacement</b>	- Ongoing internal displacement, particularly due to inter-ethnic violence, heightens instability.
<b>External Support</b>	China and Pakistan’s covert offensive in the region raises concerns. <b>Pakistan’s Special Services Group (SSG)</b> historically supported Naga guerrillas.  NNC leaders sought Chinese support in 1967, marking Chinese involvement in NEI. The success of China’s people’s revolution inspired insurgent leaders, fueling the rebellion.

<b>Perceived Excesses by the Indian Army (AFSPA)</b>	Armed Forces Special Powers Act (AFSPA) alienates locals, seen as draconian. Essential for counterinsurgency, AFSPA faces <b>criticism from Human Rights organizations</b> , vilifying it in the eyes of insurgent groups.
<b>Sources of Funding</b>	Funding through extortion, arms, and drug smuggling. Proximity to the Golden Triangle facilitates illegal drug trade, supporting separatist organizations.

**Institutional Measures to Address Insurgency in Northeast India:**

Measures	Details
<b>Ceasefire Agreements</b>	Ongoing <b>ceasefire agreements with various other militant groups</b> across states. The oldest agreement with N.S.C.N.-I.M. dates back to July 25, 1997.
<b>Peace Talks</b>	E.g., the Nagaland peace accord in 2015 with NSCN to end the insurgency.
<b>Military Operations</b>	Security force operations, including the army, state police, and paramilitary forces, to contain militancy. <b>Military operations</b> , e.g., air strikes in Mizoram and operations like Rhino and Bajrang against U.L.F.A. militants
<b>AFSPA</b>	AFSPA in Assam, Nagaland, Manipur, and parts of Arunachal Pradesh
<b>Strengthening Micro-democratic Institutions</b>	<b>Empowerment of local governance modules</b> like autonomous development councils, gram panchayats, and village councils. <b>Enhanced functionality and legitimacy</b> , bringing diverse communities into the development stream.
<b>Developmental Measures</b>	Implementation of programs like <b>Border Area Development and Hill Area Development</b> .
	Special category status to Northeast states; Developmental assistance for Infrastructure projects through <b>Bharatmala Pariyojana</b>
	Regional Connectivity Scheme (RCS)-UDAN; <b>Kaladan Multi-Modal Transit Project</b> , India-Myanmar-Thailand Tri-lateral Highway Digital North East Vision 2022 National Bamboo Mission

**Conclusion**

The insurgencies of NEI have continued for **the past seven decades despite** various efforts by the Government of India

for a permanent solution. However, with the older generation passing away and the new generation **having little interest in insurgencies**, the time is ripe to hammer out a long-term strategy for the elimination of residual insurgencies.

**Insta Links:**  
[Insurgency in North East India \(NEI\)](#)

<b>Mains Links</b>
Q1. The North-East region of India has been infested with insurgency for a very long time. Analyse the major reasons for the survival of armed insurgency in this region. (UPSC 2017)
Q2. Human rights activists constantly highlight the fact that the Armed Forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human rights abuses by security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by the Apex Court. (UPSC 2015)

<b>Prelims Links</b>
Q. Which Schedule of the Constitution of India contains special provisions for the administration and control of Scheduled Areas in several States? (UPSC 2008)
(a) Third (b) Fifth (c) Seventh (d) Ninth
<b>Ans: B</b>

**GENERAL STUDIES – 4**

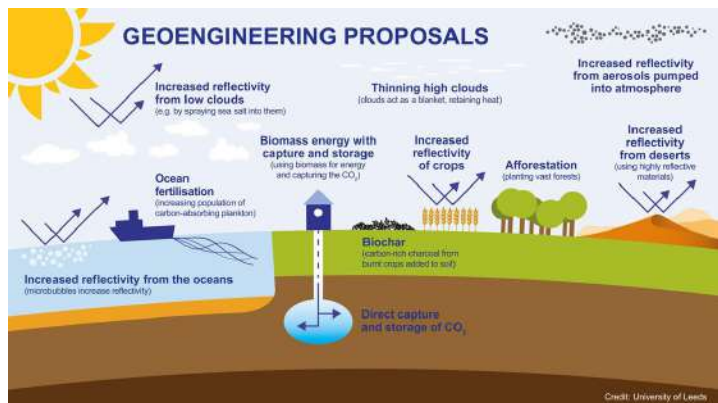
**1. ETHICAL RISKS OF CLIMATE ENGINEERING**

**Context:**  
Ahead of COP28, **UNESCO’s first-ever report on the Ethics of Climate Engineering** emphasizes the risks and opportunities of climate manipulation technologies.

**About the report:**  
The report has been published by **UNESCO’s World Commission on the Ethics of Scientific Knowledge and Technology (COMEST)**. COMEST is an **advisory body** and forum of reflection set up by UNESCO in 1998.

**What is Climate Engineering?**  
Climate engineering, also known as **geoengineering**, involves deliberate modifications to the Earth’s natural systems to **mitigate climate change effects**. It includes techniques like **Carbon Dioxide Removal** (Building large-scale infrastructure to capture and store carbon emissions from industrial processes) and **Solar Radiation Modification** (Injecting aerosols

into the stratosphere to reflect sunlight, thereby cooling the Earth's surface temperature) to alter carbon levels and sunlight reflection.



**Ethical Concerns in Climate Engineering:**

Concerns	Description
<b>Undermining Climate Policies</b>	Potential risk of <b>climate engineering diverting resources</b> from crucial emission reduction and adaptation efforts.
<b>Economic Inequalities</b>	The high costs of developing and deploying these technologies may exacerbate <b>global economic inequalities</b> .
<b>Slippery Slope</b>	It could facilitate the acceleration toward deployment without any ethical framework e.g., it <b>impacts biodiversity, and the ecosystem</b> .
<b>Moral Hazard</b>	It could provide polluters with an excuse to <b>not reduce the use of fossil fuels</b> .
<b>Military or Geo-political Use</b>	Geoengineering tools may be <b>exploited for military or geopolitical purposes</b> , necessitating strengthened global governance efforts.
<b>Knowledge Gaps and Uncertainties</b>	Lack of <b>comprehensive understanding and potential chain</b> reactions pose risks to humans, the ocean, temperature, and biodiversity.
<b>Dependency and Phase-out Challenges</b>	Creating a dependency on these technologies raises questions about when and <b>how to phase them out, impacting climate actions</b> .
<b>Transboundary Impact</b>	Countries must consider the <b>potential transboundary impacts</b> of their climate engineering decisions.

**Suggestions:**

- Legal Regulation:** States should **introduce legislation regulating climate engineering** to prevent harm.
- Ethical Research Standards:** Scientific research must adhere to ethical standards consistent with international law.
- Transboundary Impact Consideration:** Countries must assess and consider the transboundary impact

of their climate engineering decisions.

- Global Governance Collaboration:** Open and responsible collaboration between countries is crucial for effective **global governance of climate engineering**.
- Inclusive Decision-Making:** Marginalized communities impacted by climate disruption should be **fully considered and involved in climate engineering policies**.

**Conclusion:**

The current intergovernmental **discussions during COP28 must cover the ethical aspects** of climate engineering so that they align with ethical frameworks and Paris Agreement commitments.

**Insta Links:**

- [Solar Geo-Engineering](#)

**Mains Links:**

Q. Do you think that climate engineering is a good strategy to overcome the challenges posed by global warming? State ethical concerns related to it.

**CONTENT FOR MAINS ENRICHMENT**

**1. PAUL LYNCH: 2023 BOOKER PRIZE FOR HIS NOVEL "PROPHET SONG"**

**Context:**

Ireland's Paul Lynch, 46, has won the **2023 Booker Prize with his novel "Prophet Song,"** a dystopian narrative set in Dublin amid totalitarian rule.

**Content of Novel:**

The novel explores a **family's struggle in a world where democratic norms are eroding**. Lynch mentioned that the inspiration for "Prophet Song" came from the **Syrian war and refugee crisis**.

The other nominees for the Booker Prize included works by Paul Murray, Chetna Maroo, Paul Harding, Jonathan Escoffery, and Sarah Bernstein. The Booker Prize is a prestigious literary award, with previous winners including Margaret Atwood, Hilary Mantel, Bernardine Evaristo, and Salman Rushdie.

Previously, **Bulgarian writer Georgi Gospodinov and translator Angela Rodel** have won the **International Booker Prize** for their novel "Time Shelter."

Prize	Description	Scope
<b>Booker Prize</b>	Awarded annually for the best original novel written in English, open to authors from the UK, Ireland, and the Commonwealth.	Limited to English-language works
	E.g., Salman Rushdie, Arundhati Roy, Kiran Desai, Aravind Adiga, and others	
<b>International Booker Prize</b>	Honours a book translated into English and recognizes the combined efforts of the author and translator.	Open to books from around the world, translated into English.
	E.g., "Tomb of Sand" became the <b>first book written in an Indian language</b> to be awarded the International Booker Prize.	

**Usage:** The example can be used in an Essay/Ethics paper.

## 2. EGYPTOLOGY AND NAPOLEON'S FAILED EGYPT EXPEDITION

**Context:**

Napoleon's failed Egypt expedition in 1798-1801, driven by colonial ambitions and competition with the British, is credited with **giving birth to Egyptology**.

Despite military setbacks, the **expedition led by Napoleon involved around 160 scholars** in various fields, laying the foundation for the study and documentation of Egypt's history and culture. The resulting works, such as **Dominique-Vivant Denon's "Travels in Lower and Upper Egypt"** and **"The Description of Egypt,"** marked the start of academic archaeology in the Nile Valley.

**Who was Napoleon?**

**Napoleon Bonaparte (1769-1821)** was a French military and political leader who rose to prominence during the **French Revolution**. He became Emperor of the French in 1804 and embarked on a series of military campaigns across Europe, known as the **Napoleonic Wars**. Despite his military brilliance, he faced defeats, leading to his exile. His impact includes **legal and educational reforms, the Napoleonic Code,** and shaping modern European geopolitics.

**Usage:** The example can be used to show the positive impact of colonialism on culture esp. documentation and preservation of cultural heritages

## 3. PROJECT Q\*

**Context:**

OpenAI's Project Q\*, an AI breakthrough, has sparked controversy and concerns about its potential threat to humanity.

**What is Project Q\*?**

Project Q\* is an AI breakthrough, reportedly **capable of solving complex problems and demonstrating advanced reasoning** similar to humans. The project has raised concerns about its potential threat to humanity, with fears stemming from its deep learning capabilities, potential to accelerate scientific progress and the **possibility of unintended consequences and misuse**.

**What is Artificial General Intelligence (AGI) and how it is different from Generative AI?**

Artificial General Intelligence (AGI) refers to **artificial intelligence with human-like cognitive abilities**, enabling it to understand, learn, and apply knowledge across various domains, similar to human intelligence. Q\* is seen as a **leap towards Artificial General Intelligence (AGI)**.

**Difference from Generative AI:** While AGI aims for broad intelligence, Generative AI specifically concentrates on producing content, such as images, text, or other forms of data, using algorithms and models trained on existing examples.

**Ethical Dilemmas:** The ethical concerns surrounding Project Q\* include questions about the **adequacy of safety measures, the potential acceleration** of scientific progress, and the responsible commercialization of such advanced AI models.

## 4. HENRY KISSINGER

Henry Kissinger



**Context:** Henry Kissinger, the influential American diplomat and Nobel Peace Prize winner, has died at the age of 100

Category	Contributions	Examples
 Political	Facilitated U.S. diplomatic opening with China.	Orchestrated secret meetings leading to Nixon's historic summit in Beijing with Chairman Mao Zedong.
 Diplomatic	Key role in U.S.-Soviet arms control talks.  Pioneered "shuttle diplomacy" for conflict resolution.	Negotiated <b>Strategic Arms Limitation Treaty (SALT I)</b> with the Soviet Union, reducing nuclear arms.  E.g., Efforts made by then-U.S. Secretary of State Henry Kissinger in the 1970s to negotiate peace between Israel and Egypt. Kissinger flew back and forth between <b>Jerusalem and Cairo</b> , meeting with leaders from both sides, to broker a ceasefire and ultimately the <b>Camp David Accords</b> .
Nobel Peace Prize	For his actions in negotiating a <b>ceasefire in the Vietnam War</b> , Kissinger received the 1973 Nobel Peace Prize. Kissinger played a key role in the <b>Paris Peace Accords</b> with North Vietnam.	
 Supported India	On his advice, the US Chambers of Commerce in the 70s established the <b>US India Business Council (USIBC)</b> . As per archival diplomatic conversations, as early as 1972 he had <b>advocated for India and Japan</b> to be the permanent member of the UN Security Council.	
 Controversies	Kissinger's legacy <b>remains controversial and polarizing in U.S. politics</b> . He is both considered an effective Secretary of State and condemned for <b>turning a blind eye to war crimes</b> committed by American allies  Supported <b>anti-communist dictatorships</b> in Latin America, undermining a democratically elected government in <b>Chile</b>  Involved in <b>U.S. actions that supported authoritarian regimes</b> , leading to criticism of undermining democratic values. E.g., <b>sending weapons to Pakistan's dictator</b> , whose regime slaughtered residents of what's now Bangladesh	

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## 5. SAM MANEKSHAW

### Context:

Field Marshal Sam Manekshaw, also known as **Sam Bahadur**, was the Chief of the Army Staff of the Indian Army during **the Indo-Pakistani War of 1971**, and the **first Indian Army officer to be promoted to the rank of field marshal**.

Sam Manekshaw's life exemplified ethical values, including:

- Integrity:** He faced inquiry but **maintained his integrity**, eventually being cleared of all charges.
- Compassion:** After the 1971 war, he personally ensured the **well-being of Pakistani Prisoners of War**, providing a Quran upon request.
- Loyalty:** Despite facing challenges, he displayed loyalty to the Army, rising above personal vendettas when he attained higher ranks.
- Courage:** Throughout his military career, Sam displayed **courage on the battlefield** and in facing political pressures during his service.
- Respect:** Fluent in Punjabi, he showed respect to soldiers **by conversing in their native language, fostering a connection with troops** from different backgrounds.

## 6. RAMESHBABU PRAGGNANANDHAA AND HIS SISTER VAISHALI

The remarkable success of **Indian chess siblings, Rameshbabu Praggnanandhaa and his sister Vaishali**, who have been making waves in the chess world.

Praggnanandhaa, **a chess prodigy**, achieved the title of **International Master at the age of 10 and became the second-youngest Grandmaster in 2018**. He has also defeated the five-time world champion **Magnus Carlsen three times in online games**.

**Vaishali**, Praggnanandhaa's older sister by four years, recently became the **third-ever female Grandmaster from India**, joining the ranks of Koneru Humpy and Harika Dronavalli. This achievement also makes them the **first Grandmaster brother-sister pair in history**.

Vaishali faced the **emotional toll and pressure of being successful** as her brother Praggnanandhaa gained international attention. But she **overcame feelings of envy and pressure** to carve her own path in chess. The siblings, who initially trained under Grandmaster RB Ramesh, have taken different

paths in their chess journeys.

The siblings have contrasting playing styles – **Praggnanandhaa is known for his defensive skills, while Vaishali is a tenacious attacker**. Praggnanandhaa is extrovert and Vaishali is more introvert

**Usage:** The example can be used to show excellence, dynamics of sibling rivalry, excellence in Chess, etc.


## FACTS FOR PRELIMS

### GS-1

## 1. SAINTS IN NEWS

### Saints in News



Topic	Details
 Kavi Bhima Bhoi and Mahima Cult	<b>Context:</b> Inauguration of the 'International Seminar on Santha Kavi Bhima Bhoi and the legacy of Mahima Cult' in Bhubaneswar, Odisha. <b>Mahima Cult:</b> A unique religious movement in Odisha founded by Mahima Swami, emphasizing worship of the attribute-less God known as <b>ALEKH</b> . <b>Santha Kavi Bhima Bhoi:</b> A 19th-century saint, poet, and social reformer from Odisha, follower of Mahima Swami, known as the "Saint Poet." <b>Significant works:</b> Stuti Chintamani, Odia Bhajans, and Chautisa (devotional song).
	<b>Context:</b> Prime Minister's participation in the 525th birth anniversary celebration of Sant Meerabai in Mathura, Uttar Pradesh. <b>Devotion:</b> Saguna Bhakt with deep devotion to Lord Krishna, considering Him her husband. <b>Contributions:</b> Composed poems in Rajasthani dialect, famous for "Mere to giridhar gopal" and "Paayoji maine Ram Ratan dhan paayo." <b>Challenge to Norms:</b> Moved to Brindavan, challenging societal norms for princesses and widows.
 Meerabai	<b>Background:</b> Founder of Sikhism, born in 1469, initiated inter-faith dialogue, wrote compositions included in Adi Granth (Guru Granth Sahib). <b>Teachings:</b> Advocated 'Nirguna' form of bhakti, gave mantra ' <b>Ek Onkar</b> ,' insisted on equality irrespective of caste, creed, and gender.
 Guru Nanak Dev	<b>Egalitarian Society:</b> Introduced social institutions like Langar, Pangat, and Sangat promoting equality and collective decision-making. <b>Social Harmony:</b> Preached the idea of the entire world as God's creation, emphasizing forgiveness, patience, and kindness. <b>Just Society:</b> Promoted the motto of "kirat karo, naam japo and vand chhako" (work, worship, and share) and the concept of "dasvandh." <b>Gender Equality:</b> Respected women, advocated gender equality, and emphasized women's equal responsibility to God. <b>Peace Building:</b> Guru Nanak Dev's ideas contribute to promoting peace, equality, and prosperity globally.

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## 2. PARTHENON SCULPTURES

### Context:

A diplomatic dispute between **Greece and the UK** has arisen over **the Parthenon Sculptures** housed at the British Museum.

- Greece has consistently sought the permanent return** of the sculptures, also known as the **Elgin Marbles**, which are **over 2,000 years old** and originally adorned the **Parthenon temple in Athens**.
- The **sculptures were removed by Thomas Bruce, the 7th Earl of Elgin**, in the early 19th century and purchased by the **British Museum in 1816**.
- While Greece alleges theft, **Lord Elgin claimed permission from the Ottoman Empire**

The Parthenon Sculptures are a **collection of more than 30 ancient Greek stone sculptures**. They are over 2,000 years old and were originally part of the Parthenon temple in Athens. The sculptures are currently housed in the British Museum



### 3. MAN, THE HUNTER - THEORY

#### Context:

A recent study challenges the traditional notion of **'Man, the Hunter,'** suggesting that **women not only participated in hunting during the Palaeolithic era but also had certain biological advantages.**

- The 'Man, the Hunter' theory emerged in the 1960s, proposing that hunting played a significant role in human evolution. However, recent studies have **contested this idea, highlighting the oversight of women's participation in hunting activities.**
- The study argues that **estrogen, a hormone produced more in females,** contributes to their **metabolic suitability for endurance activities like running,** challenging the **notion that only males excel in such activities.**
- From an archaeological perspective, the study examines burial remains and injury patterns among our closest extinct human relatives, the Neanderthals.
- The researchers **found no significant differences in trauma or injury patterns based on sex,** suggesting that both males and females were engaged in similar activities, including **ambush-hunting large game animals and processing hides for leather.**

The study also addresses the **societal changes around 10,000 years ago with the advent of agriculture,** leading to **rigid gender roles and economic inequality.** The researchers argue that the shift towards gendered roles occurred with the **intensification of agriculture, population growth, and the concentration of resources**

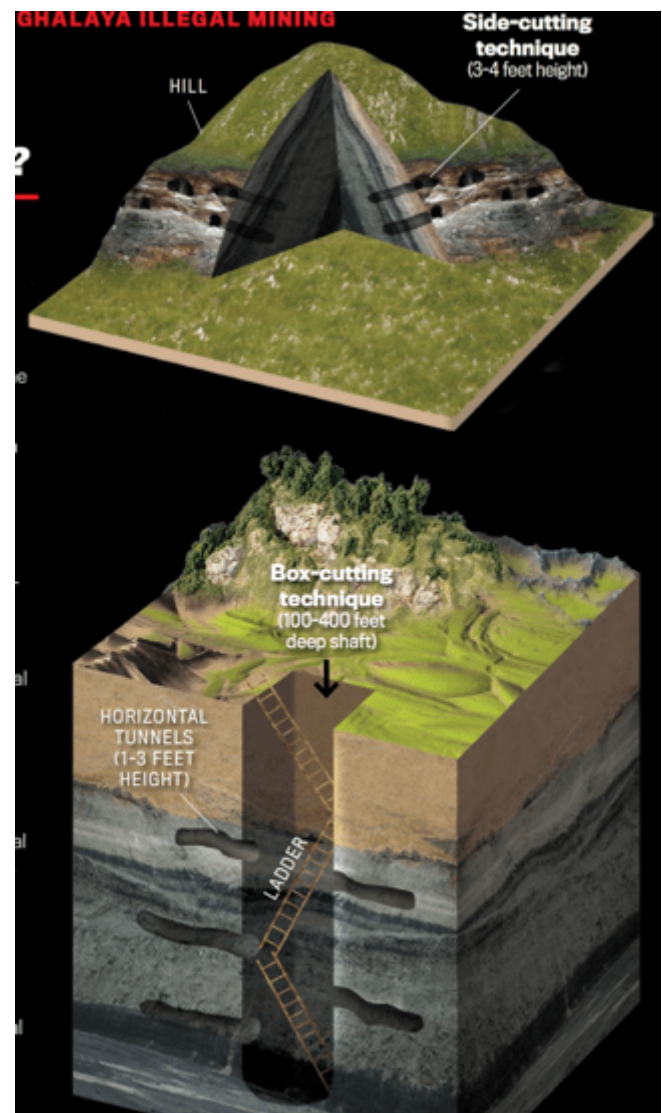
### 4. RAT HOLE MINING

#### Context:

In the rescue operations for the collapsed Silkyara tunnel in Uttarkashi, **rat miners played a crucial role in completing the drilling process.**

- **Rat-hole mining,** a method of **manual drilling common in Meghalaya,** involves skilled workers **digging narrow pits just wide enough for one person.**
- The term "rat hole" refers to these pits used to **extract coal.** This method is hazardous, illegal in many countries due to safety concerns, and **has faced criticism for its environmental impact.**
- Rat-hole mining has faced **criticism for its hazardous conditions,** environmental damage, and accidents leading to injuries and fatalities.
- The **National Green Tribunal (NGT) banned the practice in 2014** and retained the ban in 2015 due to safety concerns and environmental impact.

Other methods, such as **vertical drilling and auger mining,** were also employed in the rescue operations, highlighting the **diverse techniques used to address complex situations.**



GS-2

## 1. CERT-IN NOT UNDER RTI

**Context:**

The government has **excluded the Indian Computer Emergency Response Team (CERT-In)**, the national agency responsible for addressing cybersecurity threats, from the Right to Information Act, 2005.

**What is CERT-In (founded 2004; HQ: New Delhi)?**

It is an office within the **Ministry of Electronics and Information Technology**. It is the nodal agency to **deal with cyber security**. It strengthens the security-related defence of the Indian Internet domain.

- **The Information Technology Act of 2000** designates CERT-In to perform functions in the realm of cybersecurity, including the collection, analysis, and dissemination of information on cyber incidents and implementing emergency measures for handling cybersecurity incidents.
- CERT-In now joins **26 other intelligence and security organizations** already exempted from the Act such as RAW, CBI, and IB.

**How Government exempt CERT-In from RTI?**

Department of Personnel and Training has used the **powers under Section 24 of the RTI Act to exempt CERT-In from transparency laws**. It allows the government to **withhold information related to CERT-In** from public scrutiny.

**What is Section 24?**

Section 24 of the RTI Act says that **this law is not applicable to the intelligence and security organizations** specified in the Second Schedule. However, the information pertaining to the **allegations of corruption and human rights violations** shall not be excluded.

**Other exemptions under RTI:** Information affecting **the sovereignty and integrity of India**, records of **Council of Ministers' deliberations**, information forbidden by court of law, etc. However, Section 8(2) of the RTI Act allows disclosure if public interest outweighs the harm to the protected interests under the Official Secrets Act, 1923.

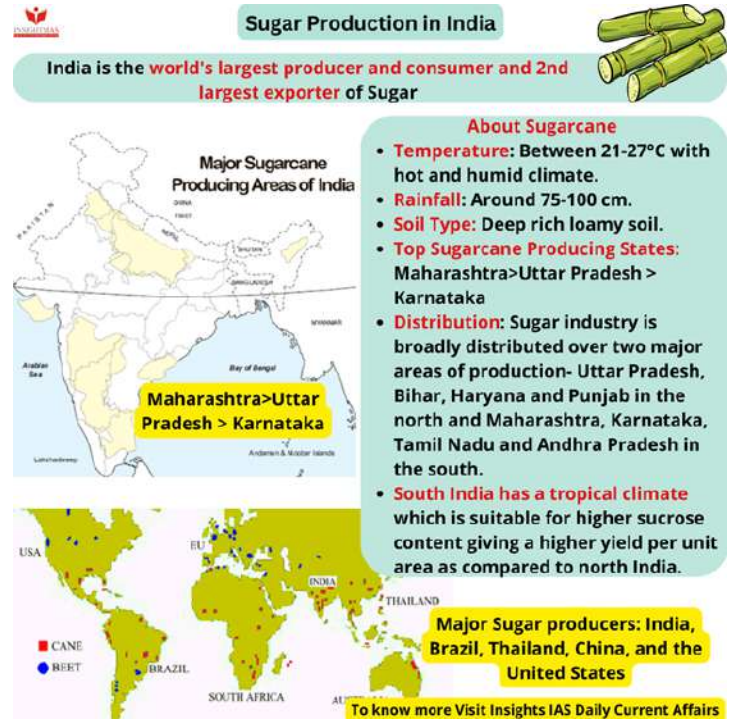
## 2. INTERNATIONAL SUGAR ORGANISATION (ISO)

**Context:**

India has been designated as the **Chair of the International Sugar Organisation (ISO) for 2024**, following the announcement made during the 63rd council meeting held in London.

**What is ISO?**

The International Sugar Organization (founded 1968; HQ: London) is an **intergovernmental organization**, which was established by the **International Sugar Agreement of 1968**, as the body responsible for administering the Agreement (aimed at establishing an "orderly relationship between the supply and demand for sugar in the world market."). It has 88 countries as its member (Saudi Arabia joined in 2022)



**Sugar Production in India**

India is the **world's largest producer and consumer and 2nd largest exporter of Sugar**

**About Sugarcane**

- **Temperature:** Between 21-27°C with hot and humid climate.
- **Rainfall:** Around 75-100 cm.
- **Soil Type:** Deep rich loamy soil.
- **Top Sugarcane Producing States:** Maharashtra > Uttar Pradesh > Karnataka
- **Distribution:** Sugar industry is broadly distributed over two major areas of production- Uttar Pradesh, Bihar, Haryana and Punjab in the north and Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh in the south.
- **South India has a tropical climate** which is suitable for higher sucrose content giving a higher yield per unit area as compared to north India.

**Major Sugarcane Producing Areas of India**

**Major Sugar producers: India, Brazil, Thailand, China, and the United States**

**To know more Visit Insights IAS Daily Current Affairs**

\*Note: in October 2022, India became the **largest producer of Sugar** in the world. Depending on the source of news, India's position may defer.

## 3. PRIVILEGED COMMUNICATION

**Context:**

The **proposed Bharatiya Sakshya (BS) Bill**, intended to **replace the Indian Evidence Act of 1872**, includes a **provision barring courts from inquiring into privileged communication** between Ministers and the President of India.

- While **Article 74(2) of the Constitution** already mentions this, the bill seeks to give it legal backing.
- However, the term "**privileged communication**" **has not been clearly defined**, leading to potential interpretation challenges.

**Privileged communication** refers to **confidential and protected exchanges** between **specific individuals or within certain relationships**, where the law recognizes the need to keep the communication confidential.

This **privilege is designed to encourage open and honest communication** within these relationships. The concept aims to **ensure that individuals can freely share information without fear of that information being disclosed in legal proceedings**.

## 4. ALL INDIA JUDICIAL SERVICE

**Context:**

The President advocated the establishment of an [All-India Judicial Service](#) to ensure diverse representation in the judiciary during an event celebrating **Constitution Day at the Supreme Court**.

- The proposed **All-India Judicial Service** would **identify and nurture talent from across the country, promoting inclusivity**.

**About All India Judicial Service:**

The **All-India Judicial Service (AIJS)** is a proposed **judicial service in India**.

The AIJS was added to the constitution in **1976 by the 42nd Constitution Amendment**.

**Article 312** of the Constitution provides for the **establishment of the AIJS for posts of district judge and above**

The AIJS will not include any post inferior to that of a District Judge

Worst Forms of Child Labour Convention	Promotional Framework for Occupational Safety and Health Convention, 2006
Discrimination (Employment Occupation) Convention	

## 5. DEMAND FOR RATIFICATION OF THE LABOUR CONVENTION

**Context:**

In the wake of the incident (Silkyara Tunnel collapse), the Central Trade Unions have urged the Union government to ratify the labour conventions

**Status:** The [International Labour Organization \(ILO\)](#) report reveals that **nearly 30 lakh workers globally die annually** due to work-related accidents and diseases. It highlights that 79 out of 187 countries have ratified the **ILO Occupational Safety and Health Convention** (however India has not done so). In India, workers' safety is covered under the **Occupational Safety, Health and Working Conditions Code (OSH-WCC) 2020**.

**Threats:** Long working hours, exposure to particulate matter, gases, and fumes, and occupational injuries are major causes. Mining, construction, and utilities are the most hazardous sectors.

**ILO Conventions:**

Ratified by India	Not ratified by India
Abolition of <a href="#">Forced Labour Convention</a>	Freedom of Association and Protection of Right to Organise Convention
Equal Remuneration Convention	Right to Organise and Collective Bargaining Convention
Minimum Age Convention	Occupational Safety and Health Convention, 1981

## 6. AMPLIFI 2.0 PORTAL

**Context:**

The Union Ministry of Housing and Urban Affairs has launched the **Amplifi 2.0 portal** to **provide raw data from Indian cities on a single platform for academics, researchers, and stakeholders**, aiming to support **data-driven policymaking**.

- The portal covers diverse information such as **diesel consumption, water quality testing, healthcare expenditure, slum population, and road accident fatalities**.
- The initiative, **part of the Urban Outcomes Framework 2022**, aims to streamline data across 14 sectors and shift the focus from indices to comprehensive indicators for effective analysis.
- The initiative aims to harness **data for informed urban policy decisions and planning**.

## 7. AYUSHMAN AROGYA MANDIR

**Context:**

The Ayushman Bharat-Health and Wellness Centres (AB-HWC) in India will now be known as 'Ayushman Arogya Mandir,' following a decision by the government.

The rebranded centres will also feature **a new tagline, 'Arogyam Parmam Dhanam.'** The move is aimed at **enhancing the identity and promotion** of these health facilities across the country.

**About AB-HWC:**

**Introduced in 2018 under the Ayushman Bharat Program**, there are currently more than **1.6 lakh centres** across India. These centres extend their services beyond maternal and child healthcare, encompassing **non-communicable diseases**, palliative and rehabilitative care, oral, eye, and ENT care, mental health services, and first-level care for emergencies and trauma. Additionally, they offer **free essential drugs and diagnostic services**.

## 8. DECENTRALISED AUTONOMOUS ORGANISATIONS (DAOS)

Decentralised Autonomous Organisations (DAOs) are **transforming the digital world** by **operating without central con-**

trol, governed by **smart contracts and consensus**.

Aspect	Details
About	Decentralised Autonomous Organisations, are <b>digital entities</b> operating on <b>blockchain technology</b> . They function <b>without central control</b> , governed by smart contracts and the consensus of members
Aim	The idea is to create <b>self-sustaining, community-driven entities</b> governed by smart contracts on blockchain networks.
Example	One example is a DAO <b>in decentralized finance (DeFi), like MakerDAO</b> . In MakerDAO, users holding tokens can propose and vote on changes to the protocol, influencing decisions on lending and borrowing services without relying on traditional banks.
Use Cases	<b>Global Financial Ecosystem</b> (Platforms like Compound and Maker DAO enable lending and borrowing); <b>Art</b> (Artists tokenize creations); <b>Supply Chain Management</b> (DAOs offer transparency and traceability in global supply chains); <b>Governance</b> (e.g., DAO stack facilitates decentralized governance for internet communities)
Significance	<b>1. Decentralization and Democratic Governance:</b> Shifts power from central authorities, promoting democratic decision-making.
	<b>2. Transparency and Trust:</b> Smart contracts ensure transparency, reducing opacity associated with centralized organizations. However, vulnerabilities in smart contracts can pose security risks
	<b>3. Inclusivity and Global Collaboration:</b> Enables global participation, fostering diversity and innovation.
	DAOs aim to create <b>transparent, democratic, and self-executing systems</b> , challenging traditional business structures.
Challenges	<b>Security Vulnerabilities</b> (e.g., 2016 DAO hack); Challenges in legal classification, taxation, and liability assignment; Decentralized decision-making makes dispute resolution challenging

**Ayushman Bharat- PM Jan Aarogya Yojana and Digital Mission (ABDM)**

**Context:** ABDM introduced the Scan and Share (QR-code-based) service for faster OPD registrations in 2022

**About ABPM-JAY**

- It is the **world's largest health assurance scheme** (launched in 2018 by MoH&FW). It provides medical insurance of Rs 5 Lakh to over 10 Cr marginalized families (identified through SECC 2011 data) for secondary and tertiary care hospitalization.
- Centrally sponsored scheme
- Funding: 60:40 & 90:10 (NE states and three Himalayan states- J&K, Himachal and Uttarakhand)
- **No limit** on family size covered or age of members.
- It covers **pre-existing diseases**
- Implementation by **National Health Authority**



**Ayushman Bharat Digital Mission (ABDM)**

- It aims to develop the **digital backbone** for integrated digital health infrastructure.
- launched in 2021, it is **Central sector scheme**
- It contains: ABHA health account numbers; ABHA App; Health Facility Registry and Unified Health Interface (for patients and health provider interactions)
- Implementation: **National Health Authority** under MoH&FW.

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## 9. FAST TRACK COURTS

**Context:**

The Union Cabinet has approved the **continuation of the Fast Track Special Courts (FTSC)** dedicated to **expediting justice in cases of sexual offences** for an additional three years, extending up **to March 31, 2026**.

- **Launched in 2019** as a **centrally sponsored scheme**, the FTSC aims to swiftly dispose of cases related to **rape and those falling under the Protection of Children from Sexual Offences (POCSO) Act**.
- The **Department of Justice, Ministry of Law and Justice**, oversees the implementation of the scheme, which has seen the **establishment of 761 fast-track courts across 30 states and union territories**.
- These courts **have resolved over 1,95,000 cases, with a focus on ensuring prompt justice for victims of sexual offences**.

## 10. DRONES TO THE WOMEN SELF HELP GROUPS (SHGS)

**Context:**

The Union Cabinet, has approved a **Central Sector Scheme** for providing **drones to Women Self Help Groups (SHGs)** from **2024-25 to 2025-26**.

- The scheme aims to **empower 15,000 selected Women SHGs** by offering **drone rental services to farmers for agricultural purposes**.

The key features of the scheme include:

Key Points	Details
------------	---------

<b>Holistic Interventions</b>	The scheme integrates efforts from the <b>Department of Agriculture &amp; Farmers Welfare, Department of Rural Development, and Department of Fertilizers</b> . Collaboration with Women Self Help Groups (SHGs) and Lead Fertilizer Companies is an integral part of the holistic approach.
<b>Cluster-Based Approach</b>	Identification of <b>economically feasible clusters for drone usage</b> . Selection of 15,000 women SHGs within these clusters for the provision of drones.
<b>Financial Assistance</b>	<b>Women SHGs receive 80% of the drone cost as Central Financial Assistance</b> . The remaining amount can be <b>raised by SHGs as a loan under the National Agriculture Infra Financing Facility</b> , with a <b>3% interest subvention</b> .
<b>Training</b>	Elected members of SHGs undergo a <b>15-day training program</b> . Training includes <b>mandatory drone pilot training</b> and additional sessions for agricultural applications. Another member is trained as a drone technician/assistant for repairs and maintenance.
<b>Role of Lead Fertilizer Companies (LFCs)</b>	<b>LFCs act as intermediaries between drone suppliers and SHGs</b> , facilitating procurement and maintenance. <b>Promotion of Nano Fertilizers is emphasized</b> .
<b>Income Generation</b>	<b>SHGs rent out drone services to farmers for Nano fertilizer and pesticide applications</b> . Aim to provide sustainable business and livelihood support.
<b>Technological Advancement in Agriculture</b>	The scheme aims to <b>infuse advanced technology into agriculture</b> , leading to <b>improved efficiency, enhanced crop yield, and reduced operational costs</b> . The technological advancements benefit farmers and contribute to overall agricultural development.

<b>Objectives</b>	Address socio-economic <b>challenges faced by Particularly Vulnerable Tribal Groups (PVTGs) in India</b> .
<b>Ministries Involved</b>	9 Ministries, including the <b>Ministry of Tribal Affairs</b> .
<b>Focus Areas</b>	<b>11 critical interventions</b> , encompassing various sectors such as housing, infrastructure, healthcare, education, and connectivity.
<b>Key Components</b>	- Provision of pucca houses - Connecting roads - Water supply projects - Mobile medical units - Hostels - Vocational education - Anganwadi Centers - Multipurpose centres - Electrification - Solar off-grid systems - Solar lighting - Setting up Village Development Knowledge Centers (VDVKs) - Installation of mobile towers
<b>Target Duration</b>	The mission will operate over <b>the next three years</b> .
<b>Beneficiary Scope</b>	<b>75 Particularly Vulnerable Tribal Groups (PVTG) communities</b> in 18 states and the Union Territory of Andaman and Nicobar Islands.
<b>Overall Goal</b>	Improve the <b>overall well-being of PVTG households</b> by targeting basic facilities, including housing, water, sanitation, education, health, connectivity, and livelihood opportunities.
<b>Contribution of Other Ministries</b>	Ayush and Skill Development ministries will establish wellness centres. Ayush facilities will be provided through mobile medical units. - Skill and vocational training will be offered in PVTG habitations.

**GS-3**

## 11. PRADHAN MANTRI JANJATI ADIVASI NYAYA MAHA ABHIYAN (PM JANMAN)

**Context:**

The **Union Cabinet**, has approved the **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN)**

Key Points	Details
<b>Initiative Name</b>	<b>Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan</b>

## 1. COSEISMIC IONOSPHERIC PERTURBATIONS (CIP)

**Context:**

A study conducted by **scientists from the Indian Institute of Geomagnetism** reveals that **earthquake processes**, even relatively small ones, **leave a distinct mark in the ionosphere**.

- The study demonstrates that **coseismic ionospheric perturbations (CIP)**, caused by vertical crustal movements during earthquakes, can be **influenced by multiple fault segments, challenging the assumption of a single source for near-field CIP**.
- The study suggests that **space-based observations of ionospheric perturbations** could provide **valu-**

able insights into earthquake precursors, paving the way for improved earthquake monitoring and prediction.

**Coseismic ionospheric perturbations (CIP)** refer to **disturbances in the Earth's ionosphere** caused by seismic activity, specifically by the **vertical crustal movements** during an earthquake.

These perturbations result from the **excitation of acoustic waves (AWs) in the atmosphere** due to the **vertical movement of the Earth's crust during an earthquake**

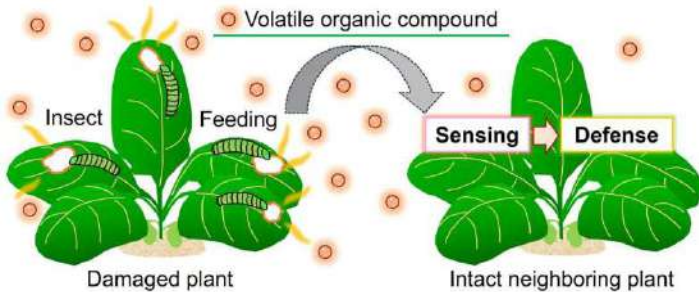
## 2. GREEN LEAF VOLATILE

### Context:

Researchers from Japan have conducted **groundbreaking research on plant-plant communication** through volatile organic compounds (VOCs) called Green Leaf Volatile (GLV). Using real-time **fluorescence imaging**, they visualized how plants take up VOCs released by **damaged neighbours**, leading to calcium-dependent defence responses against potential threats.

The research also revealed that **guard cells, responsible for stomatal function**, play a crucial role in VOC perception.

GLVs are **common constituents of herbivore-infested plant volatiles**. GLVs play an important role in plant defence.



**Significance:** This discovery enhances understanding of the **intricate communication network** among plants for timely defence responses. The findings showcase **nature's remarkable adaptations** and have broader implications **beyond plant science**

## 3. CASGEVY

### Context:

The UK drug regulator recently approved Casgevy, **a gene therapy for sickle cell disease and thalassaemia**, marking a breakthrough as the **world's first licensed therapy** using **Crispr-Cas9 gene editing** technology.

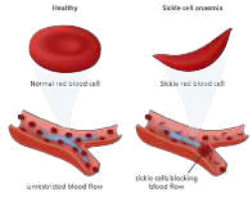
### What is Casgevy?

It is a groundbreaking **gene-editing therapy for sickle cell anaemia**, utilizing the CRISPR-Cas9 tool. Casgevy edits the

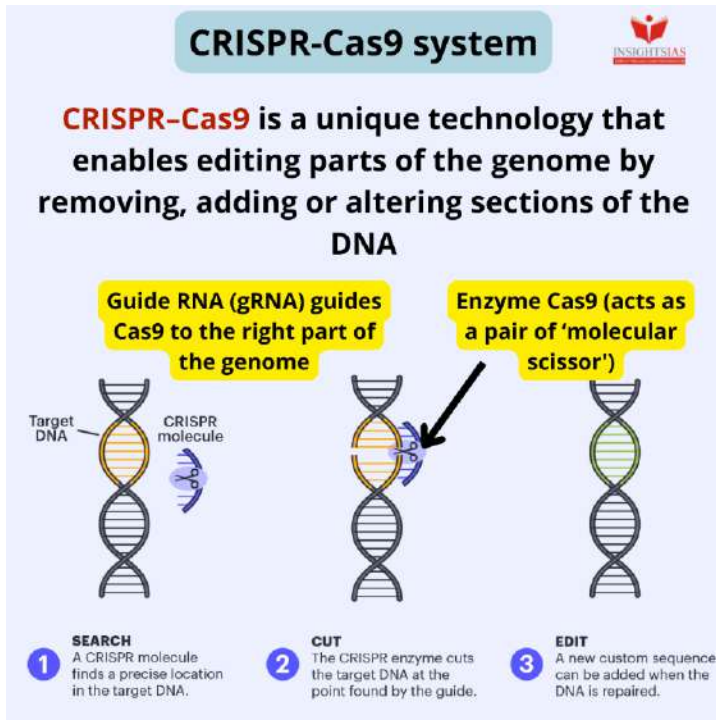
**faulty gene causing these blood disorders**, potentially providing a lifelong cure. The therapy, targets the **BCL11A gene to increase foetal** haemoglobin production, reducing severe pain crises and the need for transfusions.

However, **challenges include the high potential cost** (estimated up to \$2 million per patient) and the necessity for improved local manufacturing facilities to make the therapy more accessible globally

### About Sickle Cell Disease:

	Description	
<b>What is Sickle Cell Anaemia?</b>	<p>It is an <b>inherited blood disease common</b> among people of African, Arabian, and Indian origin. It affects haemoglobin, delivering oxygen to cells.</p> <p>A typical <b>haemoglobin molecule (haemoglobin S) distorts</b> red blood cells, causing a sickle shape, and blocking blood flow and oxygen.</p> <p>Symptoms include <b>severe pain (sickle cell crises)</b> and organ damage over time.</p>	 <p>The diagram shows a 'Healthy' state with a 'Normal red blood cell' (spherical) allowing for 'unimpeded blood flow'. In 'Sickle cell anaemia', a 'Sickle red blood cell' (crescent-shaped) causes 'Sickle cells blocking blood flow'.</p>
<b>Treatment</b>	Medication, blood transfusions, and occasionally bone marrow transplants.	
<b>Implications</b>	<b>High Prevalence:</b> 30,000 to 40,000 children are born with sickle cell disease annually in India, mostly in tribal areas	
<b>Government Initiatives</b>	<p>India aims to eliminate the SCA by 2047 through a national program.</p> <p><a href="#">National Sickle Cell Anaemia Elimination Programme</a></p> <p>ICMR and NRHM implement outreach programs for disease management and control</p> <p>Universal screening, awareness, and counselling funded under the <b>National Health Mission</b></p>	

### About the CRISPR-Cas9 system:



## 4. GENERIC DRUGS FOR RARE DISEASE CURE

### Context:

The Union Health Ministry in India has introduced generic drugs to treat four rare diseases, namely **Tyrosinemia-Type 1, Gaucher's Disease, Wilson's Disease, and Dravet-Lennox Gastaut Syndrome.**

### What are Generic drugs?

Generic drugs are medications that are **equivalent to brand-name drugs** in terms of active ingredients, dosage, safety, strength, quality, and intended use but are **typically sold at a lower cost.** Once the patent protection for a **brand-name drug expires,** other pharmaceutical companies can produce and sell generic versions.

- The price of these **unbranded generic versions of medicine for the four rare diseases** will be **100 times lower than** the current market value of the branded drugs.

### What are Rare Diseases?

WHO defines **rare diseases as debilitating lifelong conditions** with a prevalence of **1 or less per 1000 population.** They collectively affect **6-8% of India's population (about 8 to 10 crore cases in India),** with nearly 80% being genetic.

**The National Policy for Rare Diseases (NPRD), 2021,** provides financial support up to Rs. 50 lakhs for treatment, exempts **Rare Diseases drugs from Basic Customs Duty** and includes orphan drugs in the Production Linked Incentive Scheme for Pharmaceuticals.

### About the four diseases:

Rare Disease	Description	Impact on the Body
<b>Tyrosinemia-Type 1</b>	An inherited metabolic disorder where the body lacks the enzyme ( <b>Fumarylacetoacetate hydrolase</b> ) needed to break down the amino acid tyrosine.	Can lead to the accumulation of harmful substances, affecting the liver, kidneys, and nervous system.
<b>Gaucher's Disease</b>	An inherited metabolic disorder characterized by a <b>deficiency of the enzyme (glucocerebrosidase)</b> necessary for breaking down certain lipids.	Results in the <b>buildup of fatty substances</b> in organs, primarily impacting the spleen, liver, and bone marrow.
<b>Wilson's Disease</b>	A rare <b>autosomal recessive disorder</b> where abnormal copper accumulation occurs, primarily affecting the brain, liver, and cornea.	Excess copper can lead to <b>liver and neurological problems,</b> including cognitive decline and psychiatric symptoms.
<b>Dravet or Lennox Gastaut Syndrome (seizures)</b>	A genetic epilepsy syndrome marked by <b>severe seizures,</b> typically starting in infancy. It can lead to developmental delays and cognitive impairment.	Frequent and prolonged seizures <b>can hinder cognitive development, impacting motor skills,</b> language, and overall cognitive function.

## 5. NUGU WILDLIFE SANCTUARY

### Context:

The National Tiger Conservation Authority (NTCA) recommends declaring the **Nugu Wildlife Sanctuary, adjoining Bandipur Tiger Reserve,** as a core critical tiger habitat.

The recommendation is based on **the ecological significance of Nugu,** supporting diverse flora and fauna, including a **high-density elephant population,** tigers, leopards, and other wildlife species.

### About Nugu Wildlife Sanctuary:

	Description
<b>Location</b>	North of Bandipur National Park, Mysore District, Karnataka

<b>Nugu Reservoir</b>	Occupies the northern part of the sanctuary, built across the Nugu River (a tributary of the Cauvery)
<b>Declaration</b>	Declared a Wildlife Sanctuary in 1974; Added to <b>Nilgiri Biosphere Reserve in 2003-2004</b>

**About Bandipur Tiger Reserve:**

	Description
<b>Establishment</b>	Established in <b>1973 under Project Tiger</b> ; Enlarged in 1985 and named Bandipur National Park
<b>Location</b>	Contiguous districts of <b>Mysore and Chamarajanagar</b> , Karnataka; Tri-junction of Karnataka, Tamil Nadu, and Kerala  Bandipur Tiger Reserve is surrounded by Mudumalai Tiger Reserve (Tamil Nadu) in the South, Wayanad Wildlife Sanctuary (Kerala) in the Southwest, and Kabini Reservoir in the North West, separating it from Nagarhole Tiger Reserve
<b>Biosphere Reserve</b>	Part of Mysore Elephant Reserve; Component of Nilgiri Biosphere Reserve
<b>Biodiversity</b>	Recognized as one of the <b>Mega Biodiversity Areas</b> ; Rich floral and faunal diversity
<b>Rivers and Highest Point</b>	Between <b>Kabini River (north) and Moyar River</b> (south); Nugu river runs through; Highest point: <b>Himavad Gopalswamy Betta</b>



**Q1. Consider the following protected areas: ( UPSC 2012)**

1. Bandipur
2. Bhitarkanika
3. Manas
4. Sunderbans

Which of the above are declared Tiger Reserves?

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

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

**Ans: B**

**Q2. From the ecological point of view, which one of the following assumes importance in being a good link between the Eastern Ghats and the Western Ghats? (UPSC 2017)**

- (a) Sathyamangalam Tiger Reserve  
(b) Nallamala Forest  
(c) Nagarhole National Park  
(d) Seshachalam Biosphere Reserve

**Ans: A**

## 6. FIBRE OPTIC CABLES

**Context:**

The **importance of fibre optics** has been increasing in recent times, especially **during the COVID-19 pandemic when internet connections facilitated virtual communication.**

- **Optical fibres**, made of **thin glass strands**, can transmit various **forms of digital information**, such as **text, images, voices, and videos**, across long distances at **nearly the speed of light.**
- The development of **fibre optic communication** can be traced back to **physicist Charles Kao**, who **proposed glass fibres as a superior medium for telecommunication over 60 years ago.**

**Working principle of optical fibres:**

- It relies on **total internal reflection to guide light through the glass strands**, allowing signals to travel across significant distances with **minimal loss of optical power.**
- The **historical evolution of fibre optic cables** is outlined, starting from early experiments with **light guiding in the 19th century** to the **breakthroughs in the mid-20th century** that led to the **development of long-distance transmission.**
- The current state of fibre optic technology is highlighted, with **optical fibres playing crucial roles in telecommunication, medical science, laser technology, and sensing.**


## 7. AXOLOTL

**Context:**

Mexican ecologists from the National Autonomous University have relaunched the "Adoptaxotl!" fundraising campaign to support the conservation of axolotls, an endangered fish-like salamander.

**About Axotlotl:**

	Description
--	-------------

<b>What is it</b>	Axolotl is a <b>species of salamander</b> . The name " <b>axolotl</b> " is derived from the Latin words " <b>atl</b> " ( <b>water</b> ) and " <b>xolotl</b> " ( <b>monster</b> ).	
	Salamanders are a group of amphibians that includes frogs and toads.	
<b>Found in</b>	Mexico City's Lake Xochimilco	
<b>IUCN</b>	Critically Endangered	
<b>Features</b>	They have the ability to <b>regenerate lost or damaged limbs</b> , hearts, spinal cords, and even parts of their brains without permanent scarring. They remain underwater throughout their life	
<b>Significance</b>	Axolotls are a cultural icon in Mexico for their <b>unique slimy appearance and limb-regenerating ability</b> .	
	Scientists believe that the <b>regrowing power of Axolotls</b> could hold the secret to <b>tissue repair and even cancer recovery</b> in the future.	
<b>Threats</b>	The Mexican Axolotl population has <b>drastically declined by more than 99%</b> in less than two decades. The primary contributors include Water pollution, the <b>spread of Chytrid Fungus</b> (a skin-eating disease), habitat loss, droughts, wastewater disposal, and the impacts of climate change.	

## 8. PERIODIC LABOUR FORCE SURVEY (PLFS)

**Context:**

The [Periodic Labour Force Survey](#) (PLFS) Quarterly Bulletin for July–September 2023 highlights key employment indicators in urban areas:

- **Unemployment Rate:** Decreased to **6.6%** for individuals aged 15 years and above.
- **Labour Force Participation Rate:** Increased to **49.3%**, indicating a growing percentage of people in the labour force.
- **Worker Population Ratio (WPR):** Grew to 46%, reflecting a rise in the percentage of employed persons in the population.

<b>About</b>	The Periodic Labour Force Survey (PLFS) (Launched in April <b>2017</b> ) is a survey conducted by the <b>National Sample Survey Office (NSO)</b> under the Ministry of Statistics and Programme Implementation (MoSPI) in India
<b>Objective</b>	Estimate key employment and unemployment indicators (Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate) in a <b>three-month interval for urban areas under 'Current Weekly Status'</b> (CWS). And estimate employment and unemployment indicators in both <b>'Usual Status' and CWS annually for both rural and urban areas.</b>
<b>Labour Force Participation Rate (LFPR)</b>	Percentage of the <b>working-age population (aged 15 years and above)</b> that is either employed or unemployed but willing and looking for employment.
<b>Worker Population Ratio (WPR)</b>	Percentage of <b>employed persons</b> in the population.
<b>Unemployment Rate (UR)</b>	Percentage of persons <b>unemployed among the persons</b> in the labour force.
<b>Activity Status</b>	The usual activity status is determined on the basis of the <b>last 365 days</b> , while the current weekly status is determined based on the last 7 days.
<b>Types of Activity Status</b>	<b>Principal Activity Status (PS):</b> The primary activity status on which a person spent a relatively long time (major time criterion) during the last 365 days. <b>Subsidiary Economic Activity Status (SS):</b> The activity status in which a person, in addition to the usual principal status, performs some economic activity for 30 days or more in the last 365 days.
<b>Current Weekly Status (CWS)</b>	The activity status is determined based on the <b>last 7 days preceding the date of the survey.</b>

**Prelims Links:**

**Q. Disguised unemployment generally means (UPSC 2013)**

- (a) a large number of people remain unemployed
- (b) alternative employment is not available
- (c) the marginal productivity of labour is zero
- (d) productivity of workers is low

**Ans: (c)**

Aspect	Description
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## 9. INDIAN OCEAN TUNA COMMISSION

### Context:

The Working Party on Data Collection and Statistics (WP-DCS19) of the **Indian Ocean Tuna Commission (IOTC)** has commenced in Mumbai, organized by the **Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India.**

- **Tunas and other large pelagic species, such as billfishes, sharks, and rays,** have significant economic importance, with tunas alone contributing an estimated **annual trade value of US\$41 billion in 2018**

### About Tuna

Tuna refers to a **group of saltwater fish** belonging to the **Thunnini tribe.** These fish are known for **their streamlined bodies, powerful swimming ability, and wide distribution in warm seas.**

Tuna is highly valued in the global fishing industry for its meat, which is commonly used in various cuisines, especially in the **form of sushi and sashimi.** Some well-known species of tuna include the **Atlantic bluefin tuna, yellowfin tuna, and skipjack tuna.**

## 10. WALKING PNEUMONIA

### Context:

**China** is facing an **unusual surge in pneumonia cases,** particularly among children, raising global concerns.

- The surge is attributed to factors like the lifting of COVID-19 restrictions and the circulation of known pathogens like **influenza, mycoplasma pneumonia, respiratory syncytial virus (RSV), and SARS-CoV-2.**

### About Pneumonia:

- The pneumonia caused by **mycoplasma pneumoniae,** often termed **“walking pneumonia,”** is a **mild form of the infection.** It is characterized by **mild respiratory symptoms, and the bacteria can cause more serious lung infections in some cases.**

### How it spreads?

- *Mycoplasma pneumoniae* **spreads through respiratory droplets** when an infected person coughs or sneezes. Common symptoms include **sneezing, a runny or stuffy nose, sore throat, watery eyes, wheezing, vomiting, and diarrhoea.**
- Groups at higher risk of severe infection **include children, the elderly, and those with weakened lungs.**

Preventive measures recommended by WHO include **vaccination, maintaining distance from ill individuals, staying home when unwell, testing and seeking medical care,**

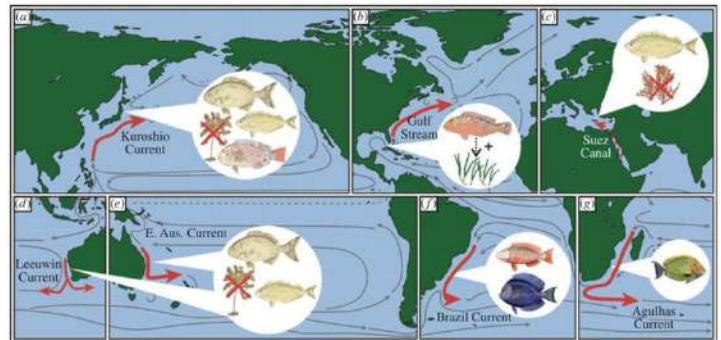
wearing masks as appropriate, ensuring good ventilation, and practicing regular hand-washing.

## 11. TROPICALISATION

### Context:

**Climate change** is causing a significant global phenomenon known as **tropicalisation,** where **tropical species in the ocean are moving towards the poles, while temperate species are retreating.**

- This mass movement of **marine life is driven by rising sea temperatures and marine heat waves** due to climate change.
- The trend is observed in **areas with strong currents away from the equator,** leading to consequences for **ecosystems, biodiversity, and potential impacts on the global economy.**
- The **socio-economic impacts** vary by region, influencing **global fisheries, carbon storage, and tourism.**



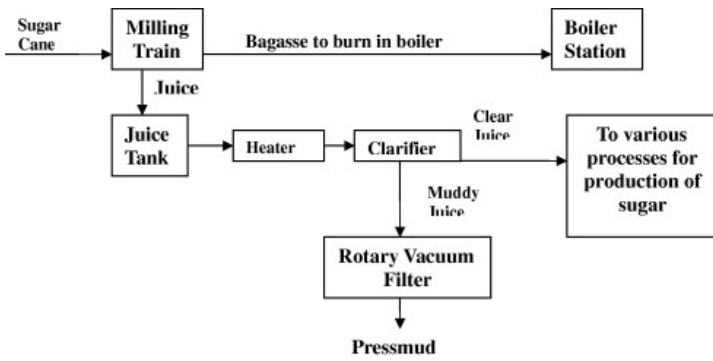
## 12. PRESSMUD

### Context:

India's pressmud, a **byproduct in the sugar industry,** can be a valuable resource for compressed biogas (CBG) production.

### What is Pressmud and how it is produced?

Pressmud, also known as **filter cake or press cake,** is a residual byproduct in the sugar industry. It is produced **during the sugar extraction process** from sugarcane. The sugarcane is crushed to extract juice, and pressmud is the **solid residue left behind** after squeezing out the juice. Other by-products are: **Bagasse, molasses**



**Applications:**

It has the potential use in **generating compressed biogas (CBG)** through anaerobic digestion and subsequent purification. With the potential to **generate 460,000 tonnes of CBG** valued at Rs 2,484 crore, pressmud offers advantages like a **simplified supply chain, concentrated sourcing, and cost-effectiveness**.

However, challenges include **rising pressmud prices**, competition for **alternative uses**, and storage issues. To fully exploit this resource, interventions such as **streamlined bioenergy policies, price control mechanisms**, and research on storage technologies are essential.

### 13. ENVIRONMENTAL COST OF THE ISREAL-PALESTINE WAR

**Context:**

The [article](#) highlights the environmental impact of Israel’s military actions in Gaza. The use of heavy bombs, white phosphorus, and herbicides has led to widespread environmental damage, affecting soil, water, and air quality.

Tool	Purpose/Effect
<b>2,000-pound bombs</b>	Causing large-scale destruction, creating craters, and resulting in environmental contamination
<b>White phosphorus</b>	Illegal use in densely populated areas, causing severe burns and environmental pollution
<b>Mk-84 bombs filled with Tritonal</b>	Release of harmful substances (aluminium and trinitrotoluene) affecting soil, water, and air <b>Tritonal is a mix of one part Aluminium and three parts trinitrotoluene or TNT. It is a dangerous explosive, especially when exposed to heat. Transport of Tritonal by aircraft or railways is forbidden due to its explosive characteristics.</b>

<b>Herbicides</b>	Destroying crops and arable land in an attempt to create a ‘buffer zone’ between Gaza and Israel
<b>Destruction of infrastructure</b>	Disruption of water supply, targeting Water, Sanitation, and Hygiene (WASH) facilities
<b>Reforestation with non-indigenous species</b>	Altering the landscape, affecting biodiversity, and diminishing cultural ties with olive trees

### 14. PARIS CLUB GROUP OF CREDITORS

**Context:**

Sri Lanka has reached an **“agreement in principle”** with India and the [Paris Club](#) group of creditors, including Japan, on a debt treatment plan.

**Aim:** This agreement is expected to facilitate the **release of the next tranche of the International Monetary Fund’s nearly \$3 billion recovery package** for Sri Lanka.

- At the height of last year’s economic crisis, Sri Lanka defaulted on its **nearly \$51 billion foreign debt**, leading to the need for comprehensive loan restructuring.

**About the economic crisis in Sri Lanka:**

The current economic crisis in Sri Lanka is a result of **a combination of factors, including high levels of government debt, a large trade deficit, weak foreign exchange reserves**, and declining economic growth.

**What is the Paris Club?**

**The Paris Club (est. 1956, HQ: Paris (France))** is a group of officials from major creditor countries whose role is to **find coordinated and sustainable solutions** to the payment difficulties experienced by debtor countries. It **provided financial assurances** to the International Monetary Fund on Sri Lanka’s debt

**Objective:** To find sustainable debt-relief solutions for countries that are unable to repay their bilateral loans.

- **Members:** 22 permanent members (all are a member of the [OECD](#))
- **India and China are not members.** India acts as an **ad-hoc participant**

### 15. GLOBAL BOND INDEX (GBI)

**Global Bond Index (GBI)**



**Context:** India would be included in its **Global Bond Index GBI-EM Global Index suite** starting 28 June 2024. However, RBI expressed caution regarding India's potential inclusion in a major global bond index (GBI) due to the associated risks

About Global Bond Index (GBI)	
What are bonds?	Bonds are <b>debt securities where investors lend money to</b> issuers (such as governments or corporations) in exchange for periodic interest payments and the return of the principal amount at maturity.
What are global bond indices?	Global bond indices, such as those by <b>JP Morgan and Bloomberg-Barclay's</b> , monitor <b>local currency bonds</b> from developing nations.
Significance	These indices are crucial for investors, providing <b>benchmarks for mutual funds and pension funds to track bond movements</b> across jurisdictions, and aiding in relative comparisons. They cover various bond categories, including <b>high-yield risky bonds, emerging market bonds, and government</b>
Criteria for Index Inclusion	The main criteria include the <b>size of the market, country rating, ease of access, absence of restrictive capital movement laws</b> , availability of forex, adequate hedging mechanisms, tax laws, and settlement of trade
Despite being the second-largest bond market in emerging markets Why was India not part of the global index before?	<b>High Taxation laws</b> (20% tax on long-term capital gains, 15% on short-term capital gains). <b>India's unwillingness</b> to favour foreign investors over domestic investors The current settlement mechanism requires bonds to be settled in Euroclear <b>whereas India prefers local settlement</b> of government securities, similar to China, but the process is cumbersome for foreign investors.
Benefits of Inclusion	Reduced pressure on commercial banks, strengthened foreign institutional investor base, <b>surge in investment, increased confidence in the Indian rupee</b> , higher equity inflows, and a stable exchange rate.
Issues with the Inclusion of India into GBI	<b>Risk of capital flight</b> due to passive investors influenced by index weightage. <b>Dependency on foreign funds</b> and susceptibility to political pressures. <b>Pressure on forex markets</b> and potential rupee depreciation. <b>Implications of depreciation</b> , include inflation, increased current account deficit, and higher fiscal deficit. <b>Vulnerability to external shocks</b> e.g., due to currency appreciation.

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## 16. LOSS AND DAMAGE (L&D) FUND

**Context:**

On the first day of COP 28, member countries **unanimously agreed to operationalize a Loss and Damage (L&D) fund**, aimed at compensating nations already facing the impacts of climate change.

The fund, **based at the World Bank but managed independently**, has received commitments worth at least **\$450 million**. L&D fund was **first announced during COP27 in Sharm el-Sheikh (Egypt) in 2022**.

**What is L&D?**

It refers to the **negative consequences arising from the unavoidable risks of climate change**, like rising sea levels, prolonged heatwaves, species extinction, crop failures, etc

The L&D fund **addresses the financial toll of climate change, estimated at over \$1.5 trillion in 2022**.

To know more about L&D Fund: [Click Here](#)

## 17. MAHASAGAR

**Context:**

The Indian **Navy's outreach initiative, MAHASAGAR**, conducted its maiden edition as a virtual interaction between the Indian Chief of the Naval Staff, and heads of navies and maritime agencies **from the Indian Ocean Region (IOR) littorals**.

Participating nations included **several members of IORA** such as Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and Tanzania. They emphasized the importance of harmonizing capacities in the IOR, aligning with **India's vision of SAGAR**.

**What is India's SAGAR?**

India's SAGAR (announced in 2015), which stands for **'Security and Growth for All in the Region'**, is a vision and policy framework designed to enhance **maritime cooperation and security in the Indian Ocean Region (IOR)**. The initiative emphasizes the importance of promoting collective security and sustainable development for the benefit of all nations in the region.



**Indian Ocean Rim Association (IORA)**

**Context:** Sri Lanka is set to assume the role of Chair in the Indian Ocean Rim Association (IORA) during the 23rd Council of Ministers' Meeting.

Aspects	Information
Previous Presidency	<b>Bangladesh</b> held the chairmanship from November 2021 - November 2023
Goal	To <b>strengthen regional cooperation and sustainable development</b> within the Indian Ocean region
Origin	The vision for IORA originated during a visit by <b>Nelson Mandela to India in 1995</b> , emphasizing socio-economic cooperation in the Indian Ocean rim
Member States	Australia, Bangladesh, Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, United Arab Emirates, Yemen
Dialogue Partners	China, Egypt, Saudi Arabia, Germany, Italy, Japan, South Korea, Russia, Turkey, the United Kingdom, the United States of America
Fisheries Support Unit (FSU)	Provides advice and makes decisions on fisheries management and issues such as illegal, unreported, and unregulated (IUU) fishing
Significance of the Indian Ocean	It commands control of <b>major sea lanes carrying half of the world's container ships</b> , one-third of the world's bulk cargo traffic, and two-thirds of the world's oil shipments, serving as a vital lifeline for international trade and transport.

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23 Members of Indian Ocean Rim Association

## 18. ASW SHALLOW WATER CRAFT (CSL) PROJECT

**Context:**

The first three ships of **the ASW Shallow Water Craft (CSL) project** for the Indian Navy, named **Mahe, Malvan, and Mangrol**, were simultaneously launched on November 30, 2023, at **Cochin Shipyard Limited (CSL)**, Kochi.

**About Mahe class ships:**

They are **part of the 08 x ASW Shallow Water Craft project** and are equipped with indigenously developed underwater sensors **for anti-submarine and maritime operations**. The project aims for 'Aatmanirbhar Bharat' with over **80% indigenous content**. The first ship is expected to be delivered in 2024.

**Aim:** To undertake anti-submarine operations in coastal waters, Low-Intensity Maritime Operations (LIMO) and Mine Laying Operations.

**Other warships:**



Type of Warship	Description	Examples
Aircraft Carriers	Large ships capable of carrying and launching aircraft.	INS Vikramaditya, INS Vikrant (under construction)
Destroyers	Versatile warships with anti-air, anti-ship, and anti-submarine capabilities.	INS Kolkata, INS Visakhapatnam, INS Imphal
Frigates	Smaller than destroyers, with multi-role capabilities.	INS Shivalik, INS Nilgiri
Corvettes	Compact warships designed for coastal defense and patrol duties.	INS Kamorta, INS Kiltan
Submarines	Submersible vessels used for stealthy underwater operations.	INS Kalvari, INS Arihant
Patrol Vessels	Smaller craft used for patrolling, search and rescue, and other coastal missions.	INS Saryu, INS Sunayna
Mine Countermeasures Vessels	Designed for mine-clearing operations.	INS Nireekshak, INS Karwar
Landing Platform Docks	Amphibious assault ships for launching troops and equipment ashore.	INS Jalashwa, INS Shardul
Offshore Patrol Vessels	Used for patrolling and surveillance in offshore waters.	INS Vikram, INS Vajra
Research Vessels	Ships dedicated to scientific research and oceanographic studies.	INS Sagardhwani, INS Sindhughosh (research variant)
Training Ships	Used for training purposes and instruction of naval cadets.	INS Tarangini, INS Sudarshini

## MAPPING

### 1. TAIWAN-INDIA

**Context:**

Taiwan and India are discussing the hiring of tens of thousands of Indian workers, through employment mobility agreements.

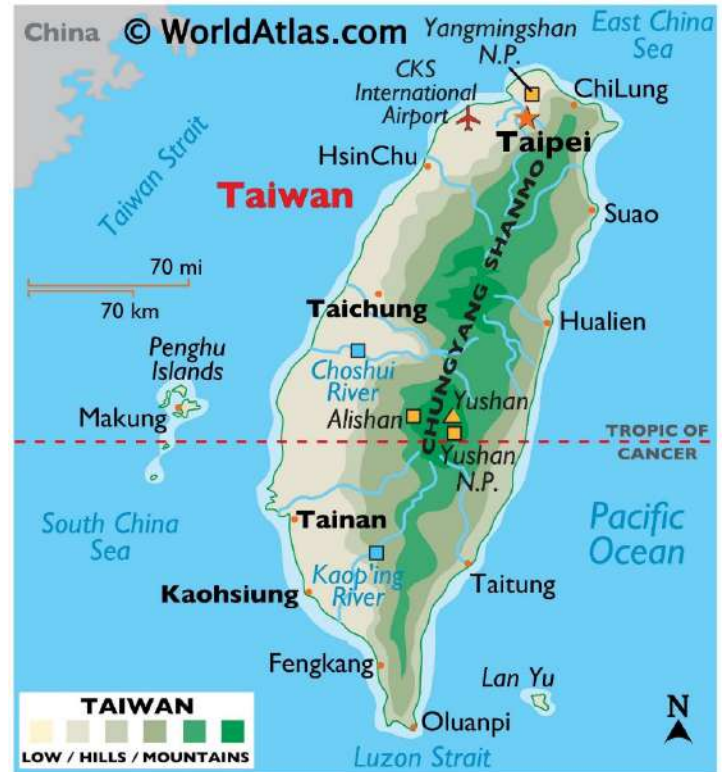
The agreement is aimed at sending Indian workers to fill labour shortages in Taiwan and addresses Taiwan's need for workers in sectors like manufacturing and agriculture due to its ageing population.

**A similar agreement has been signed with other countries such as**

- India and Germany's 'Comprehensive Migration and Mobility Partnership' to facilitate mobility and employment opportunities between India and Germany.
- [Migration, Mobility Pact with Australia \(MMPA\) between India and Australia](#)

Recently, Taiwan announced the opening of **its third representative office in India**, in Mumbai. Despite **not having formal diplomatic relations**, India and Taiwan have made progress in various domains such as economics, trade, and technology.

**Taiwan**, officially the Republic of China, is a **country in East Asia**. It is located at the junction of the **East and South China Seas** in the northwestern Pacific Ocean, with the **People's Republic of China to the northwest**, Japan to the northeast, and the Philippines to the south.



### 2. ARGENTINA

**Context:**

Argentina's new president Javier Milei plans to replace Argentina's currency with the dollar to address economic challenges.

Dollarization is seen as a potential solution to hyperinflation, breaking the link between rising prices and increasing money supply. Ecuador's successful experience with dollarization led to notable improvements in economic growth, poverty reduction, and inflation control post-dollarization. However, dollarization is not a universal remedy. Concerns have been raised about Milei's proposals to slash government spending and abolish the Central Bank.

Argentina is a country in the southern half of South America. It is the second-largest country in South America after Brazil, the fourth-largest country in the Americas, and the eighth-largest country in the world. Argentina faces a severe economic crisis marked by hyperinflation, widespread poverty, and a depreciating currency (peso).

Previously, India has been in talks for finalizing agreements for the acquisition of five lithium blocks in Argentina through the State-owned joint venture, KABIL.

**The Andes Mountains**, which run through both **Argentina and Chile**, are known for hosting **lithium-rich brine deposits**. The region's unique geological conditions make it conducive to the formation and concentration of lithium resources.



### 3. NEW ZEALAND

**Context:**

New Zealand Prime Minister Christopher Luxon has announced the **revocation of the country's ambitious anti-smoking laws**, including the **"generational smoking ban"** implemented last year, citing the need to generate income and address concerns about a **growing black market**.

The decision to scrap the smoking ban, **aimed at prohibiting tobacco sales to individuals born after 2008**, was met with criticism from health experts and anti-smoking groups who view it as a setback for public health and a **victory for the tobacco industry**.

**New Zealand** is an **island country** in the southwestern Pacific Ocean. It consists of two main landmasses—**the North Island and the South Island**—and over 700 smaller islands. Recently, an international team released **highly detailed maps of Zealandia**, covering its entire five million square kilometres.



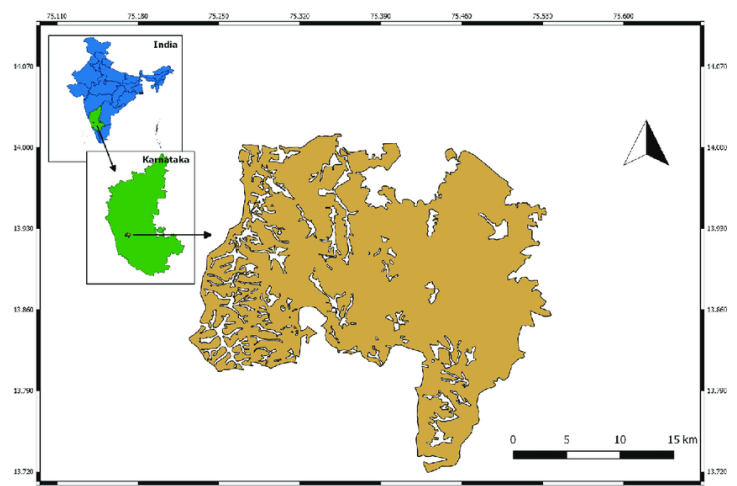
### 4. SHETTIHALLI WILDLIFE SANCTUARY

**Context:**

The **National Green Tribunal (NGT)** has given the state government **a six-month deadline** to address issues causing the **delay in notifying the eco-sensitive zone (ESZ) status** for Shettihalli Wildlife Sanctuary in Shivamogga, Karnataka.

The delay in determining ESZ has **resulted in increased land use changes and encroachment**.

**Shettihalli Wildlife Sanctuary** is in Karnataka's Shimoga District, spanning 395 sq km and was declared in 1974. It includes **Mandagadde Natural Bird Sanctuary** and features the Tunga Anicut Dam, providing habitat for otters and water birds



## 5. PAMPORE (SAFFRON PRODUCTION IN INDIA)

**Context:** Pampore, known as the **centre of the country's saffron** (referred to as "red gold") **cultivation** has seen a decline in productivity.

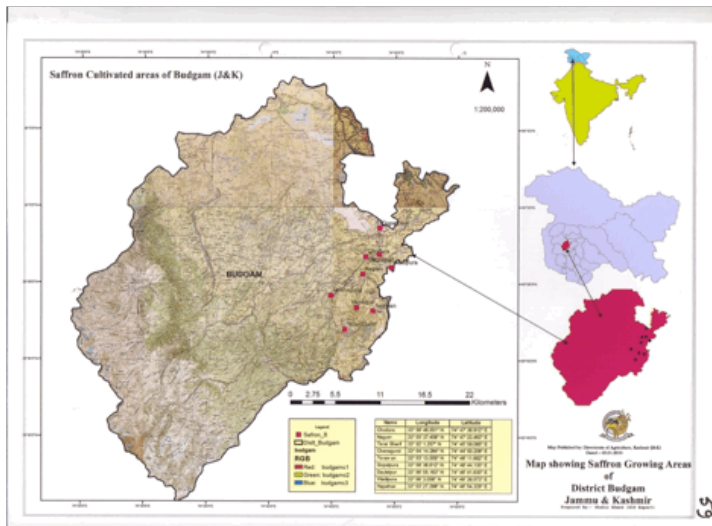
### About Saffron:

**Saffron** is a spice derived from the **flower of Crocus sativus**, commonly known as the "**saffron crocus**". The vivid **crimson stigma and styles, called threads**, are collected and dried for use mainly as a seasoning and colouring agent in food

**The main issues impacting saffron production in Pampore are:**

1. Climate change
2. Erratic rainfall patterns
3. Higher temperatures
4. Expansion of urban areas onto saffron fields
5. Insufficient investment in irrigation and farmer training, contribute to the challenges faced by saffron cultivation

**Iran, India, Spain and Greece** are the major saffron-producing countries with Iran occupying the maximum area and contributing **about 88% of the world's saffron production**. Though, **India occupies the 2nd largest area** but produces approximately 7 per cent of the total world production.



## 6. GOLAN HEIGHTS

**Context:** Recently, India has voted in favour of a UN General Assembly draft resolution **expressing deep concern over Israel's failure to withdraw from the Syrian Golan Heights**.

The resolution called for **Israel's withdrawal from the occupied Syrian Golan** to the June 4, 1967 line, emphasizing the hindrance of the occupation to achieving a just, comprehensive, and lasting peace in the region.

**The Golan Heights**, spanning about 1,800 km<sup>2</sup>, is a **basaltic plateau** bordered by the Yarmouk River, the Sea of Galilee, Hula Valley, Mount Hermon, and Wadi Raqqad. It was captured by Israel from Syria **during the 1967 Six-Day War**.

