INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

SEETHAKALI FOLK ART

The Perinad Seethakali Sangham, a group of artists from diverse backgrounds, revived the fading Seethakali folk art form in 2017.

28 AUG - 02 SEP 2023

WEEKLY CURRENT AFFAIRS

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GENERAL STUDIES – 1

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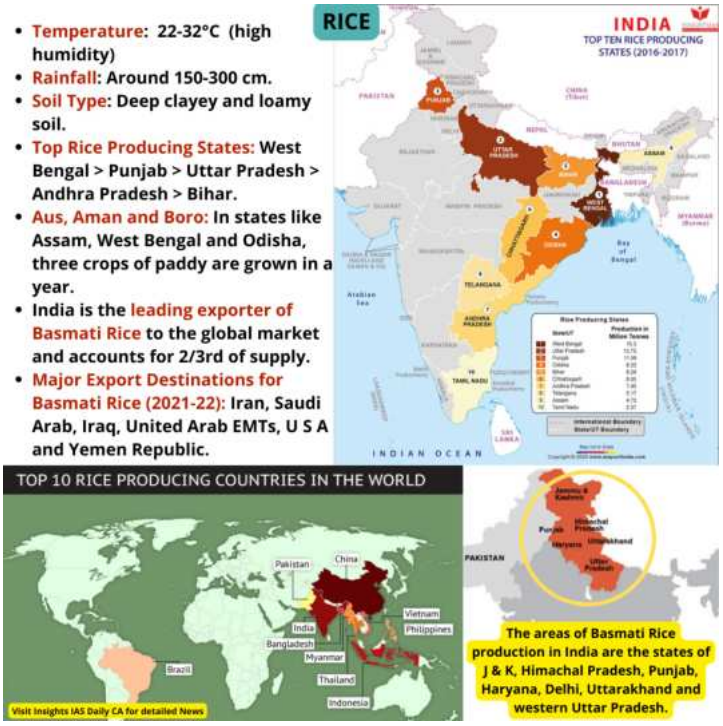

CONTENT FOR MAINS ENRICHMENT

GS-1

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FACTS FOR PRELIMS

GS-1

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MAPPING

GENERAL STUDIES – 1

Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

1. FLOOD PLAIN ZONING

Context:

Reckless urbanization **near riverbeds is a key factor in recent floods in Punjab**. Experts from the National Institute of Hydrology emphasize **the need for floodplain zoning plans as a long-term solution to mitigate flood losses**.

What is Flood Plain Zoning?

Floodplain zoning is a **land use planning strategy that designates specific areas** along rivers and water bodies for various uses based on their susceptibility to flooding.

Aim: The aim of floodplain zoning is to **regulate development in these areas to minimize the potential damage and risks associated** with floods.

Example of floodplain zoning:
The areas along the river are divided into different zones based on the likelihood and severity of flooding:

- **High-Risk Zone (Zone A):** This zone is closest to the **river and has the highest risk of flooding during heavy rain events**.
    - In this zone, **only limited and essential structures are allowed,** such as flood-resistant community centres, parks, and open spaces. Permanent residential or commercial buildings are prohibited to prevent damage and loss of life.
- **Moderate-Risk Zone (Zone B):** This zone is located slightly farther from the river and has a moderate risk of flooding.
    - Here, **some residential and commercial development is allowed**, but structures must adhere to flood-resistant design standards. Building elevations might be required to keep living spaces above potential flood levels.
- **Low-Risk Zone (Zone C):** This zone is situated at a greater distance from the river and has a lower risk of flooding.
    - In this area, most types of **development are permitted, including homes**, businesses, and recreational facilities. However, structures might still need to meet certain flood-resistant criteria to ensure safety.

Different aspects of Flood Plain Zoning:

Aspects	
Benefit	Well-maintained flood plains act as **natural defences against flooding** and recharge groundwater levels.
	Identification of flood plains based on topography helps in **better land use planning.**
	It not only reduces the **damage caused by floods but also maintains the ecological balance** of the floodplain and helps recharge groundwater levels.
	Proper zoning can prevent unsuitable constructions and concretization of flood plains.
Challenges	Lack of zoning leads to encroachment and mismanagement of flood plains.
	Unsuitable constructions push floods further inland and delay floodwater drainage.
	Floodplain degradation affects soil fertility and quality. **States have shown resistance to implementing floodplain management**, including potential legislation, primarily due to population pressure and the lack of alternative livelihoods.
Current Situation	Punjab lacks proper floodplain zoning despite NGT directions.
	Four states (Manipur, the erstwhile Jammu & Kashmir, Rajasthan and Uttarakhand) **have adopted floodplain** zoning on paper but implementation is limited.
	Environmental activists and NGOs in Punjab are advocating for floodplain zoning.

NDMA **guidelines:**
As per guidelines on floodplain zoning by the National Disaster Management Authority, defence installations, industries, and public utilities like hospitals, electricity installations, water supply, telephone exchanges, aerodromes, railway stations, commercial centres, etc. should be **located such that they are above the levels corresponding to a 100-year frequency or the maximum observed flood levels.**

NGT direction:
According to the National Green Tribunal (NGT), there should be **no construction within a 500 m area from the central lining of a river.**

Model Bill for Flood Plain Zoning:
The Model Bill for Flood Plain Zoning **outlines provisions for flood zoning authorities, surveys, delineation of flood plain areas, notification of limits,** prohibition of flood plain use, compensation, and crucially, removal of obstructions for unimpeded water flow. It proposes replacing low-lying settle-

ments with parks and playgrounds to reduce the loss of life and property.

GENERAL STUDIES – 2

Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

1. FALI S NARIMAN ON BASIC STRUCTURE DOCTRINE

Context:

Fali S. Nariman discusses the significance of the Basic Structure Doctrine

What is the Basic Structure Doctrine?

The **doctrine of basic structure** is a **judicial innovation** that puts **a limitation on the amending powers of the Parliament**. The doctrine was propounded by the Supreme Court in *Keshavananda Bharati* v. *State of Kerala* (1973) and its objective is to ensure that the **basic features of the Constitution remain unaltered** and to **preserve the core identity** of the Constitution.

Key Developments of Basic Structure Doctrine:

Year	Event
1965	German constitutional **expert Dietrich Conrad highlights** the unchangeable nature of fundamental constitutional principles.
1973	**Kesavananda Bharati case** introduces **basic structure doctrine** in a bench decision of 13 judges.
1975	**Union of India seeks reconsideration** of the doctrine; a bench of 13 judges convened in November. The bench dissolved without decision, indicating **continued adherence to the doctrine.**
1975	Constitution **39th Amendment passed,** including Article 329A(4) **attempting to validate Indira Gandhi's election.**
1975	Supreme Court declares **Article 329A(4) unconstitutional and void**, reinforcing the doctrine's principles.
1978	**Constitution 44th Amendment Act** abolishes remaining clauses of Article 329A, cementing the doctrine's foundation.
1980	**Minerva Mills vs. Union of India case reaffirms** the basic structure doctrine in a Constitution Bench decision of five judges.
2007	**IR Coelho vs. State of Tamil Nadu** reaffirms the doctrine in a bench decision of nine judges.

Why did CJI recently call the Basic Structure Doctrine a "North Star"?

The Chief Justice of India **D. Y. Chandrachud** called **Basic Structure Doctrine a North Star**. This is because it **guides and gives directions to law-makers, implementers and interpreters**.

- **The doctrine acts as a "North Star" because it provides a fixed reference point** or guiding light for constitutional interpretation.
- It helps **prevent any arbitrary or excessive exercise of power** by the government and ensures that constitutional amendments **do not violate or undermine the essential features of the Constitution**.
- It maintains constitutional supremacy by **preventing lawmakers from undermining the essence o**f the Constitution.
- Limiting the powers of lawmakers **prevents the rise of any authoritarian regime**.
- **The core values and goals** of the Constitution **remain intact.** For instance, secularism was identified as a 'basic feature' in *S.R. Bommai* v. *State of Karnataka.*
- It acts as an **effective system of checks and balances** and avoids any concentration of power in any one organ of the government.
- The doctrine has been **instrumental in safeguarding the fundamental rights** of citizens.
- The Doctrine ensures **consistency and stability in the interpretation** of the Constitution itself.

Significance of Basic Structure:

Significance	Explanation
Testimony to Constitutionalism	Prevents damage to the Constitution by ruling the majority's brute majority.
Safeguarding Indian Democracy	Limits constituent power to avoid totalitarian regimes.
Preserving Constitution's Tenets	Maintains founders' meticulously framed principles.
Strengthening Democracy	Ensures independent Judiciary, and separation of powers.
Dynamic and Progressive	Allows adaptation over time, unlike rigid past judgments.

Why is the doctrine criticised?

- It is not found in the **text of the original Constitution itself** and therefore by inventing this test the judiciary is encroaching on the Parliament's powers.
- **Senior advocate Raju Ramachandran**: The power of "**unelected judges**" to strike down amendments to the Constitution on the basis of this doctrine is "anti-democratic and counter-majoritarian."

Conclusion

However, despite the criticism, by and large, the Basic Struc-

ture Doctrine acts as a guiding star that seeks to maintain the sanctity of the Constitution.

Insta Links
Basic Structure Doctrine

Topics: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

2. ECI: POINT OF CONTENTION BETWEEN THE GOVERNMENT AND THE JUDICIARY

Context:
Recently, the government introduced a Bill that seeks **to replace the** Chief Justice of India **with a cabinet minister nominated by the Prime Minister in the committee of selection** for the appointment of the Chief Election Commissioner and other Election Commissioners in India.

Previously, The Supreme Court gave a unanimous judgment on March 2 and directed that the Chief Election Commissioner (CEC) and Election Commissioners **(ECs)** should be appointed by the President based on a committee's advice. This committee would include the Prime Minister, the Leader of the Opposition in the Lok Sabha or the largest Opposition party leader, and the Chief Justice of India (CJI).

For major provisions of the New Bill and issues with it: Click Here

The ongoing debate in light of the recent Supreme Court judgement:

- **Rationale**: Article 324(2) reads "The appointment of the Chief Election Commissioner and other Election Commissioners shall, subject to the provisions of any law made on that behalf by Parliament, be made by the President."
    - Since there is **no law made by parliament on this issue** as provided in the Constitution, the Court felt the need to step in to fill the "constitutional vacuum."
- **Government's position**: The government had argued that in the absence of such a law by parliament, there is no real "**vacuum**" as the President has the constitutional power to decide on the matter and asked the SC to exhibit Judicial restraint.
- **Separation of powers**: The debate has focussed on the **separation of powers** which is a feature of the basic structure of the constitution. The question is whether SC is in line to produce such a pronouncement versus whether a government to be elected can appoint persons governing the process of election.
- **Parliament's new bill**: The new bill has been the government's rebuttal to the judiciary.
- **Issues in the bill**: The bill attempts to return to the status quo of government decisions while including only the leader of the opposition (replacing the provision of CJI with the minister as a member).
    - This has been criticised as the government of the day having a greater voice in appointing such an important body.
- **Other subjects of debate**: The SC had left the question of funding the EC, the Permanent secretariat and the need for expenditure to be charged to the Consolidated Fund of India for the government to decide.

Suggested measures:

- **Transparency and independence in appointment**: The appointments should be made by a bipartisan committee that includes representatives from various stakeholders.
    - Also, the publishing minutes of the meeting of such a committee is essential.
- **Judicial restraint**: The judiciary must be aware of drawing the line between activism and overreacting to exercise restraint except when a true constitutional or executive vacuum exists.
- **Independence of the commission**: The ECI should be given complete autonomy in the conduct of elections which can be done by creating a dedicated cadre of officers responsible for election duty.
- **Charged expenditure and other infrastructure**: The government must act on the nudge of the SC to provide a permanent secretariat and other infrastructure along with funding via charged expenditure to ensure the commission's independence.

Committee Recommendations:

Committee/Leader	Recommendation
V.M. Tarkunde Committee (1975)	Broad-based appointments of ECI members through the collegium process rather than the government's advice
Dinesh Goswami Committee **(1990s)**	A similar suggestion for broader-based appointments through a collegium
Second Administrative Reforms Commission **(2009)**	Suggested broader-based appointments of ECI members
B.B. Tandon (2006)	Proposed a **seven-member committee with PM, CJI, Lok Sabha Speaker, Opposition leaders, Law Minister**, and a judge nominated by CJI

L.K. Advani (2012)	Suggested a **collegium with PM as chairman, CJI, Minister of Law and Justice, and Leaders of the Opposition as members**

Current provisions:

- **Appointment**: The President appoints the Chief Election Commissioner (CEC) and Election Commissioners. The President makes the appointment on the advice of the Union Council of Ministers headed by the Prime Minister.
- **Tenure**: They have a fixed tenure **of six years, or up to the age of 65 years**, whichever is earlier.
- **Service conditions**: They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court (SC) of India.
- **Removal**: The CEC can be removed from office only through a process of removal similar to that of an SC judge by Parliament.
- **Number of commissioners**: As per Article 342(2) the Election Commission shall consist of the CEC and such number of other election commissioners, if any, as the President may from time to time fix.

Conclusion:

Free and fair elections are the foundation of any functioning democracy. In this light, it is important to find a way to balance the need for independence, accountability, and transparency, in order to ensure that the ECI remains a truly independent and impartial institution.

Insta Links:

How are the CEC and ECs appointed?

3. SIMULTANEOUS ELECTIONS

Context:

The Government has formed a committee, headed by former President Ram Nath Kovind, to explore the possibility of "one nation, one election," **which** refers to holding simultaneous Lok Sabha (Parliament) and state assembly elections.

What is one nation, one election (ONOE)?

The concept of "**one nation, one election" refers to holding elections to Lok Sabha and State Legislative Assemblies simultaneously, once in five years**.

Background:

Simultaneous elections were held in the country **during the first two decades after Independence up to 1967. The dissolution of certain Assemblies in 1968 and 1969 followed by the dissolution of the Lok Sabha led to the disruption** of the conduct of simultaneous elections.

Benefits of "one nation, one election"

Benefit	Description
Reducing Election Expenditure	Conducting all elections simultaneously **minimizes expenses** on logistics, security, and campaigning.
Better Governance	Simultaneous elections allow elected governments to **focus on governance** rather than preparing for the next election. It will help in **streamlining the election cycle to avoid policy disruptions** due to the Model Code of Conduct
Voter Convenience	Ensures voters are **not subjected to multiple rounds of voting**, leading to **better turnout** and voter convenience.
Reduced Security Concerns	Conducting elections together **reduces overall security concerns** and enhances security setup across the country.
Level Playing Field	Provides a **level playing field for all parties and candidates**, promoting fairness and transparency in elections.
Reduced Impact on Education	Simultaneous elections **reduce the impact on the education sector**, as fewer teachers are involved in the electoral process.

Challenges of "One Nation, One Election":

Challenge	Description
Constitutional Challenges	Requires **constitutional amendments**, necessitating consensus among political parties and states, a complex and lengthy process.
Anti-federal	Assembly elections focus on **local issues**, and combining them with general elections may **overshadow regional narratives**.
Logistical challenges	Conducting all elections simultaneously **involves logistical arrangements,** security deployment, voter rolls, and polling booth management, leading to administrative difficulties.
	Need for approximately **30 lakh** electronic voting machines (EVMs) and voter-verified paper audit trail (VVPAT) machines
Possibility of Domination by National Parties	Simultaneous **elections may favour national parties** with more resources, potentially marginalizing regional parties and issues.

Impact on Democracy	Voters may struggle to **engage with all issues simultaneously**, potentially leading to uninformed choices and undermining the democratic process.

Way forward

- **Recommendation of** Parliamentary Standing Committee **on Law and Justice: A two-phase election schedule**, according to which elections to some legislative assemblies whose term **end within six months to one year** before or after the election date could be held during the **midterm of Lok Sabha**. For the rest of the states, elections could be held along with the general elections to Lok Sabha.
- Cost can be brought under control by ensuring that the **legal cap on the expenditure of candidates is followed by all parties.**
- Concept of **One year, One election** will be easier than ONOE, and will have the same benefits.

International Examples:

Simultaneous Elections are successfully held in **South Africa (national and provincial), and Sweden** (including local elections as well on the same day).

Conclusion:

While the idea of "One nation, one election" has its own merits, it is important to consider the **practical challenges and limitations** of implementing it. A **comprehensive study** is required to examine the feasibility of this concept in India.

Insta Links

One nation, one election

Topics: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

4. 9 YEARS OF PM JHAN DHAN YOJANA

Context:

The government is celebrating 9 years of completion of Pradhan Mantri Jan-Dhan Yojana (PMJDY) in revolutionizing financial inclusion in India.

What is financial inclusion?

It is ensuring access **to financial services and credit for vulnerable groups at an affordable cost**. In India, it's vital for development and progress. Access to a transaction account is a key step, allowing storage, payments, and transfers, acting as a gateway to broader financial services.

What is PMJDY?

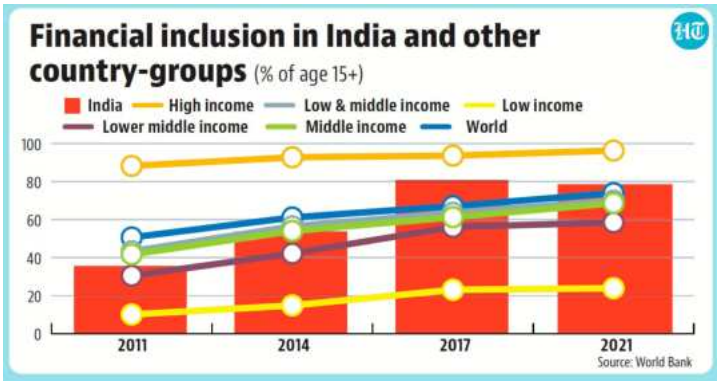
The PMJDY, the **world's largest financial inclusion mission**, reached a significant milestone by **surpassing 500 million accounts after nine years since its launch**.

About the scheme:

Key Successes of PMJDY:

Aspects:	Examples
Achievement	• Providing banking access to rural and urban populations alike • Crossed 500 million accounts • Over ₹2 lakh crore deposit
Women Empowerment	Increased financial inclusion for women; **over 55% of accounts** belong to women
Rural & Semi-Urban Focus	Extending banking facilities to underserved regions; **67% of accounts opened in these areas**
RuPay Cards	Offering insurance benefits to account holders; **About 340 million** were issued with ₹2 lakh accident insurance cover
Inclusion	Empowering financially vulnerable sections; Brought marginalized sections into the formal banking system
Financial Benefits	Enabling individuals to save and transfer funds securely; Savings brought into the formal financial system, remittance opportunities, freedom from usurious money lenders

Role in Welfare	Direct Benefit Transfers (DBT) using PMJDY accounts; Used to distribute welfare packages without pilferage, including COVID-19 financial assistance, PM-Kisan, MGNREGA, and insurance covers
Digital Platform	Providing easy access to banking services; the **Jan Dhan Darshak app locates** banking touchpoints
JAM Architecture	Facilitating direct transfer of government benefits; Part of JAM (Jan-Dhan, Aadhaar, mobile) system for subsidy delivery and benefits transfer
Formalisation of Financial System	It provides an **avenue for the poor to bring their savings** into the formal financial system, an avenue to remit money to their families in villages besides taking them out of the clutches of the usurious money lenders



Conclusion:

Efforts are being made to provide **micro-insurance coverage to PMJDY account holders**, with eligible individuals being targeted for inclusion in schemes like PMJJBY and PMSBY. To facilitate this, acceptance infrastructure is being established across the country. Moreover, steps are being taken to enhance the **access of PMJDY account holders** to micro-credit and micro-investment options such as **flexi-recurring deposits.**

Insta Links:

Pradhan Mantri Jan Dhan Yojana

5. MINORITY SCHOLARSHIP SCHEME SCAM

Context:

The Central Bureau of Investigation (CBI) has registered a case against unknown nodal officers and bank officials for **alleged fraud in the implementation of minority scholarship schemes**.

More about the News:

The scam involved 830 "fake" institutions receiving benefits, causing a loss of more than Rs 144 crore to the Ministry of Minority Affairs between 2017-18 and 2021-22.

The central government provided three different minority scholarship schemes to **approximately 65 lakh students every year between 2017-22**. The schemes were:

- Pre-Matric Scholarships
- Post-Matric Scholarships
- Merit-cum-Means for the students of Six Minority communities

Scholarship Scheme	Description
Pre-Matric Scholarship Scheme	Centrally funded scholarship scheme; Open annually; Provides financial aid for classes 1 to 10; Encourages minority students' education
	Eligibility for Pre-Matric Scholarship: Student in Class 1 to 10; From minority community; Parent/guardian income ≤ ₹1 Lakh/year
Post-Matric Scholarship Scheme	Centrally Sponsored Scheme; Implemented through State Govt. and UT administration; Covers classes 11, 12, undergraduate, and postgraduate courses; Supports higher education and career growth
National Means Cum-Merit Scholarship Scheme (NMMSS)	Centrally Sponsored Scheme (CSS); Launched in 2008; Assists meritorious minority students with limited finances; Promotes academic excellence and equal opportunities

Impact of the Scam:

Implications	Description
Financial Impact	Loss of over ₹144 crore to the Ministry of Minority Affairs.
	Diversion of funds intended for genuine beneficiaries.
Scholarship Scheme Undermined	Pre-Matric Scholarship Scheme targeted by the scam.
	Funds meant for deserving minority students were misused.
Collusion and Exploitation	Collusion of institutions, applicants, nodal officers, and more.
	Diversion of scholarship funds through fraudulent means.
Impact on Beneficiaries	Genuine students from minority communities are potentially denied rightful aid.
	Misuse of scholarships affects educational opportunities.

Ethical Impact	Betrayal of Trust; Inequity and Injustice; Colluding parties compromise ethical standards for personal gains; Erosion of moral values in education and administration; Exposure of such scams erodes public confidence in government initiatives

Minority Communities in India:

- **Recognized under the** National Commission for Minorities Act**, 1992**: Muslims, Sikhs, Christians, Buddhists, Parsis; and Jains added in 2014.
- **19.3%** of the total population as per the 2011 Census.
- **Major groups**: Muslims (about 14%), Christians (about 2%), Sikhs (1.7%), Buddhists (0.7%), Jains (0.4%), Parsis (0.006%).
- The term **"minority" is not defined in the Indian Constitution**. However, the Constitution recognizes **only religious and linguistic minorities**.
- Constitutional Provisions: Article 29 preserves distinct language, script, and culture; Article 30 grants education institution rights.
- Article 350-B**:** Special Officer for Linguistic Minorities established by the Seventh Constitutional Amendment Act of 1956.
- **Parliamentary Provision**: The National Commission for Minorities Act, 1992 defines minorities as notified by the Central government.

Other schemes for minorities:

- Education Loan Scheme by NMDFC
- Employment and Economic Empowerment Schemes
- Jiyo Parsi
- Qaumi Waqf Board Taraqqiati Scheme (QWBTS)
- Shahari Waqf Sampatti Vikas Yojana (SWSVY)
- Pradhan Mantri Jan Vikas Karyakram (PMJVK)

Insta Links
Issues related to minorities

Topics: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

6. FIRST UN GUIDANCE ON CHILDREN'S RIGHTS AND ENVIRONMENT

Context:

The United Nations Committee on the Rights of the Child (UNCRC) has issued ground-breaking guidance (first of its kind), **General Comment No. 26**, recognizing children's rights to a clean and sustainable environment, with a focus on climate change.

Impact of Climate Change on Children:

- **2020 report by** WHO-UNICEF-Lancet warns of threats to children's well-being due to environmental degradation and climate change.
- **2022 saw 12 million** children displaced due to extreme weather events
- **Climate change is a key driver** of extreme poverty, inequality, and child vulnerability.
- **Children are especially vulnerable** to climate change impacts because of their unique development needs.

Key Points of UN Guidance on Children's Rights and the Environment:

Key Points	
Recognition of Rights	UN recognizes children's right to a clean, healthy, and sustainable environment.
	Special emphasis on addressing climate change impacts on children.
Legal Framework	General Comment No. 26 was adopted on August 28, 2023.
	Provides the **legal foundation to tackle environmental degradation** and climate change's effects on **children's rights**.
Obligations of Member States	Member states urged to **take necessary measures to protect children's rights** from climate change-related harm caused by businesses.
	Priority on **establishing inclusive early warning systems to safeguard children** from extreme weather impacts.
	Developed nations are urged to **provide grants instead of loans** to prevent negative impacts on children's rights.
Climate Finance Concerns	Highlighted **concerns over unequal allocation of finance** for adaptation and loss and damage measures.

Calls for Emissions Reductions	**Insufficient progress in achieving international** climate commitments endangers children.
	Urges rapid and effective emissions reductions to protect children's rights and prevent irreversible environmental damage.

To know How climate change contributes to violence against children? Click here

To know How to address violence against children: Click here

About UNCRC

UNCRC, adopted in 1989, outlines **children's rights, including life, health, clean drinking water, and survival and development.** It is **ratified by 196 state parties (including India).** CRC is the body of **18 independent experts** that monitors the implementation of the UNCRC by its state parties

Insta links:

- Impact of Climate Change on Children
- ILO–UNICEF joint report on social protection for children

7. OMISSION OF DISABILITY-RELATED QUESTIONS FROM NFHS-6

Context:

The decision to **omit disability-related questions from the sixth round of the** National Family Health Survey **(NFHS-6)** has raised concerns about the **understanding and representation of disability issues in India.**

- **Persons with disabilities make up around 2.21% of** the country's population, which is **approximately 2.68 crore people according to the 2011 Census.**

Reasons for under representation of Persons with Disabilities**:**

- The **inadequate understanding of the term "disability**."
- The government report on **'Persons with Disabilities (Divyangjan) in India - A Statistical Profile: 2021'** only acknowledges **eight categories of disabilities**, failing to **account for the 21 categories recognized by the Rights of Persons with Disabilities Act, 2016 (RPWDA).**
- This oversight is **particularly concerning for "invisible disabilities**," such as mental health-related illnesses, which affect **nearly 24 lakh persons but are not adequately addressed in the data.**

Issues because of under representation of Persons with Disabilities:

- **Lack of Accurate Data**: Without including questions related to disabilities, it becomes challenging to gather accurate and up-to-date data on the disabled population in India.
- **Invisibility of Invisible Disabilities:** Many disabilities, particularly "**invisible disabilities" like mental health conditions**, often go unnoticed or unreported. The omission of questions related to such **conditions exacerbates the invisibility of these disabilities**.
- **Limited Policy Insights**: Policies and programs designed to support people with disabilities may not be comprehensive or targeted effectively **without a clear understanding of the disability landscape.**
- **Exclusion from Development Goals:** The United Nations Convention on the Rights of Persons with Disabilities (CRPD) and the Sustainable Development Goals (SDGs) emphasize the inclusion and empowerment of people with disabilities.
- **Barriers to Accessing Services:** People with disabilities **often face barriers in accessing healthcare**, **education, employment, and social services**.
- **Underreporting of Disabilities**: When individuals do not see their specific disabilities reflected in data collection efforts, **they may be less inclined to self-identify or seek support.**
- **Stigmatization and Discrimination:** When disabilities are not recognized or understood, individuals with **disabilities may face exclusion, bias, or negative stereotypes.**
- **Missed Opportunities:** Comprehensive data on disabilities can provide valuable insights into the diverse needs and experiences of people with disabilities.

Insta Links:

Disability Rights

Topics: Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

8. SUSPENSION OF WRESTLING FEDERATION OF INDIA (WFI)

Context:

The United World Wrestling (UWW) has provisionally suspended the Wrestling Federation of India (WFI) due to the delay in conducting its elections.

The suspension comes in the wake of allegations of **sexual harassment, intimidation, financial irregularities, and administrative lapses brought forth by prominent** wrestlers against the former WFI president, **Brij Bhushan Sharan Singh**, and others.

- The UWW took this action due to the **absence of an elected president and board,** which goes against **UWW regulations and membership conditions**. The suspension is expected to last for **at least six months**
- The UWW has also considered the **protection of athletes** and the need to restore the federation's functioning as reasons for the suspension

Why was the delay caused?

The WFI announced elections for May 7. However, protesting Wrestlers demanded Brij Bhushan's arrest and his family's exclusion from elections. The Ministry of Sports halted polls and asked the Olympic Association to form an ad-hoc committee. However, before the election could take place on the date set by IOA, the High Court of Guwahati and Punjab& Haryana stayed the elections.

As a result of the suspension:

- **Indian wrestlers** cannot compete under the **national flag in UWW-sanctioned events**.
- **No national anthem** will be played if an Indian wrestler wins a gold medal in these events.
- **However, Indian Wrestlers are not barred from playing**

Common issues faced by women in sports:

Issue	Examples
Lack of funding and support	The US women's soccer team paid less despite winning more titles than the men's team.
Gender-based discrimination	Female athletes are told they are not as strong or capable as male athletes.
	Indian sports are marred by political influence and male domination in positions of power.
Sexual harassment and abuse	Tennis player Ruchika Girhotra raised their voice against the tennis federation president.
	E.g., Chinese Tennis star Peng Shuai accused the Chinese Vice Premier of sexual assault.
	E.g., USA Gymnastics faced a sexual abuse scandal.
Lack of media coverage	Women's sports events receive less media coverage, limiting visibility and sponsorship.
Decreased quality training	Inferior facilities, lack of trained coaches, and inadequate equipment.
Stereotyping and objectification	Female athletes are objectified and stereotyped based on appearance.
Social attitudes and disfigurement	Discrimination based on gender identity, negative evaluations, and loss of position.
Ethical issues	Sexual harassment in sports leads to abuse of power, trust violations, and unsafe environments.

Steps needed and those taken to address the issues faced by women in sports:

Step	Example
Education and Awareness	The International Olympic Committee's Athlete365 program provides educational resources on athlete safeguarding.
Policy and guidelines development	Sports Authority of India mandates female coaches to accompany female athletes during travel.
Reporting and complaint mechanisms	Sexual Harassment Electronic Box (SHe-Box) offers a platform for women to register complaints of harassment.
Accountability and enforcement	National Human Rights Commission (NHRC) issued notices regarding inappropriate coach behaviour.
Support and empowerment	Ministry of Youth Affairs and Sports launched the Khelo India Scheme to encourage girls' sports participation.

Conclusion:

To address the issues faced by women in sports. It will require a concerted effort from various stakeholders, including governments, sports organizations, and civil society, to create a safe and equitable environment for women in sports.

About United World Wrestling

It is the international governing body **(founded 1912; Headquarters: Corsier-sur-Vevey, Switzerland**) for the sport of amateur wrestling; its duties include overseeing wrestling at the World Championships and Olympics. It presides over **international competitions** for various forms of wrestling, including Greco-Roman, Freestyle, Grappling, as well as others

Insta Links:
What triggered Indian Wrestlers' Protests?

9. CONCERNS ABOUT RTI ACT

Context:
The Right to Information (RTI) Act, 2005, which was initially seen as a powerful tool for citizens to access government information, is **facing concerns about its effectiveness and transparency**

What is the RTI Act?
RTI Act (enacted in 2005) replaced the former Freedom of Information Act, 2002. Under the provisions of the RTI Act, **any citizen of India may request information from a "**public authority**"** which is required to reply expeditiously or within thirty days.

Significance of RTI:
The Second Administrative Reforms Commission (**2nd ARC)** lauds the Right to Information (RTI) as the **"master key of good governance**." This legislation marks a significant paradigm shift, transitioning from **the veil of secrecy to the light of transparency.**

- Often termed the **dawn of a new era in democracy**, RTI initiates the second democratic revolution, empowering citizens to access information crucial for an informed and accountable governance system.

Success of RTI

Success	Details and Impact
Empowering Citizens	**Over 50 lakh RTIs** are filed annually, showcasing extensive use.
	Public offices (90%) proactively share RTI-related information, promoting openness.
Access to Vital Information	RTI grants access to **crucial information like competitive exam answer** keys (IIT JEE, Civil Services), ensuring fairness.
	Disclosure of **property details of public officials** helps prevent conflicts of interest.
Exposing Scams and Corruption	RTI played a pivotal role in **uncovering major scams** like the Commonwealth Games and 2G spectrum allocations.
	Fosters **accountability and corrective actions** against wrongdoings.
Global Influence and Inspiration	The adoption **of similar information access laws in Sri Lanka** underscores India's impactful legal framework.
	Reflects **India's positive global influence** and effective governance practices.
Transparency and Anti-Corruption Efforts	RTI promotes transparency in diverse sectors and empowers citizens in democratic processes.
	Recognized by Transparency International for combating corruption through exposure and accountability.

Areas of Concern with the RTI Act:

Aspects of the RTI Act	Details and Impact
Amendments	The Digital Personal Data Protection Act, 2023, made significant amendments to the RTI Act, particularly regarding the **disclosure of personal data.**
	This change has raised **concerns about the impact of social audits** and public officials' accountability.
Union Government's Control	The **Right to Information (Amendment) Act, 2019,** granted the Union Government unilateral power in deciding the tenure and salaries of information commissioners, affecting their independence.
Rules and Appointments	The implementation of the RTI Act depends on **rules made by the Union and State Governments.** This can lead to complications, as states have discretion in **deciding payment methods for public authority fees**.
	Delayed appointments to information commissions have also undermined the RTI framework.
Online RTIs	While filing RTI applications online has made the process more accessible, some states lack online portals. The Union **Government's RTI portal** has faced issues, including data loss and a more complex application process.
Low Satisfaction	Dissatisfaction with the RTI system is growing, as more citizens file first appeals, **indicating their dissatisfaction with the information** received from public officials.

Structural Problems	Many of the issues faced by the RTI Act **stem from institutional and website-related problems**, as well as narrowing avenues to conveniently file requests and appeals.
Limited Applicability	The RTI Act's limitations regarding its **applicability to political parties**, the **judiciary**, and **intelligence agencies** have been subject to debate.
	Moreover, the Act's limited applicability to **NGOs and private entities** narrows its reach.
Non-compliance	**Over 26% rejection rate of RTI applications** on spurious grounds as per DoPT data. Appeals processes are delayed
Safety of Activists and Lack of Centralized Database	The safety of RTI activists remains a concern due to **instances of violence and fatalities.** Additionally, the absence of a centralized database hampers data access, impacting the Act's intended transparency
Inconsistent Record Management	**Poor record management** by Public Information Officers (PIOs) leads to response delays and incomplete information
Grievance Redressed Backlog	Enforcing fines for **non-compliance remains weak**, with only a 1% imposition rate

For the Impact of the DPDP Bill on the RTI Act: Click Here

Conclusion:

While the RTI Act initially empowered citizens to seek government information, concerns have arisen about its diminishing effectiveness due to changes in the law, bureaucratic processes, and structural issues. These challenges threaten its role in ensuring transparency and accountability in government operations.

Insta Links:

New draft digital data protection bill: How it compares with the older version and laws elsewhere

Topics: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

10. INDIA-GREECE BILATERAL RELATIONSHIP

Context:

During Indian Prime Minister Narendra Modi's visit to Greece, the two nations elevated their bilateral **relationship to a "strategic partnership,"** focusing on enhancing political, defence, and security cooperation.

What is a Strategic Partnership?

A strategic partnership is a **long-term interaction between two countries** based on political, economic, social and historical factors. E.g., India has strategic partnerships with the **United States, Russia, China, Japan, UK, France and others**

Key points of the visit:

- This visit marked the **first by an Indian Prime Minister in 40 years.**
- Greece conferred the Grand Cross of the Order of Honour **(Greece's 2nd highest civilian honour) on Modi**, making him the first foreign head of government to receive this honour.
- The two countries also aimed to **double bilateral trade by 2030**
- Early finalization of the Mobility and Migration Partnership Agreement **(MMPA)** to facilitate skilled migration between the two countries.
- They reaffirmed their **commitment to a free and rules-based Indo-Pacific region** and the Mediterranean Sea, advocating for **international peace, stability, and security**.

Various aspects of India-Greece Relations:

Aspect	India-Greece Relations
Ancient Interactions	• Interaction initiated by **Alexander's campaign in the 4th century BCE** • **Diplomatic, trade, and cultural relations** mentioned in Ashoka's edicts • **The** indo-Greek period was marked by cultural exchange under Greek rulers Demetrius I and Menander I
Political Relations	• **Diplomatic relations established in 1950** • Diplomatic ties, high-level visits, and cooperation between leaders • Support for India's inclusion in NSG and other groups
Commercial Relations	• Trade at **1.32 billion euros** • **Main exports**: cotton, scrap, marble, etc. • Indian participation in **Thessaloniki International Fair** • **India-Greece Framework Agreement** on International Solar Alliance
Defence	Bilateral cooperation, MoU on defence, joint exercises

Geostrategic Significance	• **Greece's potential as India's gateway** to Europe • **India's ties with Greece unsettle Turkey**, Azerbaijan, and Pakistan • **Countermeasure against China's influence** in the Mediterranean region
Geopolitical Significance	• Support from Greece on issues like **Kashmir and terrorism** • Shared approach on initiatives like **UN reforms and the Cyprus issue** • **Greece's** NATO membership and Armenia's alliance with Russia

Conclusion:

Enhancing **India-Greece relations is crucial for India to become a pivotal player** in the evolving global order**, uniting key seas and continents**. Strengthening economic ties can **establish new financial networks** across Eurasia. **Advancing military cooperation** through comprehensive agreements will enable joint exercises, technology sharing, and intelligence collaboration.

Insta Links:

Indo-Greeks

GENERAL STUDIES – 3

Topics: Government Budgeting.

1. RETHINK THE DYNAMICS OF INDIA'S FISCAL FEDERALISM

Context:

The evolving dynamics of India's fiscal federalism require reconsideration due to various factors, such as the shift to a market-based economy, changes in the fiscal landscape, and amendments to the Constitution.

What is the meaning of India's fiscal federalism?

India's fiscal federalism refers to the division of financial powers and responsibilities between the central government and state governments within the framework of a federal system. It involves **how revenue is generated, shared, and utilized to fund public services** and governance across different levels of government in the country.

Issues with the India's fiscal federalism:

- Replacement of Planning Commission **with** NITI Aayog**.**
- **Authority of** GST Council under Goods and Services Act.
- **Impact of widespread cess and surcharges** on divisible pool size.
- Neglect of integrating the **third tier of governance**.
- **Lack of consistent financial reporting** across all government tiers.
- No comprehensive review of off-budget borrowing **practices**.
- **States are subject to restraint through Article 293(3)** under the oversight of the Union and the FRBM Act, but the Union frequently evades such checks.
- The substantial **use of the National Small Saving Fund (NSSF)** for financing central PSUs through loans is not **included in the Union's fiscal deficits**.

Issues of Fiscal Federalism w.r.t GST:

	Details
1. Financial Autonomy of States	GST has made the country's indirect tax regime more unitary, reducing states' financial autonomy.
2. GST Compensation	States were promised compensation if revenue growth fell below 14%, but the Centre missed payments, causing friction.

3. GST Council	The central government's vote counts for one-third, giving it considerable influence; A Recent Supreme Court ruling grants states flexibility in decision-making.
4. Revenue Shortfall	States face a significant GST revenue gap, causing financial challenges and impacting fiscal federalism.

Why is there a need for re-evaluating Article 246 and the Seventh Schedule?

- **Changing Political Landscape:** India's shift from a single-party to a multi-party system has led to new dynamics in governance.
- **Altered Dynamics:** Changes in politics, society, technology, demographics, and development approaches have significantly transformed the landscape.
- **Additional Burden:** Central legislations like MGNREGA, RTE Act, and NFS Act have placed extra responsibilities on states.
- **Constitution-Making Gap:** The original constitution-making process didn't adequately address the division of responsibilities and taxation authority.
- **Borrowed Framework:** The constitution borrowed heavily from the Government of India Act 1935, lacking the subsidiarity principle.
- **Missed Opportunity:** The 73rd and 74th Constitutional Amendments provided a chance for reconsideration, but no substantial steps were taken.
- **Complexity Introduced:** Introduction of Schedule XI and Schedule XII complicated matters without clear operational significance.
- **Need for Specificity:** These schedules need to be broken down into specific activities and sub-activities, similar to Kerala's approach, for practical relevance.

What should be done:

- **Equity in Intergovernmental Transfers**: India's transfer system should prioritize equity. The **16th Finance Commission should** focus on equity in tax devolution.
- **Revisiting Article 246 and Seventh Schedule**
- **Subsidiarity Principle for Division of Functions**: The introduction of a new local list detailing the responsibilities of local governments is necessary.
- **Empowering the Third Tier:** Recognizing local governments' role, the upcoming Union Finance Commission should address this.
- **Reviewing Off-Budget Borrowing**: Off-budget borrowing practices by both the Union and States need review. **Transparency is crucial, and all income** and expenditure transactions should be accounted for within the budget.

Insta Links:
The poor state of India's fiscal federalism

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.

2. USE OF TECHNOLOGY IN AGRICULTURE

Context:
During India's G20 presidency, **member countries are focusing on transforming their agriculture ecosystems into sustainable and resilient systems**.

This involves developing **an** integrated digital agriculture ecosystem with standards and protocols for data interoperability.

What is Digital Agriculture?
Digital Agriculture refers to the **use of Information and Communication Technologies (ICT)** and data ecosystems to provide **timely, targeted information and services** to enhance the profitability, sustainability, and efficiency of farming practices. Examples of digital agriculture include:

- **Agricultural Biotechnology**: E.g., developing microorganisms for specific agricultural purposes.
- **Precision Agriculture (PA)**: It relies on the use of ICT to optimize resource application.
- **Digital and Wireless Technologies**: e.g., weather monitoring systems, robotics, drones, and other wireless devices

Benefits of Digital Agriculture:

Benefits	Explanation
Increases agriculture productivity	Digital tools and data-driven insights can lead to better crop management, optimizing yields and overall production.
Prevents soil degradation	Precision farming techniques can help reduce soil erosion and nutrient loss, preserving soil health.
Reduces chemical application in crop production	Targeted application of inputs like fertilizers and pesticides can minimize environmental impact.
Efficient use of water resources	Digital sensors and data can aid in precise irrigation, minimizing water wastage and enhancing water efficiency.

Disseminates modern farm practices	Information dissemination through digital platforms empowers farmers to adopt best practices and innovations.
Changes in the socio-economic status of farmers	Increased productivity and reduced costs can lead to improved income and livelihoods for farmers.

Challenges for Digital Agriculture:

High Capital Costs discourage many farmers, especially those with limited resources, due to substantial initial investments. **Small Land Holdings in India** complicate adopting large-scale digital technologies, as smaller plots are less conducive to certain solutions. **Renting and Sharing equipment,** common due to financial constraints, hinder individual technology adoption as not all farmers have timely access. **Illiteracy in Rural Areas** is a significant barrier, as many rural farmers lack computer literacy, impeding their effective use of digital tools.

Related Government Initiatives:

Initiative	Explanation
AgriStack	A collection of technology-based interventions in agriculture to provide end-to-end services across the agri-food value chain.
Promotion to Start-ups	Currently, India has over 1,000 agri-tech startups that play a crucial role in providing innovative solutions for challenges across the agricultural value chain.
Digital Agriculture Mission	A government initiative for projects based on technologies like AI, blockchain, remote sensing, drones, and robots to advance agriculture.
Unified Farmer Service Platform (UFSP)	A platform facilitating seamless interoperability of IT systems in the agriculture ecosystem, enhancing service delivery to farmers.
National e-Governance Plan in Agriculture (NeGPA)	A scheme using ICT for timely access to agriculture-related information, including platforms like Farmers Portal and mkisan for advisories.
Strengthening/Promoting Agricultural Information System (AGRISNET)	A scheme for strengthening the IT infrastructure of the Department and enhancing information dissemination through platforms like mkisan.

Conclusion:

Embracing quantum computing, AI, and big data can revolutionize the agriculture sector, akin to the green revolution's impact. Establishing a robust digital infrastructure encompassing satellite imaging, soil health data, land records, cropping patterns, and market information is essential.

Insta Links:

e-Technology in the aid of farmers

Topics: Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.

3. UNDERSTANDING CURBS ON RICE EXPORTS

Context:

The Indian government has implemented several measures to regulate rice exports and ensure domestic food security, including a **20% export duty on par-boiled rice** until October 15 and restrictions on **white rice exports**.

Status of Rice production and export:

- India is the **second-largest producer of rice** in the world, after China.
- India is the **world's largest exporter of rice**, with a **45% share**.
- **Non-Basmati rice exports** have been on a consistent upward trend over the past three years.
- **Decreased production**: The latest rice production estimate in India for the Rabi season 2022-2023 indicates a decrease of about 14% compared to the previous year.
- The government has increased the **Minimum Support Price (MSP)** for rice.

Recent government restrictions on Rice exports:

- In May 2022, the government **banned wheat exports**.
- In June 2023, restrictions on **stock holdings were imposed**.
- In September 2022, the export of broken rice was prohibited, and a 20% tariff was imposed on non-parboiled white grain shipments.
- In July 2023, **non-basmati white rice exports were entirely prohibited**, with only parboiled non-basmati and basmati rice allowed.
- Recently, **a 20% duty was introduced on all par-boiled non-basmati rice exports**.

Why is the Indian government imposing restrictions on rice and wheat exports?

- **Enhancing Domestic Supply**: The government's goal is to reduce exports to ensure an adequate supply of grains within the country.
    - There are concerns about depleting rice stocks, especially in light of the free-foodgrains scheme's continuation pressure (**Pradhan Mantri Garib Kalyan Anna Yojana)**
- **Impact of** monsoon/El Nino**:** It includes potential declines in rice production in several Indian states. El Nino may affect new crop arrivals.
- **Tackling Inflation**: Retail food inflation was at **11.5% in July**, and the government is taking measures to control rising food prices.
- **Preventing Illicit Exports**: The minimum export price rule is meant to prevent illegal exports of **non-basmati white rice** from being misrepresented as basmati rice.

The government's initiative to limit rice and wheat exports faces several issues:

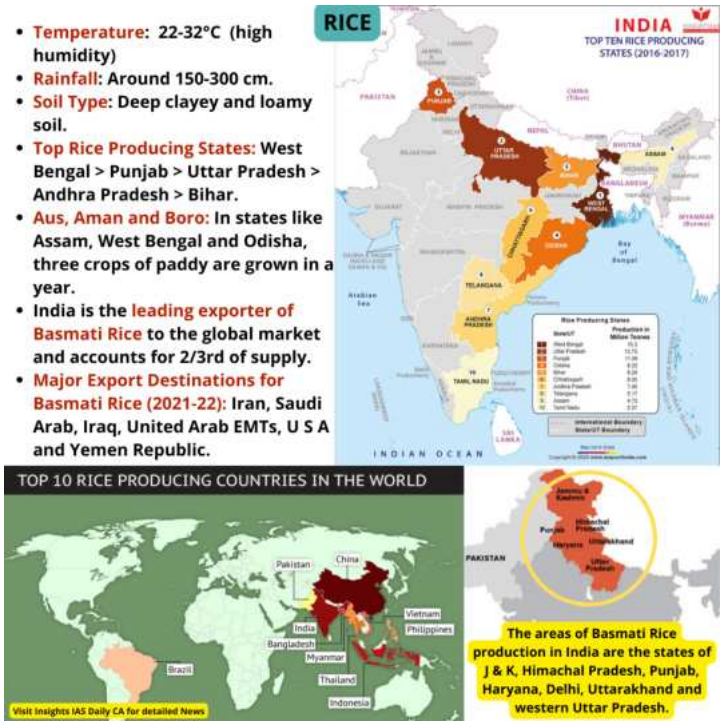
- **Enforcement Challenges**: Export limitations can be bypassed through inaccurate classification. White non-basmati rice has been exported using codes intended for parboiled and basmati rice.
- **Excessively High Minimum Export Price**: The **$1,200 Minimum Export Price** is considered too high. Only specific rice varieties achieve these prices, accounting for just around 15% of basmati exports.
- **Impact on the earnings of farmers**

Suggestions and the way ahead include:

- **Consider classifying rice for export policy decisions** as common and speciality rice, rather than **just as Basmati and non-Basmati.**
- **Protect varieties of rice with** Geographical Indication (GI) recognition from general market interventions.
- **For Basmati rice, permit exports to continue or set a minimum export value, such as $900 per tonne**, as new crop arrivals are expected to meet demand due to good quality and consistent supply.

Conclusion

Government's actions **aim to strike a balance between safeguarding domestic interests** and maintaining a competitive presence in the global rice market. The situation will become clearer by mid-September, as factors like crop arrivals and government policies evolve.



Insta Links:

Direct seeding of Rice

Topics: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

4. LEAD POISONING IN INDIA

Context:

Lead poisoning poses a **hidden threat in India**, with **over half of children** having blood lead levels above **5 micrograms per deciliter (µg/dL) (**WHO **safe level),** according to studies.

What is lead?

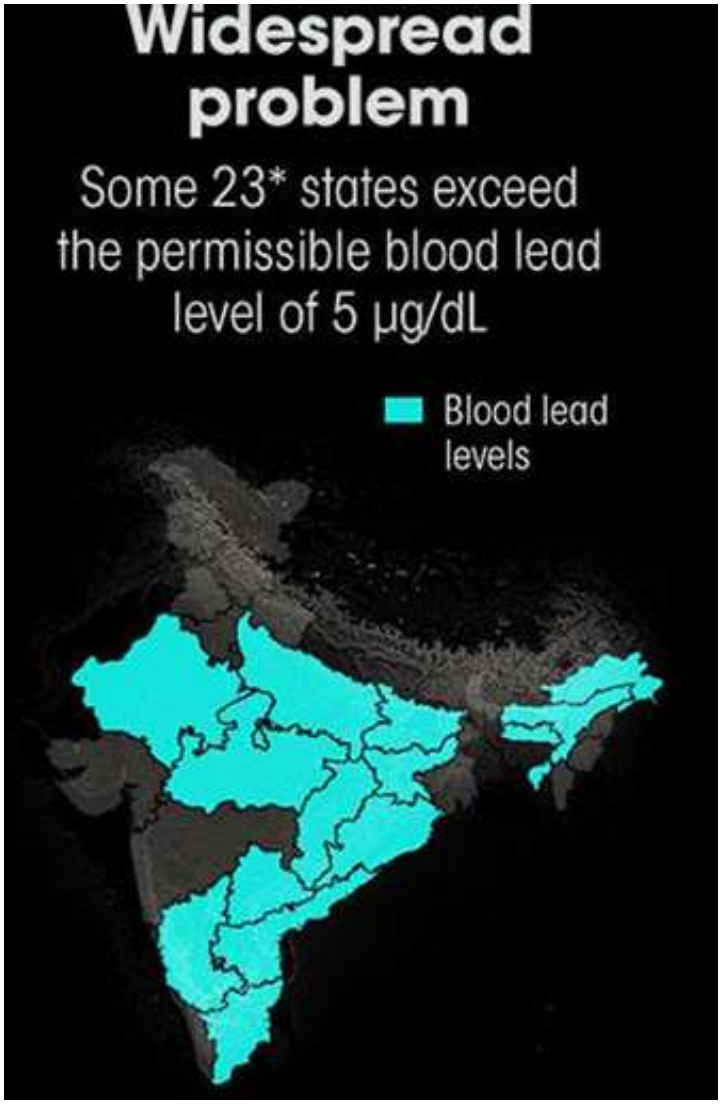
Lead is a **heavy metal element that is toxic to humans** and can cause serious health problems when ingested or inhaled, especially in high amounts. Major sources of lead exposure include **lead-based paints, lead batteries, contaminated soil and water**, and occupational exposure in industries such as mining, smelting, and battery recycling.

What is Lead poisoning?

It is a condition that **occurs when a person's body accumulates high levels of lead**, a toxic metal. It can lead to various health issues, especially in children, including learning disabilities, neurological problems, stunted growth, and organ damage.

Concerns of Lead Poisoning in India:

High Exposure in Children	A 2021 study found that about **20 crore children in India** have blood lead levels exceeding the safe limit set by WHO.
Severe Health Impact	Lead poisoning can lead **to learning disabilities, neurological impairments**, stunted growth, and organ damage. Children are especially vulnerable.
Economic and Social Impact	The effects of lead poisoning account for a significant learning gap between rich and poor countries. Affected children might achieve less in education and work, impacting the nation's productivity.
Impacted regions	Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh, and Andhra Pradesh account for 40% of the population with high blood lead levels.



Factors contributing to lead poisoning:

- **Informal and substandard recycling** of lead-acid batteries.
- **Increase in vehicle ownership**, combined with the lack of **vehicle battery recycling** regulation and infrastructure.
- **Workers in dangerous and often illegal recycling** operations break open battery cases, and spill acid and lead dust into the soil.

Government steps to control lead poisoning:

- National Programme for Prevention and Control of Fluorosis**,** Endemic Skeletal Fluorosis and Arsenicosis: Launched in 2010 to prevent lead poisoning.
- **Import Ban on Non-Compliant Lead Acid Batteries**: In 2013, the Ministry of Environment and Forests banned non-compliant lead acid battery imports.
- National Health Mission **(NHM):** Provides healthcare services, including lead poisoning screening and treatment.
- Lead Battery Waste Management Rules, 2016: Regulates lead-acid battery disposal and promotes safe recycling.
- **National Programme for the Health Care of the Elderly (NPHCE):** Offers healthcare to the elderly, who are vulnerable to lead poisoning.
- **Center for Advanced Research on Environmental Health (CAREH):** Conducts research on environmental health, including lead poisoning.

Global efforts to address lead poisoning have taken various approaches:

- **U.S. Gasoline Initiative**: The U.S. successfully reduced blood lead concentrations by **more than 90% from 1976 to 1995** by eliminating lead from gasoline.
- **Paint and Water-Pipe Regulations**: Many countries have implemented stringent standards to ensure paints and water pipes are lead-free, minimizing potential sources of lead exposure.
- **Bangladesh's Turmeric Solution**: In Bangladesh, lead contamination through turmeric adulteration was tackled by enforcing strict regulations and raising consumer awareness between 2017 and 2021, resulting in a decrease of lead-tainted turmeric from **47% in 2019 to 0% in 2021**

Way forward for India to control lead poisoning:

Approach	Description
Clear Legislation	A strong legislative framework is needed to establish health and safety standards for lead-containing products.
Enforce Standards	Strict enforcement of regulations on lead-free paints and water pipes.

Monitoring System	Establish blood lead level testing, including in household surveys to identify affected populations.
Identify Contaminated Sites	Nationwide efforts to locate lead-contaminated areas, with priority on clean-ups near schools and residential zones.
Promote Sustainable Practices	Implement waste management and e-waste recycling programs to reduce lead contamination.
Inter-departmental Coordination	Enhance collaboration between government agencies, NGOs, and international partners for cohesive action.
Public Awareness	Raise awareness among parents, workers, schools, and healthcare professionals about lead's dangers.

Insta Facts:

- **Lead in the body is distributed to the brain, liver, kidney and bones**. It is stored in the teeth and bones, where it accumulates over time.
- **Lead in bone is released into the blood during pregnancy** and becomes a source of exposure to the developing foetus.
- WHO has identified **lead as 1 of 10 chemicals of major public health concern**.
- WHO has joined with the United Nations Environment Programme to form the Global Alliance to Eliminate Lead Paint.

Insta Links:
Lead poisoning

Topics: Awareness in space.

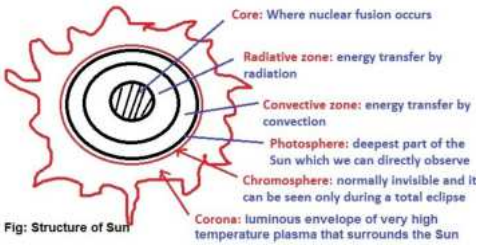
5. ADITYA-L1 SOLAR MISSION

Context:
The Indian Space Research Organisation (ISRO) will launch the Aditya-L1 solar mission on September 2, 2023.

More about the news:

- The spacecraft will be launched from the Sriharikota spaceport on the **PSLV rocket**.
- **Aim**: Aditya-L1 aims to study the Sun from a **halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth systems**, about **1.5 million** km away from Earth.

We already discussed Aditya-L1 a few days back in our FFP. Here we will analyse its significance.

Aspect	Explanation
Mission Objective	To study the Sun, its **upper atmospheric dynamics** (chromosphere and corona), and understand the physics of the solar corona and its heating mechanism for the five-year time period.  Fig: Structure of Sun
Launch Vehicle	Polar Satellite Launch Vehicle (PSLV)
Orbit	L1 orbit (First Lagrange point of the Sun-Earth system)
Primary Payload	Visible Emission Line Coronagraph (VELC)
Other Payloads	Solar Ultraviolet Imaging Telescope (SUIT), Solar Low Energy X-ray Spectrometer (SoLEXS), High Energy L1 Orbiting X-ray Spectrometer (HEL1OS), Aditya Solar wind Particle EXperiment (ASPEX), Plasma Analyser Package for Aditya (PAPA)
Significance of VELC	VELC is a solar coronagraph **capable of simultaneous imaging, spectroscopy, and spectro-polarimetry**. It can image the solar corona down to 1.05 times the solar radius.
Purpose of Studying the Sun	To **gain a deeper understanding of the Sun's radiation, heat, flow of particles, and magnetic fields;** provide clues about the high temperature of the solar corona; understand space weather dynamics; and offer early warnings for solar events.
Importance of L1 Point	L1 point provides an **unobstructed view of the Sun, even during phenomena like an eclipse;** allows payloads to directly observe the Sun; makes the mission fuel-efficient.
Significance of Lagrange Points	Lagrange points are **equilibrium positions in space where the gravitational forces of two large bodies,** like the Earth and the Sun, produce enhanced regions of attraction and repulsion.
Benefits of Studying the Sun from Space	Provides more detailed information due to the absence of Earth's atmosphere; helps understand solar phenomena; enables monitoring of solar events and their potential impacts on Earth.

Other Solar Missions by Different Countries:

United States	• **Parker Solar Probe (August 2018):** Touched the Sun's upper atmosphere, sampled particles and magnetic fields in December 2021 • **Solar Orbiter (February 2020)**: Explores the Sun's changing space environment
Japan	• **Hinotori (ASTRO-A, 1981):** Studied solar flares using hard X-rays • **Yohkoh (SOLAR-A, 1991):** Studied solar activity • **Hinode (SOLAR-B, 2006):** Studied the Sun's impact on Earth.
Europe	• **Ulysses (October 1990):** Studied space environment above and below the Sun's poles • **Proba-2 (October 2001):** Part of solar exploratory missions. • **Upcoming:** Proba-3 (2024), Smile (2025)
China	**Advanced Space-based Solar Observatory (ASO-S, October 2022):** Launched to observe the Sun.

The Aditya-L1 mission by ISRO holds significant importance for India due to its focus on studying the Sun and the solar corona. This mission aims to achieve the following:

- **Scientific Understanding:** The mission's primary objective is to deepen our understanding of the Sun, its radiation, magnetic fields, and the flow of particles.
- **Space Weather Forecasting:** By studying the Sun's behaviour, the mission can contribute to predicting space weather events, such as solar flares, that can disrupt satellite communications and other technologies on Earth.
- **Technological Advancement:** Developing a space-based observatory to study the Sun demonstrates India's technological prowess in space exploration and adds to its reputation in the global space community.
- **International Collaboration:** Participating in solar research aligns with international efforts to understand the Sun and its effects.
- **Education and Inspiration:** The mission inspires future scientists, engineers, and researchers by showcasing India's achievements in space science and encouraging the pursuit of space-related careers.
- **Data for Innovation:** The collected data can lead to innovations in technology, materials science, and various other fields that can benefit India's technological landscape.

Insta Links:
Aditya-L1

Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

6. AIR POLLUTION SHORTENS INDIAN LIFE

Context:

The Air Quality Life Index (AQLI) report by the University of Chicago reveals that fine particulate air pollution (Particulate Matter 2.5) reduces the average Indian's life expectancy **by 5.3 years.**

- This figure is based on the World Health Organization's (WHO) guideline of **5 micrograms per cubic meter (µg/m3)**

Key Findings:

- Particulate pollution **is the primary threat to Indian health**, reducing life expectancy by 5.3 years on average.
- **Cardiovascular diseases** diminish life expectancy by **about 4.5 years,** while malnutrition reduces it by 1.8 years.
- **All 1.3 billion Indians** live in areas exceeding the WHO guideline for annual average particulate pollution.
- **Approximately 67% of the population** lives in regions surpassing India's own air quality standard of **40 µg/m3**
- **India contributed over 59% of the world's increase** in pollution from 2013 to 2021.
- The Northern Plains are the most polluted region in India and about 39% of residents may lose eight years of life expectancy compared to WHO guidelines.

Reasons Behind Spike in Air Pollution in South Asia

The surge in air pollution in **South Asia stems from rapid industrialization**, economic growth, and population expansion. These factors have led to **increased energy demand** and fossil fuel usage in the region. In India and Pakistan, the vehicle count on roads has **quadrupled since the early 2000s**, while in Bangladesh, it tripled from 2010 to 2020. **Electricity generation from fossil fuels also tripled** between 1998 and 2017 in Bangladesh, India, Nepal, and Pakistan combined. While this elevated energy consumption improved living standards and economies, the resulting rise in particulate pollution has had severe consequences.

WHO's New Air Quality Guidelines

The World Health Organization (WHO) has **introduced updated air quality guidelines in 2021 to safeguard population health** by reducing levels of key air pollutants

These guidelines offer recommended air quality levels for six pollutants: particulate matter (PM2.5 and PM10), ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2), and carbon monoxide (CO)

Suggestions to Improve Air Quality and Health
1. Adopt or revise national air quality standards based on the latest WHO guidelines.
2. Monitor air quality and identify pollution sources.
3. Promote clean household energy for cooking, heating, and lighting.
4. Develop safe public transport and pedestrian-friendly networks.
5. Enforce stricter vehicle emissions and efficiency standards.
6. Invest in energy-efficient housing and power generation.
7. Enhance industry and municipal waste management practices.
8. Reduce agricultural waste incineration and forest fires.
9. Incorporate air pollution in health professional curricula.
10. Provide tools for the health sector to address air pollution.

About the AQLI report:

Air Quality Life Index (AQLI) Annual Update 2023 translates particulate pollution into life expectancy impact and was developed by the University of **Chicago's Energy Policy Institute**.

Insta Links:

Issues with the Air Pollution Control Measures in India

7. PROTECT WORLD HERITAGE SITES TO CONSERVE BIODIVERSITY: UN

Context:

UNESCO World Heritage sites, home to a significant portion of global biodiversity, **including iconic species like elephants, tigers, and pandas**, are under threat from climate change and human activities.

- The sites make up **only 1% of Earth's surface** but play a critical role in preserving biodiversity and addressing climate disruption

What are World Heritage sites?

World Heritage sites are **landmarks or areas of cultural, historical, scientific, or natural significance** that are recognized and designated by the **United Nations Educational, Scientific and Cultural Organization (UNESCO).** These sites are considered to be of outstanding value to humanity, and their preservation is of global importance.

There are two main types of World Heritage sites:

- **Cultural Heritage Sites**: These include historical buildings, cities, monuments, archaeological sites, and cultural landscapes that hold cultural and historical significance.
  - Examples include the Pyramids of Egypt, the Historic Centre of Rome, and the Great Wall of China.
- Natural Heritage Sites**:** These encompass natural areas, ecosystems, and geological formations that are of exceptional natural beauty or scientific importance.
  - Examples include the **Galápagos Islands,** the Great Barrier Reef in Australia, and Yellowstone National Park in the United States.

Significance of World Heritage sites:

They are protected and preserved to ensure that they are **passed down to future generations**.

Protecting World Heritage sites will lead to Biodiversity Conservation:

Importance for Biodiversity Conservation	Examples
1. High Biodiversity Richness: World Heritage sites are home to a significant portion of the world's biodiversity, including numerous plant and animal species.	**Virunga National Park**, Democratic Republic of Congo, is home to diverse wildlife, including mountain gorillas and endangered African elephants.

2. **Habitat for Endangered Species**: Many critically endangered species find refuge in these sites.	**Kaziranga National Park**, India, is a sanctuary for the one-horned rhinoceros, tigers, and various bird species.
3. **Protection from Anthropogenic Threats**: These sites provide a degree of protection from human activities such as habitat destruction, poaching, and overexploitation.	**Great Barrier Reef, Australia**, offers shelter to coral reefs and marine species, shielding them from direct human disturbances.
4. **Climate Change Resilience**: Preserving biodiversity in these areas contributes to global climate resilience as diverse ecosystems are more adaptable to climate change.	**Mont-Saint-Michel and its Bay, France**, showcase intertidal ecosystems that adapt to sea-level rise.
5. **Scientific Study**: These sites offer unique opportunities for scientific research and the study of diverse ecosystems.	**Yellowstone National Park, USA**, serves as a living laboratory for studying geothermal features and wildlife behaviour.
6. **Cultural and Natural Harmony**: Cultural World Heritage sites often coexist with biodiversity-rich areas, highlighting the harmonious relationship between humans and nature.	**Machu Picchu, Peru,** combines cultural heritage with stunning natural surroundings, fostering a strong bond with the environment.
7. **Conservation Education:** These sites promote awareness and education about biodiversity and conservation, helping people connect with nature.	**Galápagos Islands, Ecuador**, attract scientists and tourists interested in understanding and protecting unique species.
8. **Sustainable Livelihoods:** Local communities often rely on these sites for sustainable livelihoods linked to ecotourism and traditional practices.	**Mount Athos, Greece,** sustains monastic communities that practice sustainable agriculture and forestry.

What are geo-heritage sites and geo-relics?

Geo-heritage sites are special areas displaying geological features like rock formations, fossils, and landscapes, reflecting Earth's history. They're preserved for scientific, educational, and cultural significance.

Geo-relics are unique geological features or specimens prized for rarity, scientific value, or historical meaning.

- Examples: **Siwalik Fossil Park in Himachal Pradesh, Deccan Traps, Lonar Lake in Maharashtra, fossil-rich sedimentary rock formations of Jaisalmer**

Recently, the Ministry of Mines has notified **Geo-Heritage Sites and Geo-relics (Preservation and Maintenance) Bill** that is aimed at providing for the declaration, preservation, protection and maintenance of geo-heritage sites and geo-relics of **national importance,** for **geological studies, education, research and awareness purposes.**

Conclusion:

The UN calls for the **nomination of more biodiversity-rich areas as World Heritage sites** and emphasizes the **importance of these sites in national biodiversity strategies**. Additionally, site managers are being trained in climate change adaptation strategies, with plans for all sites to have **climate adaptation plans by 2029.**

Insta Links:

- Protecting India's natural laboratories
- What does the Ministry of Mines' draft Geo-heritage Sites and Geo-relics Bill say?

Topics: Disaster and management.

8. ARE NATURAL DISASTERS MAN-MADE?

Context:

The article discusses the impact of human actions on natural disasters, particularly in the context of **increasing incidents during the** monsoon season in India.

What are natural disasters?

A natural disaster is a **catastrophic event that is caused by the forces of nature**. Examples of natural disasters include earthquakes, floods, hurricanes, tornadoes, and wildfires. E.g, The **2020 Haiti earthquake**, a recent landslide in Himachal Pradesh.

Although natural disasters are natural, many natural disasters are exacerbated by poor planning and human activities:

Natural Disaster	Human Influence/ Contribution	Examples
Flooding	Deforestation, urbanization,	Flooding in urban areas due to
	improper land use, drainage issues	inadequate drainage systems (e.g., Mumbai floods).

Wildfires	Forest mismanagement, arson, climate change	California wildfires are caused by human activity and dry conditions.
Landslides	Deforestation, construction on slopes, heavy rainfall	Landslides in hilly regions due to deforestation and improper land use.
Drought	Over-extraction of water resources, climate change	Prolonged droughts in regions with excessive water use (e.g., California).
Hurricanes/Cyclones	Climate change, sea-level rise, inadequate infrastructure	More intense hurricanes due to global warming and poor coastal planning.
Earthquakes	Induced seismicity from activities like hydraulic fracturing (fracking)	Earthquakes triggered by hydraulic fracturing (fracking) operations.
Tsunamis	Underwater explosions, coastal engineering	Tsunamis caused by underwater nuclear tests or improper coastal engineering.
Volcanic Eruptions	Human activity near active volcanoes	Volcanic eruptions are exacerbated by settlements near active volcanic zones.

Urbanization, increased population density, and unsustainable development practices pose significant challenges for disaster management in the country:

- **Infrastructure Strain:** Rapid urbanization often leads to inadequate infrastructure such as roads, water supply, and sewage systems, causing congestion and public health issues.
- **Environmental Degradation:** Unsustainable development harms ecosystems, leading to deforestation, pollution, and loss of biodiversity.
- **Natural Disaster Vulnerability**: Rapid urban growth in hazard-prone areas can increase vulnerability to natural disasters like floods and earthquakes.

Solutions to mitigate the impact of natural disasters:

Natural Disaster	Solution	Examples that India can learn from
Flooding	Improved drainage systems, floodplain zoning, early warning systems, flood-resistant, infrastructure, flood insurance	The **Netherlands'** extensive network of dikes and levees to prevent river flooding.
Wildfires	Controlled burns, firebreaks, forest management, public awareness campaigns, and firefighting infrastructure.	**Australia's "Prepare, Act, Survive" strategy** to educate and prepare communities for bushfires.
Landslides	Slope stabilization, reforestation, landslide monitoring systems, land-use planning.	**Japan's extensive efforts in slope stabilization** and warning systems.
Drought	Efficient water management, rainwater harvesting, drought-resistant crops, water conservation, drought monitoring and early warning.	**Israel's advanced drip irrigation** systems to maximize water efficiency.
Hurricanes/ Cyclones	Advanced storm tracking, early warning systems, coastal defences, building codes, and evacuation plans.	The **United States National Hurricane Center's forecasts** and evacuation plans for hurricane-prone regions.
Earthquakes	Seismic building codes, retrofitting existing structures, early warning systems, community	**Japan's stringent earthquake building codes** and disaster preparedness.
Tsunamis	Tsunami warning systems, coastal land-use planning, public education on tsunami safety.	The **Indian Ocean Tsunami Warning System (IOTWS)** for early warnings.
Volcanic Eruptions	Monitoring volcanic activity, evacuation plans, hazard mapping, and resilient infrastructure.	**Iceland's comprehensive monitoring** and response system for volcanic eruptions.

Some best practices of nature-based solutions against disasters:

Countries	Nature-based solutions related targets and/or commitments
Australia	Increase 63 $MtCO_2e$ of accredited carbon offsets each year by 2050, involving 1.5 million hectares of on-farm plantings (equivalent to 2 per cent of total agricultural land)
China	Increase forest coverage rate to 25 per cent by 2030, and increase forest stock volume by 6 billion cubic meters over 2005 level
Cambodia	Achieve carbon neutrality in 2050 with the forest and other land use (FOLU) sector providing a total carbon sink of 50 $MtCO_2e$
Fiji	Increase the total area of mangroves to a maximum level of 54,762 hectares and a maximum sequestration of 531,204 tCO_2e in 2050
India	Create an additional carbon sink of 2.5 to 3 $GtCO_2e$ through additional forest and tree cover by 2030, including restore 26 million hectares of deforested and degraded land by 2030
Indonesia	Reach the peaking of national greenhouse gas emissions in 2030 with net sink of forest and land-use sector reaching 540 $MtCO_2e$ by 2050
Nepal	Pave the way to net-zero emissions by 2045, with carbon sequestration potential reaching 5.7 $MtCO_2e$ in 2050
New Zealand	Increase new forest area with more than 1.2 million hectares from 2022 to 2050
Thailand	Increase forest and green areas by up to 55 per cent of the country's total land area to achieve net-zero emission in 2065, with the carbon sequestration of 120 $MtCO_2e$
Tonga	Protect all (100 per cent) of intact mangrove forests and other coastal vegetation

Conclusion:

While knowledge exists of disaster management, awareness and risk assessment are often lacking. Underestimating risks and inadequate data contribute to the problem. The need for transformative thinking**, involving experts from both public and private sectors**, is needed to address the conflict between development goals and environmental preservation.

Insta Links:

- Lightening: Natural Disaster
- New ESCAP Study on Natural Disasters

CONTENT FOR MAINS ENRICHMENT

GS-1

1. SOLUTION TO MINIMIZE HEAT-WAVES IN URBAN INDIA

The study conducted by the **Centre for Science and Environment (CSE)** explores the impact of different urban forms on heat resilience.

Key findings and recommendations include:

- **Morphology Influence:** Areas with **open highrise, open midrise, and compact midrise urban morphologies** show lower land surface temperatures (LST), indicating better heat resilience.
    - **Low-rise areas with sparse** vegetation tend to have higher LST.
- **Blue/Green Infrastructure**: Greenery, like trees, shrubs, and grass, enhances microclimates. Effective vegetation cover (EVC) reduces LST; trees with thick foliage are more effective.
- **Floor Space Index (FSI):** Higher FSI correlates with lower LST. Increased FSI results in decreased temperatures.
- **Street Orientation**: North-south-oriented streets have higher LST due to sun exposure, offering guidelines for **urban planning.**
- **Cooling Solutions**: Different urban forms can have distinct zoning regulations for heat resilience, such as shaded walkways, cool roofs, and high EVC.
- **Adapting Urban Plans**: Cities should amend building by-laws and master plans based on factors influencing heat gain.
- **Impact on Energy Consumption**: A 1°C temperature decrease can lead to a 2% reduction in the city's power consumption.

2. R RAVI KANNAN (RAMON MAGSAYSAY AWARD FOR 2023)

Dr R Ravi Kannan, **a surgical oncologist from Assam**, has been honoured with the Ramon Magsaysay Award for 2023.

He received this **prestigious award for his remarkable contributions** to transforming **cancer treatment in Assam**, particularly through programs that prioritize the welfare of the people and those with limited means.

Kannan left his practice in Chennai and moved to Assam with his family in 2007 to provide basic healthcare facilities to the people **of Barak Valley through Cachar Cancer Hospital and Research Centre in Silchar.**

Usage: This highlights how values of **Dedication, compassion, and Duty towards public service** can take a long way in the betterment of society.

About Ramon Magsaysay Award

It was **established in 1957 and is Asia's prestigious honor** named after **Ramon Magsaysay**, the Philippines' **third president**.

- It celebrates **individuals and organizations in Asia** who excel in their fields and contribute generously to others **without seeking public recognition**.
- Initially, **awards were given in five categories**, but since 2009, the foundation has selected **awardees for Emergent Leadership. Recipients** receive a certificate, a **medallion featuring Ramon Magsaysay,** and a cash prize.
- This award is often **referred to as Asia's Nobel Prize counterpart**, recognizing outstanding contributions across diverse domains.

GS-3

1. FIRE PREVENTION ZONE (CANADA)

In Canada, a well-constructed fire prevention zone established by a local Indigenous logging company proved crucial in safeguarding a community from a threatening wildfire.

Fire prevention zones are designated areas meticulously managed to mitigate the risk of wildfire spread and associated damage.

The Indigenous logging company, Ntityix Development, employed **traditional Indigenous forestry practices** to craft the fire prevention zone. These practices encompassed activities such as **forest thinning, clearing debris from the ground, and controlled burning** of debris and ground cover. This approach aimed to **curtail the availability of fuel for wildfires**.

Usage: The example can be used in disaster management Questions. It underscores the significance of **proactive initiatives such as fire prevention zones**, especially as climate change intensifies wildfire seasons.

2. INDIA'S FIRST SOLAR ROOF CYCLING TRACK (HYDERABAD)

Hyderabad is embracing a **sustainable shift towards cycling,** with the introduction of an **innovative solar roof cycling track (23 KM long)** near the city's Outer Ring Road (ORR).

The track encompasses **three lanes and consists of two segments.** Distinguished by its **16MW solar panels fixed on the roof**, this project sets an impressive sustainability precedent.

Usage: The example can be used in governance/disaster management/ environment Questions.

3. SOLUTION FOR MITIGATING HUMAN-WILDLIFE CONFLICT

In Assam's Udalguri district, efforts are underway to secure a **significant elephant habitat and reduce human-elephant conflicts**. This initiative involves **planting 25,000 saplings of native tree species, including Amla and bel**, both crucial for elephants' diets. The project spans a 100-hectare habitat within the **Rowta Reserve Forest,** situated in proximity to Bhutan's border.
The chosen tree species, such as **gamhari, jamun, bhumura, arjun, elephant apple, and khair**, are studied to be essential components of elephants' diets.

Furthermore, to promote **human-elephant coexistence**, alternative livelihood opportunities have been provided **to communities impacted by conflicts with elephants**. Training in **poultry farming** has been extended to villagers, particularly women, across the Garo Hills region.

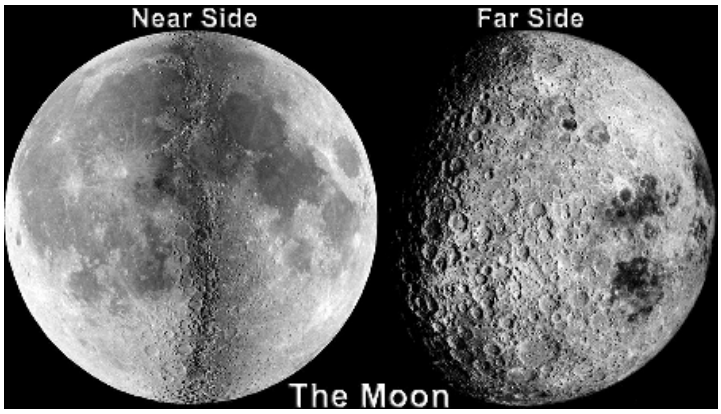
Usage: This holistic approach underscores the **importance of restoring natural habitats, ensuring biodiversity, and fostering harmonious relationships** between humans and wildlife. The example can be used in Environment conservation Questions.

4. NEAR VS. FAR SIDE OF MOON

Context:
The Chandrayaan-3 mission, part of India's lunar exploration efforts, successfully **landed the Vikram lander on the near side of the Moon,** making it one of the closest approaches to the Moon's South Pole.

Difference between the Near and Far side of the Moon:

Aspect	Near Side of the Moon	Far Side of the Moon
Visibility from Earth	Visible to Earth observers (about 60% of the moon's surface area)	Not visible from Earth
Sunlight Exposure	Receives sunlight, not perpetually dark	Receives sunlight during the new moon
Terrain	Relatively smoother, more volcanic plains	Rougher terrain with large impact craters
Crust Thickness	Thinner crust, extensive volcanic lava flow	Thicker crust, fewer volcanic features
Space Missions	Conducive to space missions due to flatter terrain	More challenging due to rough terrain and craters
Water-Ice Possibility	Limited in permanently shadowed regions	Possible in permanently shadowed regions
Lunar Exploration	Many lunar missions have landed here	Fewer lunar missions due to challenges (only China's mission was sent to the far side)
Communication	Direct line-of-sight communication with Earth	Limited communication requires the relay



5. BRAIN-COMPUTER INTERFACE (BCI)

Researchers have created a **breakthrough Brain-Computer Interface (BCI)** that enables a severely paralyzed woman to **communicate using a digital avatar**. This marks the first instance of **synthesizing speech and facial expressions** directly from brain signals.

How do BCIs work?
Brain-computer interfaces (BCIs) establish a **direct communication pathway** between the **human brain and external devices**. They interpret brain signals using advanced technology, allowing individuals to control devices or computers through their thoughts, bypassing traditional physical inputs or movements.

Importance of the technology:
They hold potential in **assistive technology, neurorehabilitation, research, and enhanced control applications** like gaming.

Concerns: Concerns include cyberattacks on brain data, unequal access due to costs, and the need for accurate translation of brain signals to speech to avoid unintended consequences.

Usage: The example can be used in S&T/ Social justice questions to show the use of technology to assist disabled individuals.

GS-4

1. PUNEETH RAJKUMAR'S EYE DONATION

Context:
Kannada actor Puneeth Rajkumar's eye donation inspired a significant increase in **eye pledges and donations in Karnataka**.

Following Puneeth Rajkumar's donation, the **Dr. Rajkumar Eye Bank at Narayana Nethralaya** received over 1,27,924 eye pledges and collected 3,989 eyes in the past two years, marking a **substantial growth compared to the previous 30 years** of its existence.

Corneal blindness, affecting millions in India, can be treated through eye transplants.

Usage: The example can be used to show ethical values of Compassion and Philanthropy, Social Responsibility, Altruism and Public Health, and Positive Role Models

2. EXAMPLE OF INITIATIVE: E RAJALAKSHMI

Context:
E. Rajalakshmi, a **52-year-old math teacher at Thangalikuppam Panchayat Union Middle School in Kurunjipadi, Cuddalore district (TN)**, used her own savings to set up a smart lab for students in **grades 6 to 8.**

The lab is equipped with a **projector and computers to facilitate interactive learning**. Rajalakshmi raised ₹4 lakh from her own savings to equip the lab. The school has about 143 students. Later on, the local Rotary Club and Village Panchayat also donated.

Features of her teaching:

- **Interactive Learning**: A teaching approach that engages students through hands-on activities and technology to enhance their understanding of subjects.
- **Syllabus-based Module**: A curriculum designed by a **non-governmental organization** to align with the **school syllabus and facilitate effective learning**.
- Experiential Learning**:** A teaching method that focuses on learning through direct experience and hands-on activities rather than traditional classroom instruction.

Usage: The example can be used in **Governance Questions/ Ethics Questions** (to show the values of **Initiative, Selflessness, Innovation, Collaboration, and Education Equity** for children in rural areas)

3. SIR ARTHUR THOMAS COTTON

Context:
The article highlights the **enduring legacy of British Gener-**

al and Irrigation Engineer Sir Arthur Thomas Cotton in the Godavari Delta region of India. In the 1840s, facing severe drought and famine, Sir Cotton **convinced the British government to build the Dowleswaram anicut on the River Godavari**.

Over the years, the **Dowleswaram anicut and subsequent developments** transformed the Godavari Delta, turning it into a **thriving agricultural region known for rice**, banana, and coconut production.

Usage: You can use the example to show the values of Dedication, Vision, Humanitarianism, and Service

FACTS FOR PRELIMS

GS-1

1. SEETHAKALI FOLK ART (KERALA)

Context:

The **Perinad Seethakali Sangham**, a group of artists from diverse backgrounds, revived the **fading Seethakali folk art** form in 2017.

Key Features of Seethakali:

Key Features	
Seethakali is a traditional folk-dance drama from Desinganad, Kerala, primarily during the Onam festivities.	
Artists	Presented by Dalit artists from the **Veda and Pulaya communities**
Story	Seethakali portrays the journey from **"vanayatra" (exile to the forest) to "andardhanam" (descend into the earth)** of Sita, featuring a blend of songs, storytelling, and fast movements.
Blend of Elements	Combines songs, storytelling, and energetic movements
Instruments	Ganjira, manikatta, chiratta, and kaimani instruments
Narrative	Story conveyed through **folk-style songs** influenced by Vallappaattu Kuthirappaattu, and Rakshasappattu
Oral Tradition	The tradition of passing down songs orally led to a hiatus
Character Ensemble	Includes key characters like Sita, Ram, Lakshman, Ravan, Hanuman

2. INCREASING CYCLONE FREQUENCY

Context:

A recent study suggests that a **combination of global warming and the Pacific Decadal Oscillation (PDO), could lead to an increase in the frequency of tropical cyclones originating near the Equator.**

- The PDO is a **20–30-year cycle that occurs in the Pacific Ocean, north of 20°N.** The PDO is a pattern of ocean-atmosphere climate variability. During a **"warm", or "positive", phase, the west Pacific becomes cooler and part of the eastern ocean warms. During a "cool", or "negative", phase, the opposite pattern occurs.**

Global warming has led to an increase in sea surface temperatures, particularly in the Indian Ocean. Warmer sea surface temperatures have **contributed to the formation and intensification of tropical cyclones in the region.**

About Pacific Decadal Oscillation:

The Pacific Decadal Oscillation (PDO) is a **natural climate pattern that affects the temperature** of the **Pacific Ocean and the weather patterns around it**. The PDO shifts **between warm and cool phases, with each phase lasting around 20-30 years**

The PDO is often quantified by the use of an index**, referred to as the PDO Index**. The PDO Index is calculated by **spatially averaging the monthly sea surface temperature (SST) of the Pacific Ocean north of 20°N**

The PDO has been **linked to slower global warming because cold phases of the PDO increase the mixing of colder, deep ocean waters with warmer surface waters**. This temporarily **reduces the rate of global warming caused by increasing greenhouse gas emissions.**

The PDO also has impacts on the weather. A **warm phase tends to cause heavy rains in the Eastern Pacific Ocean and droughts in Asia and Australia.** A cold phase tends to cause **droughts in the Eastern Pacific Ocean and floods in Asia and Australia.**

3. KOKBOROK LANGUAGE

Context:

Over 260 individuals were detained in Tripura during a 12-hour state-wide strike aimed to

advocate for the adoption of the Roman script for Kokborok, the indigenous language of the state.

- The central issue revolves around the script used for Kokborok, **which has been a decades-old debate in Tripura**. While **Bengali and Roman scripts have been used for Kokborok**, the demand for Roman script has gained momentum in recent years.

About Kokborok language:

Kokborok is a **Sino-Tibetan language** spoken by about **1 million people in the state of Tripura** in northeast India.

Kokborok is **one of the official languages of Tripura, along with Bengali**.

Kokborok is a **relatively homogenous language with several dialects spoken in Tripura**. It is the lingua franca of most of **the 19 tribal communities of Tripura**.

GS-2

1. RIGHT TO REPAIR

Apple's surprising reversal on the "right to repair" movement holds immense significance, considering it was previously among the tech giants opposing the concept.

Apple now supports legislation granting consumers and **third-party firms the right to fix** damaged electronic products. This shift aligns with a broader trend of tech companies adapting to consumer demands for greater control over their devices.

What is the Right to Repair?

The Right to Repair refers to **government legislation that is intended to allow consumers the ability to repair** and modify their own consumer electronic devices, where otherwise the manufacturer of such devices **requires the consumer to use only their offered services**.

The logic behind 'Right to Repair'?

When customers buy a product, it is inherent that they must own it completely, for which the consumers should be able to repair and modify the product with ease and at a reasonable cost, without being captive to the whims of manufacturers for repairs.

Origin of the Idea:

The idea originally originated from the **USA where the Motor Vehicle Owners' Right to Repair Act 2012**, required the manufacturers to provide the necessary documents and information to allow anyone to repair their vehicles.

Previously, MeitY launched a pilot project on Electronics Repair Services Outsourcing **(ERSO) to make India a Global Repair Capital.**

Through the ERSO scheme, India hopes to **capture 20% of the global repair service market** – currently valued at $100 billion – in five years. At present, India's revenue from repair services is about $350 million.

2. PROJECT 'AMBER'

Context:

The Ministry of Skill Development and Entrepreneurship **(MSDE),** in partnership with **Generation India Foundation (GIF) and Amazon Web Services India Private Limited** (AWS India), is implementing **project AMBER to provide cloud skills training to 1,500 learners.**

About Project Amber:

PROJECT AMBER (**Accelerated Mission for Better Employment and Retention)** is a joint initiative of the **National Skill Development Corporation (NSDC) and Generation India Foundation (GIF)** under the aegis of the Ministry of Skill Development and Entrepreneurship (**MSDE**).

This project is co-funded by **MSDE (under the** SANKALP programme**)** and private philanthropy and aims to train 30,000 youth, 50% of whom will be women trainees.

The training will be conducted in post-COVID resilient job roles, over a period of two years. Generation's holistic **7-step skilling methodology will be utilised to drive higher quality skilling, improved employment, and retention outcomes.**

3. SVAMITVA SCHEME

Context:

The SVAMITVA Scheme, initiated by the **Ministry of Panchayati Raj**, has been awarded the **prestigious National**

Award for e-Governance 2023 (Gold) for its innovative use of emerging technologies to **provide citizen-centric services.**

- The award was presented at the **26th National Conference on e-Governance (NCeG)**. The scheme employs **advanced technologies such as drones and GIS (Geographic Information System)** to conduct **surveys and mapping of inhabited areas in villages**.
- This allows property owners in rural regions **to receive official ownership documents, known as Property Cards**.

Benefits:

- These cards have multiple benefits, **including enabling property owners to access bank loans and other financial opportunities using their rural residential assets as collateral**.
- The technology aids in **resolving land-related disputes through the creation of highly accurate maps with 5cm precision**.

The collaborative **effort involves the Ministry of Panchayati Raj, Survey of India, State Revenue and Panchayati Raj Departments, and NIC-GIS**.

4. MEANING OF "GLOBAL SOUTH"

Context:

The term **"Global South" originated in 1969 during the Vietnam War** to critique the **unequal global order created by the dominance of the Northern hemisphere** over the Southern hemisphere.

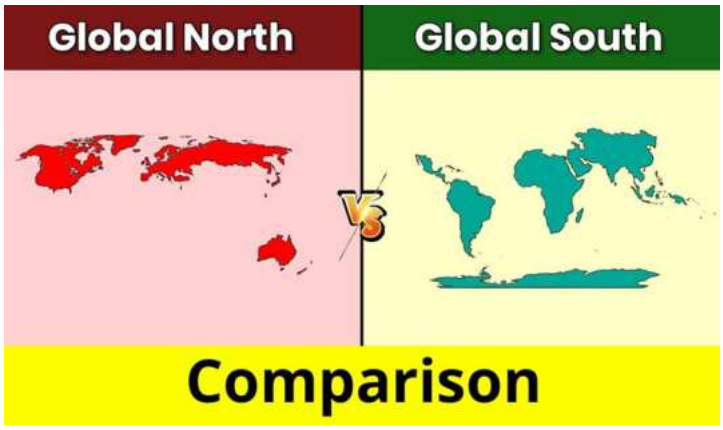
What is the Meaning of "Global South" with example?

The term "Global South" refers to **countries and regions that are economically and socially less developed** in comparison to the **more affluent and developed "Global North**."

Examples of Global South countries include **India, Brazil, Nigeria, and Indonesia**, which often face economic challenges and are considered to be part of the developing world.

Issues with this terminology:

- **Geographically**, the division between **Global North and Global South based on the 30-degree north latitude line is arbitrary** and excludes countries like Australia, New Zealand, and developed countries within the Global South.
- **Economically**, the term is inconsistent as nations like **China**, with high per capita income, are categorized as part of the Global South.
- Issues arise due to key **allies of the Global North situated in the Southern Hemisphere**, which contradicts the categorization.



Evolving meaning of "Global South":

- **New Terminology**: It's a term some leaders use as an alternative to **"developing world"**
- **Beyond Economics:** While the traditional labels focus on economic indicators, "Global South" emphasizes **cultural and other differences**
  - For example, the "Global South" prioritizes sustainable living, ecological balance, and universal healthcare.
- **Cultural Distinction**: The difference between the Global South and the Global North is more about cultural aspects than just economic or developmental ones.

5. 'SELF-RESPECT' MARRIAGES

Context:

The Supreme Court of India **recently ruled that "self-respect" marriages are valid under the Hindu Marriage Act**

- The court **overruled a 2014 Madras High Court ruling t**hat stated that marriages performed by advocates are invalid.
- The court ruled that **advocates can solemnize "self-respect" marriages in their personal capacity as friends or relatives of the couple**. However, advocates should not solemnize these marriages in their professional capacity. The court also ruled that "**self-respect" marriages do not need to be publicly declared or solemnized.**

The **Self-Respect Marriage Law, or Suyamariyathai, was legalized in 1968** by the state of Tamil Nadu. The law allows **two Hindus to marry in the presence of friends or relatives without the need for a Brahmin priest or elaborate rituals**. The law requires **the consent of both parties, who must meet the minimum age requirement for marriage.**

The Self-Respect Marriage Law is considered an alternative to conventional marriages. It **disregards Brahminical rituals, caste endogamy, religious restrictions, and gender norms.**

The Self-Respect Movement was a social movement that began in 1925 in Tamil Nadu, India. The movement's goal was to create a **new society without caste, religion, or god**. The movement's founder**, E.V. Ramaswamy Naicker**, also known as Periyar, wanted to **reject the Brahmanical religion and culture.**

The Self-Respect Movement was also **called the Dravidian Movement**. The movement demanded equal rights for the **backward castes, with a focus on women's rights.**

6. KAMPALA DECLARATION

Context:

A total of **48 African countries have agreed to adopt the Kampala Ministerial Declaration** on **Migration, Environment, and Climate Change (KDMECC)** in order to tackle the connection between **human movement and climate change on the continent.**

- This initiative aims to **provide African states with a unified position** for the upcoming **Africa Climate Summit and the Conference of Parties (COP 28).**
- Originally signed by **15 African nations in July 2022, the KDMECC has evolved into KDMECC-AFRICA and is anticipated to be formally adopted during the Africa Climate Summit**.

Africa is **highly vulnerable to climate change impacts**, which directly influence migration due to more frequent and severe extreme weather events.

According to the **Internal Displacement Monitoring Centre**, over **7.5 million people faced internal displacement due to disasters in the past year alone**.

7. INDIAN RAILWAY BOARD CHAIRMAN: JAYA VERMA SINHA

Context:

Jaya Verma Sinha has become the **first woman to lead the Railway Board (**in the Railway Board's **118-year history)**, the **top decision-making body** for India's Ministry of Railways.

About Indian Railways:

The Ministry of Railways (founded 1905; HQ: Rail Bhawan, New Delhi) functions as the **statutory authority for the Indian Railways**, a monopoly in rail transport. The **Chairman and CEO of the Railway Board** leads this organization.

About Indian Railway Board:

In 1901, on the recommendations of the **Sir Thomas Robertson Committee** regarding the administration and working of the railways, **an early version of the railway board was constituted. It initially had three members.**

In 1921, the **Railway Board was reorganized**, and a **Chief Commissioner of Railways** was appointed to make technical decisions and advise the Government on policy matters.

In December 2019, the **Union Cabinet decided to reduce the size of the board from eight to five**. It also decided to **merge its different cadres** into a **single Railway Management Service**. The restructured Railway Board will comprise a **Chairman acting as CEO and four members overseeing infrastructure, operations, rolling stock, and finance**

8. THIRD RAIL OF KOLKATA METRO RAILWAY

Context:

The **Kolkata Metro Railway**, India's **first metro system** built by Indian Railways, has decided to **replace its steel third rail with a composite aluminium third rail**.

- This move aligns Kolkata Metro with prestigious international metro **systems like those in London, Moscow, Berlin, Munich, and Istanbul, which have also made the shift from steel to aluminium third rails.**

The advantages of the composite aluminium third rail over the steel third rail include:

- **Reduction in resistive current loss and improved traction voltage levels** due to the lower resistance of aluminium compared to steel.
- **Improved acceleration with the same rolling stock.**

- **Reduced maintenance and life cycle costs**, including less frequent painting and dimension measurement of the third rail, **as well as prevention of rust-related damage.**
- **Enhanced efficiency of train operations**.
- **Significant improvements in energy efficiency** and a reduction in carbon footprint.
- **Improved train headway**, leading to **better train scheduling and operations.**

9. GLOBAL FUND SECURES DEAL TO SLASH HIV TREATMENT PRICE

Context:

The Global Fund**,** has reached an agreement with **generic pharmaceutical manufacturers to significantly reduce the price of an advanced HIV drug named TLD.**

- This deal will allow the drug to be provided for **under $45 per person per year, marking a 25% reduction in cost.**
- The TLD pill contains three essential drugs for HIV treatment: **tenofovir disoproxil fumarate, lamivudine, and dolutegravir.**

This combination has been **recommended by the World Health Organization** as the preferred first-line treatment for HIV in adults and adolescents due to its **effectiveness in suppressing the virus, minimal side effects, and ease of use.**

About Global Fund:

The Global Fund was **established in 2002 to raise and disburse funding for programs that reduce the impact of HIV/AIDS, tuberculosis, and malaria** in **low- and middle-income countries**. The Global Fund raises and invests $4 billion a year to fight these diseases. The majority of the **Global Fund's financial support comes from public resources. More than 80 countries have made or pledged contributions to the Global Fund.**

10. TIBETAN DEMOCRACY DAY

Context:

Tibetan Democracy Day, celebrated on **September 2nd**, marks the establishment of the **Tibetan democratic system in exile**.

- It commemorates the **inauguration of the Tibetan government-in-exile in Dharamshala over six decades ago**. The day is known as **Mangsto Duchen** and signifies the beginning of **Tibetan democracy, governing over 1 lakh Tibetan refugees worldwide** through the Central Tibetan Administration (CTA).

Tibetan democratic system:

The Tibetan democratic system **evolved with the first elected representatives taking their oaths in Bodh Gaya in 1960**, and the **Tibetan constitution**, based on democratic ideals and universal values, was enacted by the Dalai Lama in 1963.

In 1975, **the CTA declared September 2nd as the founding day of Tibetan democracy**. The system comprises three pillars of democracy, **including the executive head known as the Sikyong, who took over from the Dalai Lama in 2011.**

India maintains a **policy of not recognizing a separate government of Tibet in India** but regards the **Dalai Lama as a revered religious** leader. Tibetans in exile recognize the CTA as their legitimate government.

11. "SPECIAL SESSION" OF PARLIAMENT

Context:

The government has announced a **"special session" of Parliament** from September 18 to 22, and this has raised questions about the legislative agenda for the session.

About the Special session:

The term "special session" is **not defined in the Constitution** but is often used for sessions convened for **specific occasions or commemorating milestones**.

Key points about the parliamentary special session:

Key Points	Description
Special Sessions	The term **"special session"** may refer to **sessions convened for specific occasions or purposes**, often with limitations on parliamentary procedures. Presiding officers chair these sessions.
Emergency Provisions	Article 352 of the Constitution **mentions** a "special sitting of the House" in the context of a Proclamation of Emergency. If Parliament is not in session, **one-tenth of Lok Sabha MPs can request** a special meeting to disapprove the Emergency.
Determining Parliamentary Sessions	The government, through the **Cabinet Committee on Parliamentary Affairs**, decides when Parliament meets, including session dates and durations.
	The President is **informed of the Committee's decisions**, and MPs are summoned for the session.

Constitutional Requirement (Article 85)	The Constitution mandates that **there should not be more than a six-month gap between two parliamentary sessions**. This provision was adapted from the Government of India Act of 1935
Parliamentary Calendar	**India does not have a fixed parliamentary calendar. Traditionally, Parliament meets for three sessions in a year:** • Budget Session (February-May) • Monsoon Session (July-August) • Winter Session (November-December)
Dr. B.R. Ambedkar's Perspective	Dr. B.R. Ambedkar believed in **regular parliamentary sessions** and rejected proposals for **year-round or longer sessions** to prevent fatigue among legislators.
Frequency of Sessions	Session frequency has **varied over the years**. Pre-independence, the central assembly met for **about 60 days annually**, increasing to **120 days in the first two decades** after independence.
Efforts to Increase Sitting Days	Various recommendations have suggested **increasing the number of sitting days for Parliament, exceeding 100 days annually**. Some private member Bills proposed specific session durations.

12. NCERT AS DEEMED-TO-BE-UNIVERSITY

Context:

Union Minister for Education and Skill Development & Entrepreneurship, announced that the **National Council of Educational Research and Training (NCERT) has been granted the status of a Deemed-to-be-University.**

- This **new status as a research university will allow NCERT** to engage in global **collaborations and make contributions to the global education landscape.**

Further necessities highlighted:

- The importance of **developing content in the mother tongue** and proposed the establishment of **Augmented Reality, Virtual Reality, and Artificial Intelligence** labs in all seven regional canters of NCERT.
- **Equipping these centres with the latest technologies from around the world to make India a global hub of research and innovation**.
- **Standardize the teacher training curriculum and prepare children for the challenges of** Industrial Revolution 4.0.

GS-3

1. SOMATIC GENETIC VARIANTS

Context:

Scientists have known of **somatic variants for many years, but recently there has been an explosion in the amount of data.**

- While DNA replication during cell division is generally accurate, **errors occur at an estimated rate of 0.64-0.78 mutations per billion base pairs per division.**
- These mutations are more common **during development and are referred to as somatic genetic mutations**.
- These errors, often arising from the repeated copying of the genome, **increase with age and tissue turnover**. Some of these mutations can **confer advantages to cells, leading to the development of tumours known as driver mutations.**

About Somatic Genetic Variants:

- Somatic genetic variants, also known as **somatic mutations or somatic changes**, refer to **alterations in the DNA sequence that occur in the cells of an individual's body after conception**.
- Somatic mutations can occur for various reasons, **such as errors during DNA replication, exposure to environmental factors (like radiation or chemicals), or simply as a natural consequence of cellular** processes.
- Somatic mutations can have **different effects depending on where they occur in the genome and which genes are affected**.
- Some somatic **mutations are harmless and have no discernible impact** on the cell or individual. However, **others can lead to the development of diseases, including cancer.**

2. "STATE OF INDIA'S BIRDS, 2023" REPORT

Context:

The **"State of India's Birds, 2023" report** reveals a **widespread decline in most bird species** across the country, **with some currently declining and others projected to decline in the future.**

Key Findings:

- **Raptors, migratory shorebirds, and ducks** have experienced the most significant declines.
- However, several species like the **Indian Peafowl, Rock Pigeon, Asian Koel, and House Crow are thriv-**

ing and increasing in both abundance and distribution.

- The assessments, based on **data from around 30,000 birdwatchers**, indicate that **60% of the 338 species with identifiable long-term trends have declined**, while 36 species have increased.
- **Specialist bird species, which inhabit specific habitats like wetlands and rainforests, are facing rapid declines, while generalist species capable of adapting to various habitats are faring better**.
- Long-distance migratory birds, such as those from Eurasia and the Arctic, have suffered significant declines, while resident species remain more stable.
- Birds with **diets focused on vertebrates and carrion have seen notable declines**, potentially due to **harmful pollutants present in these food resources**.
- The report emphasizes the decline of species endemic to the **Western Ghats and Sri Lanka** biodiversity hotspots**.**

The main threats to birdlife in India highlighted in the report include:

- **Climate Change**
- **Urbanization**
- **Monocultures**
- **Energy Infrastructure**

3. GLOBAL BIODIVERSITY FRAMEWORK FUND (GBFF) RATIFIED

Context:

We already covered the Global Biodiversity Framework Fund (GBFF) yesterday. This is additional information for GBEF.

Global Biodiversity Framework Fund (GBFF) is presented in a tabular format:

Aspect	Details
GBFF (1st approved in July this year under the Global Environment Facility (GEF)) aims to support the Kunming-Montreal Global Biodiversity Framework's **goals by 2030**. Contributions from countries, non-profits, and the private sector are welcome.	
Purpose	To mobilize investment and accelerate **conservation efforts for global biodiversity.**
Launch	Ratified at the **Global Environmental Facility's seventh assembly** in Vancouver, Canada by representatives of 185 countries.
Governance	**GBFF Council Representation:** • 16 members from developing countries • 14 members from developed countries • 2 members from countries of central and eastern Europe and the former Soviet Union **Decision-making:** Consensus-based decisions, following the GEF Instrument model.
Financial Mobilization Goals	• 20% will be allocated to **Indigenous Peoples and local communities (IPLCs)** ○ The allocation for **IPLCs will be reviewed for two years** and the allocations for SIDS and LDCs will be **reviewed for three years.** • 25% to **GEF agencies** • 36% to **SIDS (Small Island Developing States)** • 3% to **LDCs (Least Developed Countries)**
Targets	**Raise international financial flows** to developing countries (at least $20B by 2025, $30B by 2030)
Priority Support:	Small Island Developing States (SIDS) and Least Developed Countries (LDCs) will receive **over a third of the fund's resources**, prioritizing their biodiversity conservation efforts.
Financial Management:	• **Trustee:** The World Bank will serve as the Trustee of the GBFF. • **Establishment:** Modeled after funds like **Capacity-Building Initiative for Transparency (CBIT) Trust Fund, Least Developed Countries (LDCs) Fund**, Special Climate Change Fund, and Nagoya Protocol Implementation Fund (NPIF)
Funding Sources	Governments, philanthropy, the private sector, international financial institutions.
Goals	Halt and reverse biodiversity loss, and promote sustainable species and ecosystem health.
Addressed Threats	Wildfires, flooding, extreme weather, unsustainable activities, urbanization.
Challenges	Need for more contributions, and firm commitment to allocate funds to Indigenous groups.

4. 6TH CENSUS REPORT ON MINOR IRRIGATION (MI) SCHEMES

Context:

The Ministry of Jal Shakti has released the **6th census report on minor irrigation (MI)** schemes, **providing crucial data for effective planning and policy-making in this sector.**

Key Highlights:

- The census reveals that there are a **total of 23.14 million minor irrigation schemes in India**, with **94.8% (21.93 million) being Ground Water (GW) schemes and 5.2% (1.21 million) being Surface Water (SW) schemes**.
- **Uttar Pradesh** holds the **highest number of MI schemes**, followed by **Maharashtra, Madhya Pradesh, and Tamil Nadu.**
- The report **indicates a growth of 1.42 million MI schemes compared** to the previous census, with a **6.9% increase in GW schemes and a 1.2% increase in SW schemes.**
- The ownership of **MI schemes is primarily private (96.6%),** with a notable finding that **18.1% of individually owned schemes are owned by women.**

5. 23RD AUGUST WILL BE CELEBRATED AS THE NATIONAL SPACE DAY

Context:

The Prime Minister visited the **ISRO Telemetry Tracking and Command Network (ISTRAC)** in Bengaluru and **addressed the ISRO team about the success of** Chandrayaan-3**.**

Key Highlights from PM speech:

- The Prime Minister celebrated the achievement of Chandrayaan-3 as a **significant scientific milestone that demonstrates India's prowess in space exploration.** He also announced that the point **of Chandrayaan-3's landing would be known as 'Shiv Shakti.'**
- He acknowledged the **contribution of women scientists** and referred to the **Chandrayaan-2 landing site as 'Tiranga,'** highlighting its significance in **inspiring efforts and overcoming failures**.
- He announced that **August 23rd will be observed as 'National Space Day' to celebrate science, technology, and innovation.**

He emphasized the r**ole of space technology in governance, linking it to initiatives like Swachh Bharat Abhiyan, education, healthcare, and disaster management.** He encouraged ISRO to organize hackathons on **'Space Technology in Governance' to make governance more effective.**

6. SOLAR ORBITER SPACECRAFT DISCOVERS TINY JETS THAT COULD POWER THE SOLAR WIND

Context:

The **ESA/NASA Solar Orbiter spacecraft** has identified **numerous small jets of material emanating from the Sun's outer atmosphere**, lasting for 20 to 100 seconds and **expelling plasma at speeds around 100 km/s.**

- These jets, detected by **Solar Orbiter's Extreme Ultraviolet Imager (EUI) instrument**, could **potentially be the source of the solar wind**.
- Composed of charged particles (called picoflare jets), **the solar wind continuously escapes the Sun and affects space dynamics.**

These observations **shed light on how and where the solar wind is generated, a longstanding challenge in solar research**. The jets are associated with **plasma ejections from the solar atmosphere, and their discovery suggests that the solar wind may originate from intermittent**, highly energetic outflows rather than just a steady flow.

7. IUCN'S TIGER PROGRAMME LAUNCHES PHASE IV CALL FOR CONCEPT NOTES

Context:

The **Integrated Tiger Habitat Conservation Programme (ITHCP)** has launched a **Call for Concept Notes for Phase IV of the Tiger Programme**, aiming to further **protect big cats and their environments.**

- This phase will **expand eligibility to include species beyond tigers.**
- **Leopards and both mainland and Sunda clouded leopards are now eligible for funding.** The call is open to countries **like Bangladesh, Bhutan, Cambodia, India, Indonesia, Myanmar, Nepal, and Thailand, focusing on specific conservation areas.**

The ITHCP's success in **increasing tiger populations by 40% since 2015 highlights** the effectiveness of such initiatives. This phase signifies **a vital step towards safeguarding diverse species, their habitats, and surrounding communities.**

About ITHCP:
ITHCP, **launched in 2014**, is a strategic funding mechanism supported by the German Federal Ministry for Economic Cooperation and Development (BMZ).

8. ACROYNYM "RAISE" FOR BUSINESS

Prime Minister Narendra Modi addressed the B20 Summit India 2023, highlighting various aspects related to business, sustainability, and global cooperation.

- The B20 Summit India is a platform for policymakers, business leaders, and experts to **discuss policy recommendations for G20.** Its theme is "**RAISE**".

Term	Explanation
R - Responsible	Emphasizes the **need for businesses to act responsibly** and consider their impact on society and the environment.
A - Accelerated	Refers to the **need for businesses to drive economic growth and development** through rapid progress and innovation.
I - Innovative	Highlights the **importance of innovation in business strategies** to adapt to changing global dynamics.
S - Sustainable	Advocates for businesses to adopt practices that ensure **long-term sustainability for both the economy and the planet.**
E - Equitable	Focuses on **promoting fairness and inclusiveness** in business practices, ensuring benefits are shared widely.

Other Key points:

- The PM also proposed the idea of an **"International Consumer Care Day"** to strengthen trust between businesses and consumers.
- The Prime Minister emphasized **India's role in creating a trusted global supply chain and promoting sustainability.** He called for businesses to go beyond profit and focus on supply chain resilience and sustainability.

9. EMPEROR PENGUIN

Emperor Penguin

Context: In late 2022, a tragic event unfolded in Antarctica's Bellingshausen Sea region where four out of five emperor penguin colonies experienced extensive breeding failure due to the loss of sea ice.

Emperor penguins' breeding cycle depends on stable sea ice. Loss of sea ice prevented chicks from developing waterproof wings and regulating body temperature, making them vulnerable to drowning or freezing.

Comparison of Emperor Penguin and other Penguins:

Aspect	Emperor Penguin	Penguins
Description	Largest, tallest, and heaviest penguin species	Group of aquatic flightless birds
Geographical Presence	Endemic to Antarctica	Primarily in the Southern Hemisphere
IUCN Status	Near Threatened	Varies among species
World Penguin Day	Observed on April 25th	
Flight Capability	Flightless	Flightless
Diet	Fish, crustaceans	A varied diet, including fish and krill
Submergence Capability	Can remain submerged for around 20 minutes while hunting	Diverse submergence times
Breeding Season	Breeds during the Antarctic winter	Varied breeding seasons
Lifespan	Typically, around 20 years in the wild	Varies among species, up to 50 years observed

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Why disappearance of sea ice cause catastrophic breeding failure of emperor penguins?

Emperor penguins' breeding cycle heavily relies on stable sea ice, where they spend their entire breeding cycle. The sea ice, present from April to December, provides the necessary **platform for their breeding and fledging activities** (the stage in the development of young birds when they acquire the feathers and abilities necessary for flight.).

As a result of the loss of sea ice, the penguin chicks were unable to develop their **waterproof adult wings** and regulate their body temperature. This led to their **vulnerability to drowning or freezing to death.**

While emperor **penguins usually adapt to localized ice loss** by moving to stable sites, the extensive shrinking of sea ice extent makes this strategy unfeasible.

This incident marked the **first recorded instance of widespread breeding failure** of emperor penguins across multiple colonies due to sea ice loss.

10. CHINESE NAVY IS TESTING THE MOST POWERFUL COIL GUN EVER BUILT

Context:

The **Chinese navy is reportedly testing an advanced coil gun**, an electromagnetic weapon that can launch **high-speed projectiles with exceptional velocity.**

- Coil guns, also known as **magnetic accelerator**s, have the potential to **revolutionize warfare by allowing faster and more devastating attacks on enemy tar-**

gets. These weapons could be used for **launching missiles or satellites into space**.
- Compared to traditional artillery, **the coil gun offers advantages such as faster launch speeds and lower launch costs**.
- The potential applications of coil guns extend to weapon systems, near-earth satellites, and high-speed missile launches.

The technology involves a s**eries of energized coils along the barrel of the gun that generate a magnetic field to propel the projectile forward without touching the barrel's walls**. This approach prevents wear **on components and enables repeated firings**. Despite the technology's existence for decades, **challenges in materials science have limited the development of powerful coil gun models.**

11. MILITARY EXERCISES IN NEWS

Exercise BRIGHT STAR-23:

An Indian Air Force (IAF) contingent has departed to participate in Exercise BRIGHT STAR-23, a **biennial multilateral tri-service exercise scheduled to take place at Cairo** (West) Air Base, Egypt, from August 27 to September 16, 2023.

This marks the **first time that the IAF is participating in Ex BRIGHT STAR-23**, joining contingents from the **United States of America, Saudi Arabia, Greece, and Qatar**.

Other exercises between India and Egypt:

Exercise Cyclone-I: It Is a bilateral exercise between the **special forces of the Indian Army and the Egyptian Army**. The first edition of the exercise was held in Jaisalmer, Rajasthan in January 2023.

Also in the News:

AUSINDEX-23 is a biennial maritime exercise between the **Indian Navy and Royal Australian Navy.**

12. MAGIC RICE

Context:

Chokuwa rice, also known as **Magic rice**, is a **distinctive part of Assam's culinary heritage** and has recently been granted a Geographical Indication (GI) tag **for its uniqueness.**

About Chokuwa rice:

- This rice was a **staple for the troops of the Ahom dynasty in Assam** and is cultivated in various parts of the region, **especially around the Brahmaputra area**.
- Chokuwa rice is a **semi-glutinous winter rice, categorized as Sali rice**. It comes in sticky and glutinous varieties, known as **Bora and Chokuwa, based on their amylose content**.
- The low-amylose Chokuwa rice is used **to make soft rice, which can be consumed after soaking in cold or lukewarm water**.
- The rice is **pre-boiled, dried, stored, and then soaked before eating, making it convenient and nutritious**.
- Chokuwa rice is enjoyed with various accompaniments like **curd, sugar, jaggery, and bananas, and is also used in traditional Assamese dishes like Pithe**.

13. NABHMITRA

Context:

ISRO's Space Applications Centre in Ahmedabad has developed a device called **'Nabhmitra',** which has been successfully tested.
- This device is aimed at **enhancing the safety of fishermen**. It operates through satellite**-based communication and enables two-way messaging between boats at sea and authorities** on land.
- The system can convey **weather alerts, cyclone warnings, and other information in the local language**.
- In cases of emergencies like **boat accidents or fires, fishermen can activate the device to alert the control centre.** The control centre receives the boat's location and the crew onboard gets a response from the control centre.
- Additionally, the device provides **details about shipping routes, maritime boundaries, and fishing areas.**

14. PRAGYAN ROVER CONFIRMS SULPHUR

Context:

India's Chandrayaan-3 mission's Pragyan rover has confirmed the **existence of sulphur on the moon's surface near the south pole.**

- This discovery was enabled by the **Laser-Induced Breakdown Spectroscopy (LIBS) instrument** onboard the rover, **marking the first in-situ measurements of the lunar surface's elemental composition in this region.**
- The LIBS technique involves **using intense laser pulses to analyse materials**, **creating hot and localized plasma whose emitted light** is then studied to determine the material's elemental composition.
- The analysis has also revealed the presence of **elements like aluminium, calcium, iron, chromium, titanium, manganese, silicon, and oxygen on the lunar surface**. T

The Pragyan rover is still **actively searching for the presence of hydrogen**.

15. NATIONAL CARBON REGISTRY

Context:

The **UNDP (United Nations Development Programme)** has created an **open-source software named the National Carbon Registry** for effectively **managing national data** and **processes related to** trading carbon credits**.**

- This software has received **accreditation as a digital public good (DPG), utilizing open-source code that countries can adapt to their own requirements**.
- It comprises various **modules, software, and technical documentation** that can be customized by countries, potentially **reducing costs and timelines for implementation.**
- The registry aligns with **best practices and insights from countries**, supported by the **Digital4Climate Working Group, which includes UNDP, World Bank, UNFCCC, and EBRD**.

This initiative aims to **build a digital public infrastructure for addressing climate challenges and carbon markets**. The software also aligns with the Paris Agreement's **Article 6 and NDCs, recognizing the growing interest in carbon markets worldwide for GHG emission reduction**.

16. ADDIS ABABA DECLARATION

Context:

African environment ministers have come to an agreement to establish **national and regional strategies aimed at minimizing the environmental impacts** associated with the **extraction and processing of critical mineral resources.**

- This decision stems from the **19th African Ministerial Conference on the Environment (AMCEN) held in Addis Ababa, Ethiopia**.
- The conference, themed "**Seizing Opportunities and Enhancing Collaboration to Address Environmental Challenges in Africa,"** resulted in the **Addis Ababa declaration**, which acknowledges **pressing environmental challenges like land degradation, desertification, and drought.**
- The declaration emphasizes actions to **combat climate change, plastic pollution, marine protection, biodiversity conservation, and natural capital, contributing to global goals of sustainable development and climate mitigation.**

The conference saw the launch of the first **Africa UN Science-Policy-Business Forum and discussions encompassing Africa's engagement in global environmental assemblies and conventions**.

17. HOLLONGAPAR GIBBON SANCTUARY

Context:

Primatologists have proposed a solution to **address the division caused by a 1.65-km long railway track** within the **Hollongapar Gibbon Sanctuary in eastern Assam**, dedicated to the **western** hoolock gibbon**.**

- The sanctuary, **home to about 125 hoolock gibbons**, is facing **habitat fragmentation due to the track's presence**, which has **separated gibbon populations on either side**.
- To counter this, **scientists from the Wildlife Institute of India (WII)** have **suggested constructing an artificial canopy bridge to enable the gibbons** to move across the **railway line**.
- This would help **maintain genetic diversity and support the survival of the endangered gibbons**, which are **highly sensitive to disruptions in their canopy habitat**.

About Hoolock Gibbons:

- Gibbons, known as the **smallest and fastest of all apes, inhabit tropical and subtropical forests in Southeast Asia.**

Conservation Status:

International Union for Conservation of Nature's Red List:

- **Western Hoolock Gibbon: Endangered**
- **Eastern Hoolock Gibbon: Vulnerable.**
- Schedule 1 of the **Indian (Wildlife) Protection Act 1972.**

The **Hollongapar Gibbon Sanctuary**, formerly known as the **Gibbon Wildlife Sanctuary or Hollongapar Reserved Forest** is an isolated protected area of **evergreen forest located in Assam, India.** The sanctuary was **officially constituted and renamed in 1997.**

The Hollongapar Gibbon Sanctuary contains **India's only gibbons – the hoolock gibbons**, and North-eastern India's only nocturnal primate **– the Bengal slow loris**.

18. MYSTERIES OF THE Y CHROMOSOME

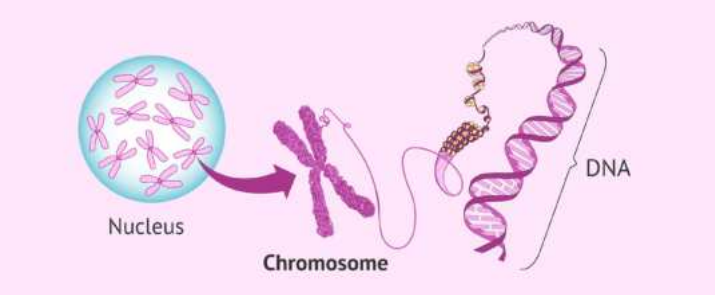
Context:

For the first time, **scientists have successfully sequenced the Y chromosome**, providing insights that could impact the **understanding of male infertility and various health issues.**

Significance:

- Y chromosome **sequence will aid the study of conditions and disorders linked to this chromosome, including male infertility.**
- **Significance for health and longevity, as it contains genes related to cancer and cardiovascular disease prevention.**
- **Y chromosome's role in age-associated diseases, men's shorter lifespans, and cellular ageing could be further explored with this complete sequence.**

The Y chromosome presented challenges **due to its repetitive nature**. Unlike other chromosomes, a **significant portion of the Y chromosome consists of repetitive sequences and palindromes**.

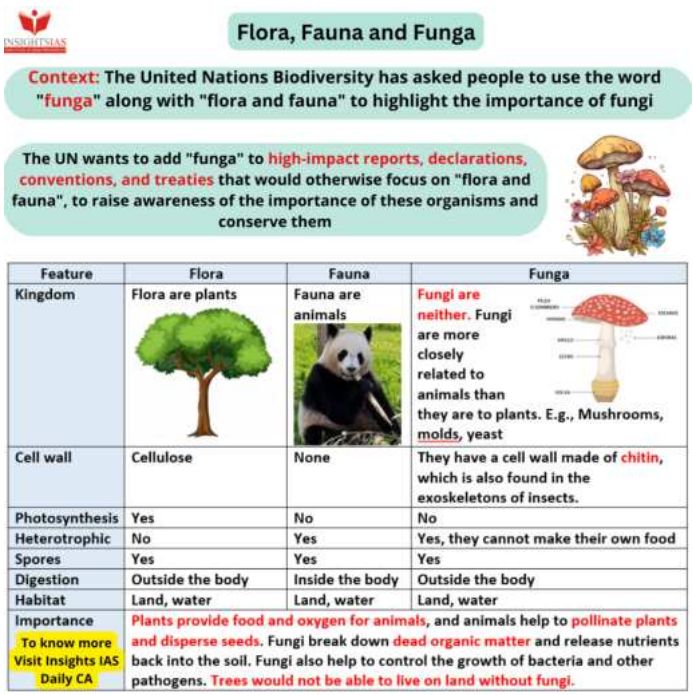


About Chromosomes:

Chromosomes are **thread-like structures that carry genetic information from cell to cell**. They are made **of DNA and proteins**. DNA is the material that **holds genes, which are the building blocks of the human body.**

Humans have **23 pairs of chromosomes**. The first **22 pairs are called autosomes**. These code for **most of the genetic traits in the body**. The **23rd pair are known as the sex chromosomes**. These chromosomes decide if a person will be **born male or female**. **Females have two copies of the X chromosome, while males have one X and one Y chromosome.**

19. FLORA, FAUNA AND FUNGA



Origin of the term: The term "**funga**" was established **five years ago by mycologists**, mostly from Latin America. It refers to the **kingdom fungi**, which is **one of the six kingdoms of biology.**

Significance: The term "fungi" should be **added to discussions of biodiversity** to raise **awareness of the importance of these organisms and conserve them** on equal footing with flora and fauna.

The six kingdoms of biology are:

- **Animalia**: Animals - multicellular, eukaryotic organisms that can move.
- **Plantae**: Plants - multicellular, eukaryotic organisms that photosynthesize.
- **Fungi**: Fungi - eukaryotic organisms that absorb nutrients from their surroundings.
- **Protista**: Protists - a diverse group of mostly unicellular eukaryotic organisms.
- **Eubacteria**: True bacteria - single-celled prokaryotic

organisms.
- **Archaebacteria**: Archaea - single-celled prokaryotic organisms that often live in extreme environments.

20. CYBTERTERMS IN NEWS

Context:
Recently various cyber terms have been in the news. We have tried to cover them briefly

Spamouflage:
- Spamouflage is a **Chinese influence campaign that has been active on over 50 platforms and forums,** including Facebook, Instagram, TikTok, YouTube, and X (formerly Twitter).
- **The accounts in the campaign have a tendency to intersperse political posts**.
- The campaign has **pushed positive narratives about China and negative commentary about the United States, Western foreign policies, and critics of the Chinese government.**

Smishing Scam:
The Indian government has warned against a **new scam called 'Smishing'.**
- Smishing is a **phishing cybersecurity attack carried out over mobile text messaging, also known as SMS phishing.**
- As a variant of phishing, **victims are deceived into giving sensitive information to a disguised attacke**r. SMS phishing can be **assisted by malware or fraudulent websites**.

21. AGRICULTURAL CESS

Context:
The government has **removed the 15 per cent agriculture cess** (also called Agriculture infrastructure and development cess (AIDC)) on imports of LPG, liquified propane, and **liquified butane starting from September 1**.
- This exemption reverses the previous imposition of the **agriculture cess on these goods in July**
- It is also imposed on **Crude Palm Oil**

What is Cess?
Cess is a kind of **special-purpose tax** which is levied over and above basic tax rates.

What is AIDC?
The AIDC was introduced in the **Budget 2021**. The purpose of the AIDC is to raise funds to **finance spending on developing agriculture infrastructure**.

22. NET ZERO PLEDGES OF BIG OIL COMPANIES

Context:
A report by **Greenpeace Central and Eastern Europe (CEE)** has found that **European Big Oil companies failed to fulfil their Net Zero pledges in 2022**.

Key Highlights:
- The **12 largest oil and gas companies in Europe produced only 0.3% of their energy from renewables,** with the rest coming from oil and gas.
- While these companies **reported a 75% increase in profits and a 70% increase in revenues in 2022**, **their investments in green energy only rose by 37%.**
- It called for stricter government regulations on fossil fuel companies**, including mandatory green infrastructure investment and the decommissioning of North Sea infrastructure**.
- The report also urged governments to **establish a detailed roadmap for phasing out oil and gas across Europe and to increase regulations on international oil companies, including banning advertising.**

About Net Zero Pledges:
Net-zero pledges are a **goal to prevent the concentration of carbon in the atmosphere from increasing**. They require **reducing human-caused emissions, such as those from burning fossil fuels, as close to zero as possible.**

23. NEW SPECIES OF LEAF INSECTS

Context:
An international research team, has **identified seven previously unknown species of leaf insects, also known as walking leaves.**

- These insects belong to **the stick and leaf insect order,** which are known for their **remarkable camouflage that makes them appear like parts of plants such as twigs, bark, or leaves**. This disguise offers **protection from predators and poses challenges for researchers**.
- Genetic analysis played a key role in **identifying these "cryptic species"** that **cannot be differentiated based solely on their external appearance.**

About Leaf Insects:
Leaf insects are **tropical insects that resemble leaves to avoid predators**. They are closely related to stick insects and are known for their remarkable camouflage. Leaf insects are found in **the forests of Asia, Papua New Guinea, Australia, and the islands of the Indian Ocean.**

24. RED SAND BOA

Context:
A report by the **Wildlife Conservation Society (WCS)-India** has highlighted **172 incidents of seizures involving the red sand boa (Eryx johnii)** between 2016 and 2021 in India.

- The report aims to shed light on the **illegal trade of red sand boas**, particularly online, to **raise awareness and prevent further illegal collection and sale of the species.**

Key Highlights:

- The report reveals that **illegal sand boa trade occurred in 18 Indian states and one Union Territory**, spanning 87 districts across the country. Maharashtra recorded the **highest number of incidents.**
- The report recommends **that local and international conservation organizations** conduct research to **better understand the illegal reptile trade**.
- It also suggests **developing training programs for journalism students and investigative journalists** to produce informed **media stories on illegal wildlife trade to increase awareness and reduce misinformation.**

About Red Sand Boa:

- The **red sand boa (Eryx johnii)** is a **non-venomous snake** that lives in the **dry parts of the Indian subcontinent**.
- It's also known as the **Indian sand boa**. The red sand boa is a **thick-set snake that's usually reddish-brown, known** for its **blunt tail**, which it uses to **mimic its head when it senses a threat.**
- Classified as **'Near Threatened' by the International Union for Conservation of Nature (IUCN)** with a **declining population trend**.
- The red sand boa is highly sought after in the illegal wildlife trade due to its **demand in the pet trade and its use in black magic.**

25. KAKAPO PARROTS

Context:
Genetic mapping of the **nearly entire kākāpō population, a critically endangered flightless parrot found only in New Zealand**, has revealed valuable **insights into specific traits crucial for conservation efforts.**

About Kākāpō:
The kākāpō, also known as the **owl parrot**, is a **large, flightless parrot that is native to New Zealand.** Kākāpō are known for their **unique appearance**, which includes a facial disc, owl-like eyes, and a large, gray beak.

IUCN Status: **critically endangered**.

They only breed every few years, triggered by the availability of certain forest foods. **Rimu fruit, which is part of the kākāpō diet, is thought to trigger breeding.**

26. LARGEST INDIGENOUSLY DEVELOPED N-PLANT UNIT BEGINS OPERATIONS

Context:
The third unit of the **indigenously developed 700-megawatt electric (MWe) nuclear power** reactor at the Kakrapar Atomic Power Project **(KAPP3) in Gujarat**, India, has started operations at full capacity.

- This marks a **significant achievement in India's civilian nuclear program**, as it is the country's first 700 MWe unit and represents a scale-up in technology.
- The reactor uses Pressurized Heavy Water Reactor **(PHWR) technology** and is seen as a **milestone in India's effort to expand its nuclear power capacity to 22,480 MWe by 2031**.
- The reactor design also incorporates **enhanced safe-**

ty features, including a Passive Decay Heat Removal System.

27. CHANDRAYAAN-3 TAKES SEISMIC READINGS FROM LUNAR SURFACE

Context:

India's lunar exploration mission, Chandrayaan-3**,** Vikram lander and Pragyan rover **conducted their first in-situ measurements of the lunar surface**.

- The **detection of seismic activity, which not only registered the rover and scientific instruments but also captured a "natural event"**.

Further findings:

- **Chandrayaan-3's RAMBHA-LP payload** made the first-ever measurements of the **lunar plasma environment near the south pole**.
- The **assessment revealed relatively sparse plasma near the lunar surface**, with a density ranging from **approximately 5 to 30 million electrons per cubic meter**, particularly during the early stages of the lunar daytime.
- These measurements are expected to **aid in reducing noise in radio wave communication and contribute to improved designs for future lunar missions.**
- The **Alpha Particle X-ray Spectrometer (APXS)** onboard the Pragyan rover detected sulphur and other minor elements using a unique technique.

28. BS 6 STAGE II 'ELECTRIFIED FLEX FUEL VEHICLE'

Context:

Toyota Kirloskar Motor has launched the **world's first prototype of a BS 6 Stage II 'Electrified Flex Fuel Vehicle' in India**.

This vehicle combines a flex-fuel engine with an electric powertrain, offering greater use of **ethanol and improved fuel efficiency**. It aligns with India's stricter emission standards and has **the potential to utilize excess ethanol resources**.

What are Flex Fuel Vehicles (FFVs) and Electrified Flex Fuel Vehicles?

Flex Fuel Vehicles (FFVs): It is designed to **run on a flexible combination of fuels**, typically **gasoline and ethanol**. These vehicles are equipped with engines that can adjust **their fuel mixture based** on the available fuel blend E.g., E20 (20% ethanol and 80% gasoline) or even higher percentages.

Electrified Flex Fuel Vehicles: They are a **more advanced version of FFVs** that
offer the advantage of **being able to operate on both ethanol-based fuels and electricity,** providing increased fuel efficiency and potentially reducing emissions compared to traditional gasoline-only vehicles.

Significance:

- These vehicles offer higher ethanol use and better fuel efficiency similar to **Strong Hybrid Electric Vehicles (SHEVs)**
- **Electrified Flex Fuel Vehicles** use minimal advanced chemistry batteries to reduce dependence on imports.

Challenges:

- **Higher cost of ownership and running cost for customers**, which may affect their acceptance unless retail fuel prices are competitive.
- **Developing FFVs requires significant effort** and calibration with multiple fuel blends, making them less viable without widespread fuel availability.

About Ethanol Blended Petrol Programme (EBPP):

- **The target of 10% ethanol blending for** 2021-22 has already been achieved.
- The National Policy on Biofuels – 2018 targets **20% blending** of ethanol in petrol by ESY 2025-26.

About Bharat Stage VI (BS VI):

It is a set of emission standards established to regulate the level of air pollutants emitted from **internal combustion and spark-ignition engine equipment**.

India has made it mandatory to follow BS-VI emission (from previously BS-IV) norms starting on April 1, 2020.

- BS-VI contains enhanced fuel quality, and reduced the permissible Sulphur content by 80%, from 50 Parts Per Million (ppm) to a maximum of 10 ppm.

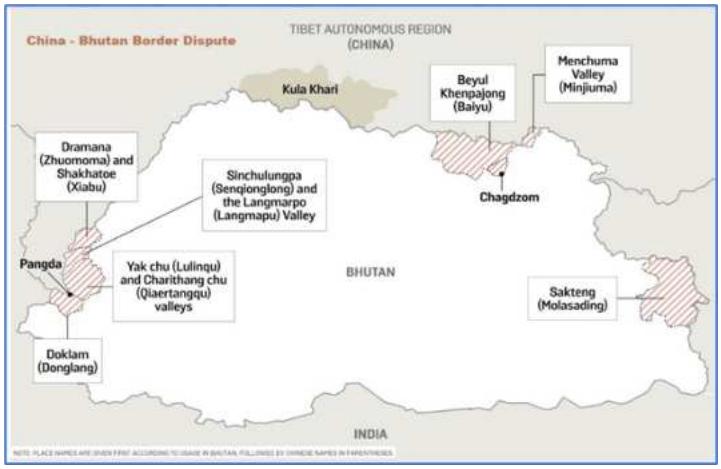
MAPPING

1. CHINA-BHUTAN BOUNDARY DISPUTE

China and Bhutan recently held boundary talks to expedite efforts to resolve their disputed border issue.

This development is significant considering **India and China's ongoing military standoff on the Line of Actual Control (LAC)** and **China's claims on Bhutanese territory**, which have implications for India's north-eastern region.

The China-Bhutan border dispute involves **territorial claims and tensions between the two countries over parts of Bhutan's territory**, particularly in areas bordering Tibet. The disputed regions between China and Bhutan **include Doklam, Gamochen, Batangla, Sinchela, Sakteng and Amo Chhu**. **Bhutan and China lack formal diplomatic relations**.



2. AUSTRALIA

On October 14, Australians **will vote in a referendum regarding the establishment of an Indigenous Voice to Parliament**, aiming to give Indigenous people a say in government policies that affect their lives. The referendum **seeks to enshrine this mechanism in the Constitution,** but there are concerns about how the Voice's powers might be interpreted, and opinions on the matter are divided within Australia.

Australian Aboriginals are the Indigenous peoples of Australia, with a history dating back over 65,000 years. They have a rich cultural heritage, with diverse languages, art, and traditions. Despite facing historical injustices and ongoing challenges, they have contributed significantly to Australia's cultural identity.

3. HURRICANE IDALIA (FLORIDA)

Context:
Hurricane Idalia hit Florida. The storm is a **Category 3 hurricane.**

Florida is prone to hurricanes because of **its location and climate**. Florida's long coastline and location between the **Atlantic Ocean and the Gulf of Mexico** make it vulnerable to hurricanes from either side.

Warm ocean waters can fuel hurricanes. **Florida's low-lying coastline** and shallow waters provide little protection from water being pushed inland by winds.

4. KENYA

India and Kenya signed a Memorandum of Understanding (MoU) for shipbuilding collaboration. The agreement focuses on **capacity building and collaboration in ship design** and construction. The partnership aims to enhance **Kenya's maritime capabilities** along the Indian Ocean.

The MoU was signed between **India's state-owned Goa Shipyard Limited and Kenya Shipyard Limited**, a government-backed company. The agreement will allow Kenya Shipyard Limited to become **one of the anchor companies in shipbuilding technology** in Africa.

India is the 16th largest maritime country in the world. **India has 12 major ports** and about 200 non-major ports.

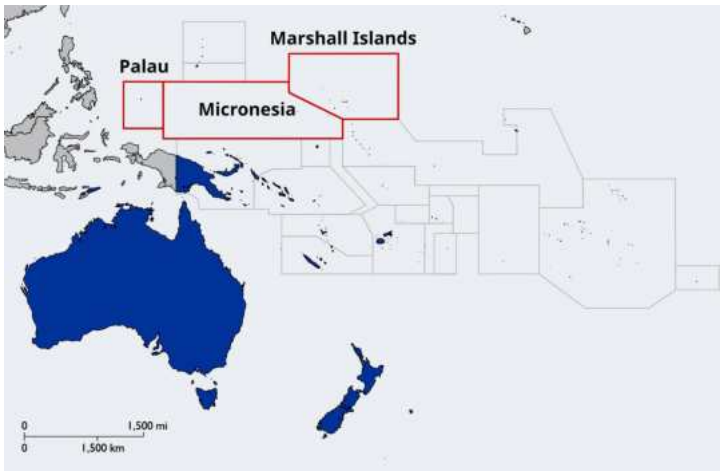
Kenya is bordered by the Indian Ocean to the southeast. Its neighbouring countries are Ethiopia, Somalia, South Sudan, Tanzania, and Uganda.

5. MICRONESIA AND COFA

Context:
The United States signed agreements with Micronesia to extend **economic assistance to the island state**. The U.S. is also negotiating similar agreements with Palau and the Marshall Islands**.**

Aim: The agreements were part of a strategic pact that the U.S. is **using to counter China in the Pacific**

The Compact of Free Association (COFA) is an international agreement between the U.S. and the **three Pacific Island states (**Micronesia, **Palau, and Marshall Islands)**. The COFA allows the U.S. to base troops in these countries in exchange for **economic and migratory benefits**. The COFA also **denies military access to these countries** by any outside party without U.S. consent.



6. KIGALI (RWANDA)

Context:
The International Solar Alliance (ISA) conducted its **5th regional meeting in Kigali, Rwanda.**

ISA grants have facilitated the implementation of **nine solar power demonstration projects** in **Uganda, Comoros, and Mali**. These projects included the **solarization of rural healthcare centres and primary schools** in these countries.

- ISA also launched the **SolarX Startup Challenge**, promoting entrepreneurship and clean energy in Africa.
- **The Global Solar Facility** aims to boost innovative solar technologies in Africa through private investment and guarantees.

Kigali is the capital city of Rwanda. Kigali Genocide Memorial documents the 1994 mass killings in Rwanda, associated with the country's civil war.

Rwanda is a landlocked country in the **Great Rift Valley of Central Africa**, where the **African Great Lakes region and Southeast Africa converge**. Located a few degrees south of the Equator, Rwanda is bordered by Uganda, Tanzania, Burundi, and the Democratic Republic of the Congo.