INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

MALABAR PIED HORNBILL

A two-decade-long community-based conservation initiative in the Vazhachal Forest division of the Western Ghats (Kerala) has successfully restored the dwindling hornbill population, specifically the Malabar Pied Hornbill, to a viable level.

22 MAY - 27 MAY 2023

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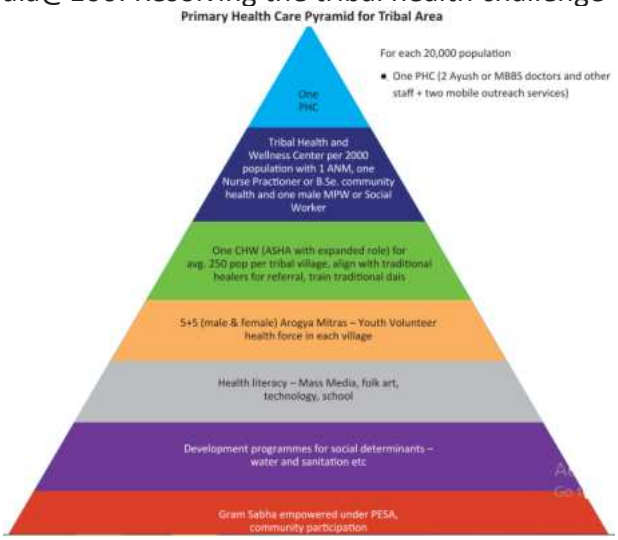

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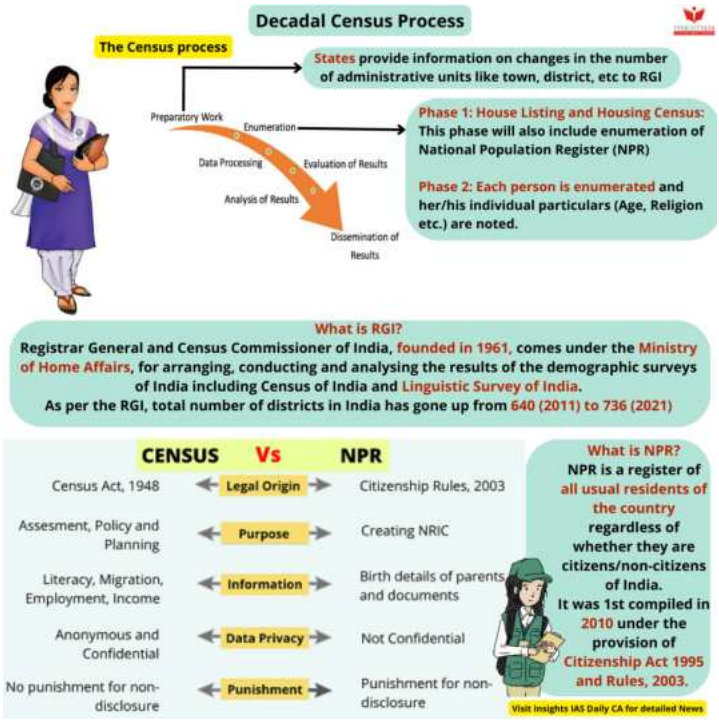

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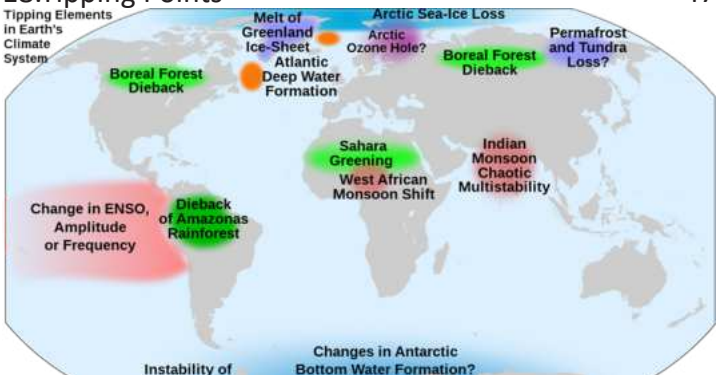

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GS PAPER 2

FUNCTIONS AND RESPONSIBILITIES OF THE UNION AND THE STATES, ISSUES AND CHALLENGES PERTAINING TO THE FEDERAL STRUCTURE

1. THE NATIONAL CAPITAL TERRITORY OF DELHI (AMENDMENT) ORDINANCE 2023

Context:

The President of India exercised legislative power under Article 123 of the Constitution to promulgate **The Government of National Capital Territory of Delhi (Amendment) Ordinance, 2023**.

Need to promulgate the Ordinance: The Ordinance negates a Constitution Bench judgment of the SC, that brought "services" under the Government of National Capital Territory of Delhi (NCTD).

The scope of the Court's verdict:

- While interpreting **Article 239AA(3)(a)**, the Court ruled that the Legislative Assembly of the NCTD has **jurisdiction over entries in List II (The State list) and List III (The Concurrent list),** *except* three entries in List II (public order, police, and land).
- **The Union of India** has executive power only over **these three entries in List II** over which the NCTD does not have legislative competence.
- Consequently, executive power over "**services**" (List II) can be exercised exclusively by the Government of the NCTD.

Key highlights of the Government of NCTD (Amendment) Ordinance 2023:

- **Creation of National Capital Civil Service Authority (NCCSA):**
  - It will be **headed by the CM of Delhi**, with the Chief Secretary and Principal Home Secretary of Delhi being the other two members.
  - It will make **recommendations to the Lieutenant Governor** (LG) regarding the transfer, posting, vigilance and other incidental matters wrt to AISs and DANICS serving the Delhi government.
  - All matters are required to be decided **by a majority of votes**. This means that the decision of the elected CM can be overruled by the two senior bureaucrats.
- **Role of LG:**
  - The L-G will pass orders to give effect to the recommendations passed by the NCCSA.
  - **In case the L-G differs from the recommendation** made, s/he may return the recommendation for reconsideration by the NCCSA. Therefore, the final decision will lie with the LG.

Changes brought by the Ordinance: It inserted "**services**" of List II into Article 239AA(3)(a), thereby expanding the scope of matters (under the control of the Union) **from 3 to 4**.

The Constitutionality of the Ordinance	
In terms of Article 368	**In terms of Articles 141 and 144**
The power conferred on Parliament (under Article 239AA) is to make fresh laws for giving effect to or supplementing the provisions contained in various clauses of Article 239AA.	When a Constitution Bench of the SC declares/interprets the law, **the same is binding on all courts and authorities in India**.
Therefore, **altering the scope of Article 239AA(3)(a) requires Constitutional Amendment** under Article 368.	**Articles 123, 141, and 144** are in Part V (The Union) of the Constitution. None has a non-obstante clause.
Consequently, the ordinance promulgated under **Article 123** to expand the scope of Article 239AA(3)(a) is **liable to be struck down**.	Therefore, Article 74 could not override Article 144.
Kumar Singh vs State of Bihar (2017): A seven-judge Bench of the SC held that the satisfaction of the President under Article 123 is **not immune from judicial scrutiny**; not a parallel source of law-making or an independent legislative authority.	

Conclusion:

The Union of India's decision to prefer review (Article 137) and promulgate an ordinance (Article 123) simultaneously is ill-conceived.

Important Articles of the Indian Constitution discussed above	
Article 74	It provides for a Council of Ministers which shall aid the President in the exercise of the President's functions.
Article 123	It empowers the President to promulgate ordinances during the recess of Parliament (when either/both the houses of the parliament are not in session).

Article 137	It deals with the review of judgments or orders by the Supreme Court.
Article 141	It stipulates that the law declared by the Supreme Court shall be binding on all Courts within the territory of India.
Article 144	All authorities, civil and judicial, in the territory of India, shall act in aid of the Supreme Court.
Article 239AA(3)(a)	The Legislative Assembly of the NCT can make laws on all the matters in the State List/Concurrent List [except police, public order and land].
Article 368	The Parliament may in the exercise of its constituent power amend by way of addition, variation or repeal any provision of the Constitution in accordance with the procedure laid down in this article.

Insta Links: Power to promulgate/re-promulgate ordinances

Mains Links:

Q. Whether the Supreme Court Judgement (July 2018) can settle the political tussle between the Lt. Governor and the elected government of Delhi? Examine. (UPSC 2018)

2. WATER DISPUTE BETWEEN ANDHRA PRADESH AND TELANGANA

Context:

The water dispute between Andhra Pradesh and Telangana, stemming from the **Krishna River,** remains unresolved even after **nine years since the bifurcation** of the combined state.

About the Dispute:

The dispute began with the **erstwhile Hyderabad and Mysore states** and later continued between successors Maharashtra, Karnataka and Andhra Pradesh. It originated from the **Gentlemen's Agreement signed in 1956**, which aimed to protect the **Telangana region's interests regarding water resources**. In 1969, the **Krishna Water Disputes Tribunal (KWDT)** was set up under the **Inter-State River Water Dispute Act, of 1956**, and presented its report in 1973. It divided water between **Karnataka, Maharashtra and Andhra Pradesh.**

After the bifurcation of the state, both states have proposed new projects (e.g., the project to increase **Krishna water utilization above the Srisailam Reservoir)** without proper clearance from **river boards and authorities** as required by the **Andhra Pradesh Reorganisation Act, 2014**. This led to **complaints and disputes** between the two states. Also, Telangana has been **pushing for an equal share**.

Legal Provisions:

The Andhra Pradesh Reorganisation Act, 2014 mandates for the **constitution of an Apex Council by the Central Government** for the supervision of the functioning of the **Godavari River Management Board and Krishna River Management Board**. The Apex Council comprises the **Union Water Resources Minister and the Chief Ministers of Telangana and Andhra Pradesh.**

Constitutional provisions:

Inter-State River Water Disputes: Under Article 262, Parliament may by law provide for the **adjudication of any dispute or complaint** with respect to the use, distribution and control of waters of any inter-state river and river valley. The Parliament enacted two laws, **the River Boards Act (1956) and the Inter-State Water Disputes Act (1956).**

About River board:

The River Boards Act provides for the establishment of **river boards by the Central government for the regulation** and development of inter-state rivers and river valleys. **A River Board is established** at the request of state governments concerned to advise them.

About Inter-State Water Disputes Act:

It empowers the Central government to set up an **ad hoc tribunal for the adjudication of a dispute** between two or more states in relation to the waters of an inter-state river or river valley. The decision of the tribunal **is final and binding on the parties** to the dispute. **Neither the Supreme Court nor any other court is to have jurisdiction** in respect of any water dispute which may be referred to such a tribunal under this Act.

Way forward:

To address water disputes effectively, it is **necessary to establish a permanent tribunal** with **Supreme Court's appellate jurisdiction** and **amend Article 262** and the Inter-State Water Disputes Act. Communication channels must be improved for **consensus-building**, and the central body should represent states adequately. The Ministry of Jal Shakti has issued a gazette notification **defining the jurisdiction of river management boards**, which can help overcome challenges. **Clear demarcation of power** for each state should be followed.

Other Inter-State River Water Sharing Disputes:

River (s)	States
Ravi and Beas	Punjab, Haryana, Rajasthan
Narmada	Madhya Pradesh, Gujarat, Maharashtra, Rajasthan

Krishna	Maharashtra, Andhra Pradesh, Karnataka, Telangana
Vamsadhara	Andhra Pradesh, Odisha
Cauvery	Kerala, Karnataka, Tamil Nadu, Puducherry
Godavari	Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh, Odisha
Mahanadi	Chhattisgarh, Odisha
Mahadayi	Goa, Maharashtra, Karnataka
Periyar	Tamil Nadu, Kerala

About	Description
Godavari River	The river (Source: Trimbakeshwar near Nasik; Length: 1465km) extends over the states of **Maharashtra, Telangana, Andhra Pradesh, Chhattisgarh and Odisha** in addition to smaller parts in Madhya Pradesh, Karnataka and the Union territory of Puducherry. Its **tributaries are**: Pravara, Purna, Manjra, Penganga, Wardha, Wainganga, Pranhita (combined flow of Wainganga, Penganga, Wardha), Indravati, Maner and the Sabri
Krishna River	**The river** (source: Mahabaleshwar (Satara); Length: 1400 km; third-longest river in India, after the Ganges and Godavari; fourth-largest in terms of water flows, after the Ganges, Indus and Godavari). It runs from four states **Maharashtra, North Karnataka and the rest of its journey** in Telangana and Andhra Pradesh before it empties into the Bay of Bengal. **Its tributaries** are Tungabhadra, Malaprabha, Koyna, Bhima, Ghataprabha, Yerla, Warna, Dindi, Musi and Dudhganga.
Srisailam project	It is constructed across the **Krishna River in Nagarkurnool district, Telangana and Nandyal district, Andhra Pradesh**. It is the **2nd largest** (1670 MW; after Koyna Dam 1960 MW) capacity working hydroelectric station in India. The dam was constructed in a deep gorge in the **Nallamala Hills.**

Insta link:
Krishna River water dispute

Mains Links:
Q. Write a critical note on the Krishna River water dispute and critically evaluate the successes of tribunals in resolving river water disputes in India. (250 Words)

Prelims Links:

Q. Consider the following pairs: (UPSC 2019)
Famous place River
1. Pandharpur Chandrabhaga
2.Tiruchirappalli Cauvery
3. Hampi Malaprabha

Which of the pairs given above are correctly matched?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: A

Q. Consider the following rivers: (UPSC 2015)
1. Vamsadhara
2. Indravati
3. Pranahita
4. Pennar

Which of the above are tributaries of Godavari?
(a) 1, 2 and 3
(b) 2, 3 and 4
(c) 1, 2 and 4
(d) 2 and 3 only

Answer: D

STRUCTURE, ORGANIZATION AND FUNCTIONING OF THE EXECUTIVE

3.POWER TO PROMULGATE/ RE-PROMULGATE ORDINANCES

Context:
To overturn a unanimous decision of the SC's Constitution Bench [which gave the Delhi govt control over services in the NCT], the central government has issued an Ordinance.

About the Ordinance:

- It gave the Lieutenant Governor of Delhi **power over services.**
- It established a **National Capital Civil Service Authority.**
    - The authority will comprise the CM and two senior IAS officials.
    - It would decide matters by majority votes - which **may lead to a situation in which the view of the elected CM could be overruled.**

Ordinance	
Meaning	It is a law enacted by the Executive (President in the case of Union and Governor in the case of State) **to meet extraordinary/urgent circumstances.**
Extraordinary/ urgent circumstances	**Article 123** of the Indian Constitution empowers the **President** [Article 213 - Governor] to promulgate Ordinances **during recess of Parliament.**
Article 123	If at any time, except when both Houses of Parliament are in session, the President is satisfied that **circumstances exist which render it necessary** for him to take immediate action, he may promulgate Ordinances.
Real authority that decides to bring the Ordinance	Under **Article 74**, the President acts on the advice of the Council of Ministers. Hence, it is in effect **the government that decides to bring the Ordinance.**
Effect	An Ordinance shall have the **same force and effect as an Act of Parliament**. However, the government is required to bring an Ordinance before Parliament for ratification.
Life	• If the government fails to get an Ordinance ratified by the Parliament, it will lapse at the **expiration of 6 weeks** from the reassembly of Parliament. Maximum life of an Ordinance = 6 months (recess) + 6 weeks • The Ordinance **may lapse earlier** - if the President withdraws it or if both Houses pass resolutions disapproving it (imply that the government has lost the majority.)
Criticism	• As lawmaking is a legislative function, Ordinance power is provided to meet urgent situations. • However, the governments adopt the Ordinance route to **bypass the legislature.** • **Repromulgation** of an Ordinance, which extends life of an Ordinance, allows the executive to further seize legislative power.

SC verdicts on the issue
• **RC Cooper Case 1970:** If an Ordinance is issued solely to bypass the Parliament, the President's decision to promulgate the Ordinance can be challenged. • **D C Wadhwa v. State of Bihar 1986:** If the Government ignores the legislature and repromulgate an Ordinance, it would be a colourable exercise of power. • **Krishna Kumar Singh v. State of Bihar 2017:** Reiterated that the Governor's power to issue an Ordinance is in the nature of an **emergency power.** Repeated re-promulgations without bringing the Ordinance to the legislature would be **unconstitutional**.

Insta Links: The ordinance route is bad, repromulgation worse

Mains Links:

Q. Resorting to ordinances has always raised concern on violation of the spirit of separation of powers doctrine. While noting the rationales justifying the power to promulgate ordinances, analyze whether the decisions of the Supreme Court on the issue have further facilitated resorting to this power. Should the power to promulgate ordinances be repealed? (UPSC 2015)

JUDICIARY

4.JUDICIAL RECUSALS

Context:

Calling it an attempt to indulge in **'bench hunting'**, a former SC judge refused to recuse himself from hearing a plea.

What is recusal?

- It is the act of declining to take part in an official activity, such as a court case because the administrative or court authority presiding over it has a **conflict of interest.**
- This **conflict of interest can arise** in many ways - from holding shares in a litigant company to having a prior or personal association with a party.

The practice of judicial recusals stems from:

- The cardinal principles of due process of law:
    - **Nemo judex in sua causa** - no person shall be a judge in his own case.
    - Justice must not only be done but must also be seen to be done.
- **The oath of office:** Both the SC and HC judges promise to perform their duties without fear or favour, affection or ill-will, in accordance with the **III Schedule** of the Constitution.
- **Restatement of the Values of Judicial Life adopted**

by the SC: It forbids a judge from deciding a case where he holds pecuniary interest unless the concerned parties clarify that they have no objections.

Recent instances of judicial recusals:

- **In the afore-mentioned case** involving a former IPS officer (Sanjiv Bhat), recusal was sought on the ground that there was a likelihood of bias since the same Judge, a Gujarat HC judge had reprimanded the IPS officer.
- **The CJI rejected an application** seeking his recusal from hearing petitions seeking legal recognition of same-sex marriages.
- **Justice Gita Gopi of the Gujarat HC** recused herself from hearing Rahul Gandhi's appeal seeking a stay on his conviction in the criminal defamation case.

Why do judges recuse?

- To prevent the perception that the judge was **biased** while deciding a case.
- When an appeal is filed in the SC against an HC judgment delivered by the concerned judge before his elevation.

What is the procedure for recusal?

- Although several SC judgments have dealt with the issue, **India has no codified rules** governing recusals.
- **There are two kinds of recusals** - automatic (where a judge himself withdraws from the case) or when a party raises a plea for recusal.
- The decision to recuse rests solely on the **conscience and discretion of the judge** and no party can compel a judge to withdraw from a case.
- If a judge recuses himself, **the case is listed before the Chief Justice for allotment to an alternate Bench.**

Do judges have to record reasons for recusal?

Since there are no statutory rules governing the process, **it is often left to the judges** themselves to record reasons for recusals.

Concerns:

- The majority of the time, the grounds for recusal are not made public, which endangers **judicial transparency.**
- However, the Delhi HC recently ruled that any investigation into the reasons for recusal would constitute **an interference with the course of justice.**

Rules formulated by the SC in the past:

- **Ranjit Thakur v. Union of India (1987):** To determine if a judge should recuse, what is relevant is the reasonableness of the apprehension of bias in the mind of the concerned party.
- **State of West Bengal v. Shivananda Pathak (1998)**: Judicial bias is a condition of mind which renders the judge incapable of impartiality in a particular case.
- **SC Advocates-on-Record Association v. Union of India (2015)**: Where a judge has a pecuniary interest, no further inquiry is needed to establish whether there is a 'real danger' of bias.
- **Indore Development Authority v. Manoharlal and Ors (2019)**: Merely having a legal opinion does not disentitle one from being impartial.

Practice in foreign jurisdictions:

- **The United State**s has a well-defined law on recusals, which details the grounds for recusal - financial or corporate interest, a case in which the judge was a material witness or a lawyer, and a relationship to a party.
- **The United Kingdom's law** laid down a standard to look at the likelihood of bias from the perspective of a fair-minded and reasonable observer.

Conclusion:

- **It is the judge's 'constitutional duty' to be 'transparent and accountable'** and therefore reasons must be indicated for recusal (Justice Kurien Joseph).
- There is a need for '**procedural and substantive rules** to deal with the growing frequency of recusal pleas (Justice Madan Lokur).

The practice of "bench hunting" refers to **petitioners attempting to have their cases** heard by a specific judge or court in order to obtain a favourable order.

STATUTORY, REGULATORY AND VARIOUS QUASI-JUDICIAL BODIES

5.NATIONAL HUMAN RIGHTS COMMISSION

Context:

For the 2nd time in a decade, the UN-backed **Global Alliance of National Human Rights Institutions (GANHRI)** deferred the accreditation of the National Human Rights Commission, India (NHRC-India).

GANHRI:

- Formerly known as the International Coordinating Committee of National Human Rights Institutions (NHRIs), **GAHNRI is a global network of NHRIs**.
- It is constituted as a **non-profit entity** (under Swiss law) and Secretariat support is provided by the Office of the UN High Commissioner for Human Rights (**OHCHR**).
- **It coordinates the relationship between NHRIs and the UN** human rights system.

The Paris Principles:

- They were defined in 1991 and were adopted by the UN Human Rights Commission (1992) and the UN General Assembly (**1993**).
- They provide the **international benchmarks against which NHRI can be accredited**.
- They set out **6 main criteria** that NHRIs are required to meet. These are:
  - mandate and competence;
  - autonomy from the government;
  - independence guaranteed by a statute or Constitution;
  - pluralism;
  - adequate resources; and
  - adequate powers of investigation.

Importance of GANHRI accreditation:

- Institutions accredited with "**A status**" means full compliance with the **Paris Principles**.
- It is the **only non-UN body** whose internal accreditation system grants access to UN committees - speaking rights and seating at human rights treaty bodies.

NHRC-India	
About	It is a **statutory** body established on 12 October 1993 (in conformity with the **Paris Principles**), under the **Protection of Human Rights Act (PHRA) 1993** [Amended in 2019].
Objective	**A watchdog** for the promotion and protection of the human rights of citizens of India. **The PHRA defines Human Rights** as the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India.
Composition (13)	• **A Chairperson**, who has been a Chief Justice of India or a Judge of the SC. • **1 member,** who is, or has been, a Judge of the SC. • **1 member**, who is, or has been, the Chief Justice of an HC. • **3 Members**, out of which at least one shall be a **woman** to be appointed from amongst persons having knowledge or practical experience in matters relating to human rights. • **7 ex officio members** - NCSC, NCST, NCBC, NCW, National Commission for Minorities, National Commission for Protection of Child Rights and the Chief Commissioner for Persons with Disabilities.
Appointment	• By the **President of India**, on the recommendation of a committee consisting of - The PM (Chairperson), The Union Home Minister, The LoP in the Lok Sabha, The LoP in the Rajya Sabha, The Speaker of the Lok Sabha, The Deputy Chairman of the Rajya Sabha. • The sitting Judge of the SC or sitting Chief Justice of any HC can be appointed only after **consultation with the CJI**.
Functions	
• The **protection** of human rights and recommend **measures for their effective implementation.** • **Enquiry into complaints of violation** of human rights or negligence in the prevention of such violation by a public servant. • **Studies treaties and international instruments** and makes recommendations for their effective implementation to the GoI. • **Review factors that inhibit** the enjoyment of human rights and recommend appropriate remedial measures. • **Undertake and promote research** in the field of human rights. • To visit jails and study the condition of inmates. • Engage in human rights education among various sections of society and **promote awareness** among the masses. • **Encourage the efforts of NGOs** and institutions working in the field of human rights literacy, etc.	

Why is the accreditation NHRC-India deferred?

- Lack of independence (political interference in appointments).
- Lack of diversity (in staff and leadership) and accountability.
- Insufficient action to protect marginalised communities, religious minorities, and human rights defend-

ers.
- Involving the police in probes into human rights violations.
- Poor cooperation with civil society.
- All of the above is contrary to the '**Paris Principles**'.

Way ahead:

- Its decisions **should be made enforceable** by the government.
- Members of NHRCs should include **civil society, human rights activists**, etc.
- NHRC should have its **independent investigating staff.**

Mains Links:

Q. Though the Human Rights Commissions have contributed immensely to the protection of human rights in India, yet they have failed to assert themselves against the mighty and powerful. Analysing their structural and practical limitations, suggest remedial measures. (UPSC 2021)

ISSUES RELATING TO DEVELOPMENT AND MANAGEMENT OF SOCIAL SECTOR/SERVICES RELATING TO HEALTH, EDUCATION, HUMAN RESOURCES.

6.INDIA@100: RESOLVING THE TRIBAL HEALTH CHALLENGE

Context:

As India celebrates its achievements, it must build a healthcare system that caters to tribal communities.

Since independence, India has made remarkable strides:

- As the world's **5th-largest economy** and a leader in the digital realm.
- **Demonstrating the ethos of Vasudhaiva Kutumbakam** - One World, One Family.
  - **For example**, through its **Vaccine Maitri initiative**, India provided over 60 million vaccine doses to nations across the world.

Challenges:

- **Equitable, affordable and quality** healthcare for 1.4 billion people.
- Finding a way to achieve this without disrupting the identities of tribals.

Healthcare issues faced by Tribal communities in India:

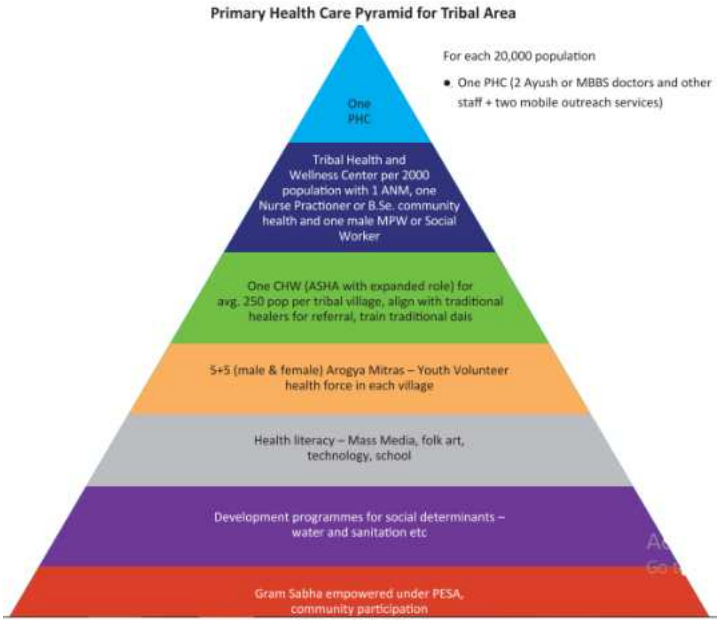
- They constitute **8.9% of the population** and remain the **most neglected and deprived group when it comes to access to healthcare**.
- For example, **the mortality rate in tribal areas is 44% higher than the national average**, and infant mortality is 63% higher [Ministry of Tribal Affairs].

Reasons behind poor health indicators among tribals:

They face multifaceted challenges - lack of infrastructure, medical professionals, connectivity, affordability, equipment, insurance, funding, etc.

Health schemes in tribal areas:

- **The National Health Mission (NHM):** It envisages the achievement of **universal access to equitable, affordable and quality healthcare services** that are accountable and responsive to people's needs.
- **Various initiatives supported under the NHM for better healthcare in tribal areas:**
  - **Ayushman Bharat-Health and Wellness Centres** (HWCs) are established as part of the Ayushman Bharat programme.
  - **National Free Drugs Service Initiative and National Free Diagnostic Service Initiative** have been rolled out.
  - **The ASHA programme** provides for recruitment of ASHA at habitation level, in hilly, tribal and difficult areas.
  - **National Ambulances Services under NHM** for free transportation of sick patients to the health facilities.
  - All tribal majority districts whose composite health index is below the State average have been identified as **High Priority Districts** (HPDs)



Way ahead:

- Urgent need to **empower** tribal communities and ensure they receive **equitable, affordable and accessible healthcare**.
  - This can be ensured by suitable **investments** (in medical colleges and training centres across such remote areas)**, public policy and governance.**
- Empowering tribal communities must be done **strategically**.
  - With a more **communitarian** social setup, an **underdeveloped economy** dependent on forest resources and **unique geographic conditions**, their health outcomes necessitate a unique approach.

Best practices:

- Mera Baccha Abhiyan:
  - It aims to fight malnutrition through **public participatio**n in Datia district, Madhya Pradesh.
  - As a result, the district witnessed a **drop in malnutrition rates (by 17.5%), rise in immunisation, breastfeeding and a drop in diarrhoea.**
- **Piramal Swasthya** - One of the largest implementing agencies of primary healthcare programmes in India:
  - It has over a decade's experience of **working with the tribal communities of Andhra Pradesh**, implementing its **unique community-based model**.
  - More recently, it has partnered with NITI Aayog to transform the health and nutrition systems in **25 Aspirational Districts** spread across 7 States of India.

Conclusion:

- As India moves towards **India@100**, the responsibility of providing healthcare (a fundamental human right) for all lies both with **private and government institutions**.
- Tribal communities can be empowered by inclusive leadership and investments in healthcare infrastructure, contributing to the UN SDGs.

Insta Links: Launch a national tribal health mission

7.ALL-IN-ONE INSURANCE POLICY PLAN

Context:

The **Insurance Regulatory and Development Authority** (IRDA) in India is working on **an all-in-one policy plan** to address the **low insurance penetration** in India.

Aim:

- To offer **an affordable bundled insurance product** that covers **health, life, property, and accident risks**.
- To **expedite claim settlements** by linking **death registries onto a common platform**
- To create a **"UPI-like moment" in insurance**, similar to the Unified Payments Interface (UPI) in the **banking sector**

Plan by IRDA (Bima Trinity of the policy):

- **Bima Sugam**: The portal will **integrate insurers and distributors**, providing customers with **a one-stop shop for purchasing insurance policies** and managing service requests and claim settlements. It will also be integrated with digitized birth and death registries
- **Bima Vistar:** It will be **bundled risk cover product**, which offers defined benefits for each risk and aims to provide **faster claim payouts** without the need for surveyors.
- **Bima Vaahaks**: The third component of the plan involves **deploying a women-centric workforce called Bima Vaahaks (carriers) in each Gram Sabha** (village council) to promote the benefits of insurance products.

Other plans:

- **State-level insurance committees**: To achieve the goal of providing **insurance coverage for all citizens by 2047**, the IRDA plans to establish **State-level insurance committees** and involve State governments in formulating **district-level insurance plans**.
- **Amendment to insurance laws** (Insurance Act, 1938) to allow **differentiated capital requirements** for niche insurers, attract more investments, and enable the addition of value-added services to insurance policies.

Benefits:

- It will provide citizens with an **affordable single policy** that covers health, life, property and accident
- **Settling claims within a short timeframe** (potentially within **six to eight hours** or a maximum of one day)
- Will allow **policyholders to easily access** their policies and submit death certificates, enabling quick processing and transfer of funds.

Issues with the current Insurance law: The current insurance laws in India **do not allow the inclusion of value-added services** along with **insurance policies**. For instance, insurance companies are **restricted from offering additional benefits** like an annual yoga membership or nursing services for policyholders' parents who live far away.

In 2022, India's **life insurance penetration** stood at around **3%**, while the non-life insurance penetration was much **lower at one percent**.

About IRDA: The Insurance Regulatory and Development Authority of India (founded 1999; HQ: Hyderabad) is a **statutory body** (under the **IRDA Act 1999**) and is **under the jurisdiction of Ministry of Finance and** is tasked with **regulating and licensing the insurance** and **re-insurance industries** in India.

Programmes for Social Security Cover

Context: Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY) and Atal Pension Yojana (APY) complete 8 years of providing social security cover

The three schemes were launched in May 2015, to ensure affordable insurance and security for people from the unorganized sector of the country.

Comparison of the three schemes:

Scheme	Pradhan Mantri Suraksha Bima Yojana	Pradhan Mantri Jeevan Jyoti Bima Yojana	Atal Pension Yojana
Type of Scheme	Accidental insurance	Life insurance	Pension scheme. The minimum pension is guaranteed by the Government.
Objective	To provide insurance against accidental death and disability at affordable rates	To provide life insurance at affordable rates	To provide a pension to unorganized sector workers
Eligibility Criteria	Age between 18 to 70 years	Age between 18 to 50 years	Age between 18 to 40 years
Insurance Coverage	Rs. 2 lakh for accidental death and full disability, Rs. 1 lakh for partial disability	Rs. 2 lakh for natural or accidental death	Depends on the contribution made by the subscriber
Premium	Rs. 12 per annum	Rs. 330 per annum	Depends on the age and contribution of the subscriber
Tax Benefits	No tax benefits are available	Tax benefits available under Section 80C	Tax benefits available under Section 80CCD
Achievement	More than 34 crore enrolment	More than 16 crore enrolment	More than 5 crore enrolment

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Insta Links:

- Insurance law review on cards to push for 'efficient use of resources'
- CHANGES IN GENERAL INSURANCE BUSINESS BILL

IMPORTANT ASPECTS OF GOVERNANCE, TRANSPARENCY AND ACCOUNTABILITY, E-GOVERNANCE

8.OPEN NETWORK FOR DIGITAL COMMERCE (ONDC)

Open Network for Digital Commerce

The Open Network for Digital Commerce (ONDC) is a government initiative aimed at transforming the e-commerce market in India by shifting from a platform-centric model to an open-network model.

Explanation

Let's imagine you want to buy a product online. You are registered on Amazon, but you find a better deal on Flipkart for the same product. In the current system, you wouldn't be able to purchase it from Flipkart because you're not registered there. But ONDC connects all the different e-commerce platforms together (similar to UPI in payment system), allowing you to compare and buy products from any platform without registering.

Benefits of ONDC	Challenges of ONDC
Level Playing Field for e-commerce operators. It promotes openness, transparency, interoperability, and innovations	Technological Complexity of Implementation
Wider digital market access for MSMEs and traders	Major e-commerce players hesitate to join ONDC due to loss of control, existing dominance, competitive disadvantage, infrastructure challenges, and control over pricing
Drives competition and innovation in various sectors	Limited benefits as sellers are already free to list their products across various e-commerce platforms even in today's platform-centric e-commerce model.
Increased freedom of choice for consumers—"Democratise e-commerce" and "provide alternatives to proprietary e-commerce sites".	Limited benefits as services such as price-comparison that are offered by various private websites, already bridge the information gap and help buyers make better decisions.
Creates a neutral and regulated platform	Lack of clarity on addressing customer complaints and returns

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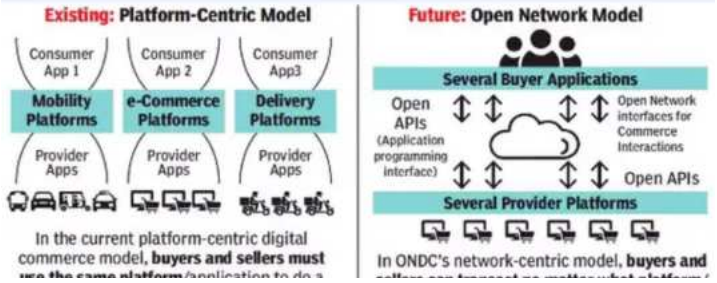
Open Network for Digital Commerce (ONDC)

Once ONDC is implemented, a user shopping on any app that is registered with the network will see products from the catalogs of multiple sellers — e-commerce apps, listed local stores, small merchants, among others— and can choose who they want to purchase from



Objectives of ONDC:

Democratization and decentralization of e-Commerce; Inclusivity and access for sellers; Increased choices and independence for consumers and making goods and services cheaper.

The way forward and Conclusion:

The success of the **Open Network for Digital Commerce (ONDC)** will depend on how efficient the listing of products from **various sellers is and maintaining the quality of services.** The government needs to focus on building a **better digital space, implementing a digital education policy, conducting a well-funded adoption campaign**, and providing a secured **single window for issue resolution**.

Insta links:

Open Network for Digital Commerce (ONDC)

Mains Link:

Q. Discuss the significance of ONDC. (150 Words)

Prelims Links:

Q. Consider the following: (UPSC 2022)

1. Aarogya Setu
2. CoWIN
3. DigiLocker
4. DIKSHA

Which of the above are built on top of open-source digital platforms?

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

Ans: D

ROLE OF CIVIL SERVICES IN A DEMOCRACY

9.CODE OF CONDUCT FOR CIVIL SERVANTS

Context:

Specially designed Conduct Rules govern a civil servant's behaviour and conduct.

What are the civil services?

- **There are 3 All India Services** (governed by Article 312 of the Indian Constitution) - the IAS, IPS and the Indian Forest Service (IFoS) - with officers allotted to various state cadres by the central government. The Centre then gets a certain percentage of officers from each state on **central deputation.**
- **Other services** are called Central Civil Services (such as the Indian Foreign Service, the Indian Revenue Service, Customs and Central Excise Service, etc). These are **under the central government with no state cadre system**.

Rules governing civil services:

- There are two sets of rules for civil servants - one for AISs (The AIS Conduct Rules, **1968**) and the other for CCSs (The CCS Conduct Rules, **1964**).
- These were framed based on recommendations of the **Committee on Prevention of Corruption headed by K Santhanam** - constituted in 1962.

Code of conduct highlighted in the rules:

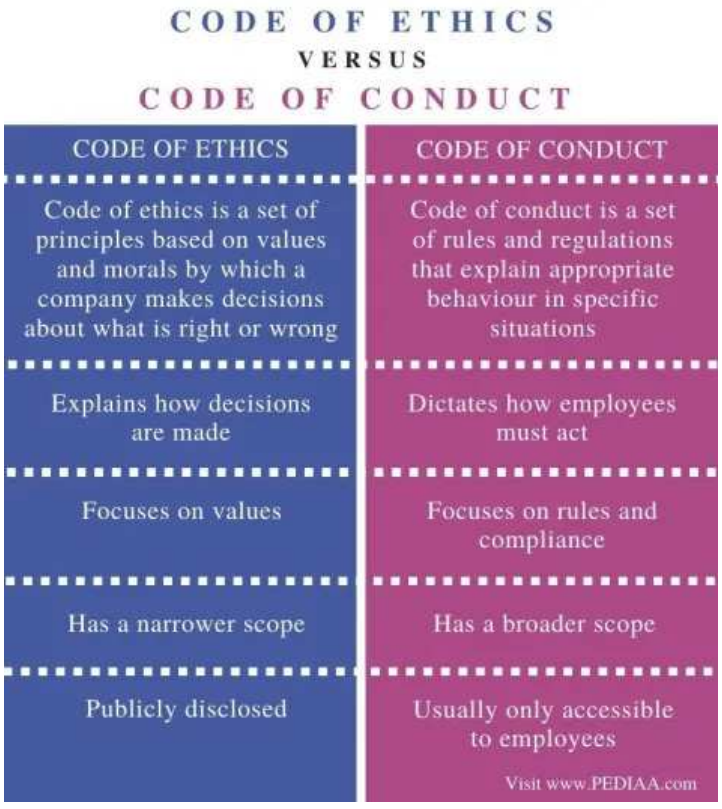
- Every member of the Service shall -
  - **Maintain high ethical standards**, integrity and honesty; political neutrality; accountability and transparency; fairness and impartiality; responsiveness to the public, etc.
  - **Use public resources efficiently,** effectively and economically; declare any private interests relating to his public duties to resolve any conflict of interest.
  - **At all times maintain devotion to duty**, and do nothing which is unbecoming of a member of the Service.
- No member of the Service shall -
  - **Use his/her position to secure employment** for any of his/her family members with any private undertaking/NGO;
  - Give or take or abet the giving or taking of **dowry.**
- **A member of the service may accept gifts** from his near relatives or friends having no official dealings with them.
  - But, he shall report to the government **if the value of such gift exceeds Rs.25,000.**
- While members can hold personal political beliefs, these rules restrict the degree to which they can act on them. **For example,** members not allowed -
  - To be part of, assist political parties; interfere with or take part in an election to any legislature or local authority.
  - To criticise any current policy or action of the government. However, civil servants are allowed to express their opinion on official documents.

Penalties for transgressions:

- Major penalties can include "**dismissal**" from the service as well.
- Besides, there are also the penal provisions mentioned under the **Prevention of Corruption Act (POCA).**

Issues with the Conduct Rules:

- **Vague:** For example, while the promotion of casteism is not covered under any specific Conduct Rules, casteist behaviour can be interpreted as "unbecoming of a member of the Service".
- **Ambiguous:** Ideas like personal integrity are not well defined. That is why evils like taking dowry are banned but seemingly common.
- There is no ethical code for civil servants in India.



Insta Links: PUBLIC SERVICE ETHICS/ADMINISTRATIVE ETHICS

Mains Links:

Q. Has the Cadre-based Civil Services Organization been the cause of slow in India? Critically examine. (UPSC 2014)

10.GENDER PARITY IN CIVIL SERVICES

Context:

In the Civil Services Exam of 2022, women secured the top four positions, and the percentage of **women candidates** recommended for services like IAS and IPS has risen from **24% to 34% since 2018,** indicating **an improvement in their participation** in the administration.

Status of Women in Civil Services:

- Despite progress over the years, women have comprised **only 13% of all Indian Administrative Service (IAS) officers** from 1951 to 2020.
- The proportion of women entering the IAS increased from 9% in 1970 to 31% in 2020, but currently, **only 21% of serving IAS officers are women**.

Challenges to equal participation of women in important positions include:

Challenges	Examples
Cultural and Family Expectations	Families may hesitate over **concerns about explaining years of preparation** if women do not succeed or face difficulty finding a **suitable groom**. **Distance and safety concerns** deter women from leaving home to study in big cities.
Limited Attempts and Lower Recruitment	Women tend to make **fewer attempts at competitive exams** compared to men. They are also less likely to take up powerful decision-making roles and more likely to **seek voluntary retirement**.
Biases and Limited Postings	Women face **biases and limited opportunities for promotions**. They are often assigned roles **overseeing cultural affairs, education, and welfare**, while men dominate urban development, law and order, and finance.
Double Burden of Family Responsibilities	Women officers face expectations to **balance work with traditional roles as wives and mothers, leading to career compromises**. The additional burden of domestic responsibilities hampers career growth.
Intersectionality	Gender disparities **vary across marginalized communities** and different states. Women from **marginalized communities face wider gender gaps among aspirants**.
Lack of Representation at Higher Leadership Positions	The first woman **foreign secretary was appointed in 2001** (Chokila Iyer) and the **first woman finance secretary** in 2011(Sushma Nath). India has **never had a woman cabinet secretary.** The share of women in top leadership positions in public administration is **significantly lower compared to countries** like Singapore, Australia, and Sweden.
Gender Equality	A **2021 UNDP global report on gender equality** in public administration reports that women's share of top leadership in India is only **12% compared to 29% in Singapore, 40% in Australia and 53% in Sweden.**

Measures to increase women's participation in Indian civil services:

Measure	Examples
Awareness and Outreach	Conducting **career counselling sessions** in schools and colleges to educate young girls about civil services; Organizing **awareness campaigns** through media platforms to **highlight success stories of women civil servants.**
Gender Sensitization	Implementing **mandatory gender sensitization training** for recruitment boards and existing civil servants; Establishing a **code of conduct** that promotes an **inclusive and respectful work environment**.
Exam Reforms	**Reviewing the syllabus** to ensure it is free from **gender biases** and reflects diverse perspectives
Coaching and Preparation Support	Providing **scholarships and financial assistance** specifically for women candidates to avail coaching programs; Establishing **online platforms that offer study materials,** mock tests, and mentorship to women preparing for civil services exams.
Family Support and Social Norms	Conducting awareness campaigns to **challenge gender stereotypes** and encourage families to support their daughters' aspirations.
Special Recruitment Drives	Implementing targeted recruitment drives to increase women's representation in civil services

Work-Life Balance	Introducing **flexible working hours and telecommuting options** to accommodate the needs of women civil servants. Establishing onsite **childcare facilities** or providing **subsidies for childcare expenses**.
Sensitization of Existing Civil Servants	Encouraging **male civil servants to actively support gender equality** and act as allies for their female colleagues.
Transparent Promotions and Career Progression	Ensuring **merit-based promotions and career progression** opportunities for women civil servants.
Monitoring and Reporting	Publishing **gender-disaggregated data on recruitment**, representation, promotions, and retention to identify gaps and measure the effectiveness of interventions.

Conclusion:

Gender equality in public administration is crucial for an **inclusive and accountable government** that serves diverse public interests. To achieve gender parity in the bureaucracy, a shift in **societal attitudes and family support** is essential. Encouraging girls from an early age to consider the IAS as a serious career choice and providing adequate support and resources can help address the gender diversity problem.

Insta Links

Issues Related to Women

Mains Links

Q. Bring out the issues and challenges in increasing women's participation in higher positions in Indian Civil Services. (250 Words)

BILATERAL, REGIONAL AND GLOBAL GROUPINGS AND AGREEMENTS INVOLVING INDIA AND/OR AFFECTING INDIA'S INTERESTS.

11.QUAD COOPERATION IN BIOTECHNOLOGY

Context:

In order to give the necessary fillip to enhance Quad cooperation in biotechnology, India should be an ideal choice for the establishment of a **Quad-led biomanufacturing hub.**

Background:

- In **2021**, the Quad set up a **Critical and Emerging Technology Working Group** to facilitate cooperation related to developments in critical and emerging technologies, including **biotechnology**.
- However, the Quad countries do not collaborate enough in biotechnology yet.

Biomanufacturing:

- **Meaning:** It uses living systems, particularly microorganisms and cell cultures, to produce molecules and materials on a commercial scale.
- **Potential:**
  - It can transform the global industrial system, with up to 60% of physical inputs to the global economy.
  - Countries like the **US and China** have designed specific policies to shape their bio-economies.

Case of India:

- The National Biotechnology Development Strategy envisions the country as a "Global Biomanufacturing Hub" by 2025.
- While the strategy sets a target of **$100 billion for the hub**, it is important to recognize that India's ambitions require **external support.**

India's strengths:

- Existing infrastructure, pharmaceutical manufacturing expertise, and **skilled manpower**.
- India is among the **top performers** in the field of biomanufacturing in both the quality of research and research publications.
- India also has **significant potential in low-cost bio-**

manufacturing (33% lower than the U.S.), particularly in the production of enzymes, reagents, research materials, and equipment.

Challenges:

- India **still requires significant capability and capacity uplifts** to become a world leader.
- **China** has expressed its intention to capture this market, similar to how it dominated small-molecule **active pharmaceutical ingredients** (APIs).
- Such dependence on the biomanufacturing sector will be **detrimental to both India and the Quad.**

How does Quad complement these strengths?

- **The U.S.** has significant funding capability.
- **Japan, Australia and the U.S.** possess advanced biotechnology innovation ecosystems and intellectual property.

Advantages of the proposed hub for India and Quad:

- Can help facilitate technology transfer,
- Connect investors,
- Establish a biomanufacturing fund that is administered through the Quad,
- Support efforts to reduce dependency on China.

Way ahead for India:

- **Strengthening physical infrastructure.**
- **A scheme** on the line the PLI scheme allocated $2 billion to the pharmaceutical sector to make biopharmaceuticals, APIs, etc.
- **Boosting the workforce** by enabling access to cutting-edge technology and training, with a focus on commercialising R&D.

Conclusion:

- The proposed hub in India can **capitalise on the economic potential** of the biomanufacturing industry and **address existing and potential vulnerabilities** in the global system.
- **Through cross-Quad collaboration**, India may emerge as a major force in the field of biomanufacturing and assist the Quad in competing in this key area.

Insta Links: India's Biotech Sector

Mains Links:

Q. 'Quadrilateral Security Dialogue (QUAD)' is the transforming itself into a trade bloc from a military alliance, in present times – Discuss. (UPSC 2020)

12. FORUM FOR INDIA PACIFIC ISLANDS COOPERATION (FIPIC)

Context:

Addressing the opening session of the **FIPIC-3 summit** (in Port Moresby, Papua New Guinea/PNG), the PM of India highlighted the importance of the 14 members of the FIPIC.

The Pacific Island Countries (PICs):

- It consists of the 3 major groups of islands: **Melanesia, Micronesia and Polynesia,** and commonly refers to the **14** countries scattered in the South-West Pacific Ocean.
- **These are the** Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Samoa, the Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu.
- The region comprises **strategically located** (at the crossroads of significant maritime trade routes) **small island nations**, with small populations and **resource-rich Exclusive Economic Zones (EEZs)**.
- Their profile is rising particularly given the popularity of the **Indo-Pacific construct.**

India's engagement with the PICs:

- **In the early 19th century**, Indian workers were taken to the region to work as indentured plantation labourers and most of whom settled particularly in Fiji and PNG.
- **After independence**, the region did not find much significance in India's foreign policy.
- However, the changing geopolitical scenario and strategic and economic compulsions, rising naval capabilities have driven India **to refresh and redesign its Pacific policy.**
- India's renewed interest can also be seen in the light of its own **rechristened Act East policy**.

- At this moment, the total annual trade between India and PICs is about **$300 million –** exports are around $200 million and imports are around $100 million.

The Forum for India-Pacific Islands Cooperation (FIPIC):

- It was launched during the PM of India's visit to Fiji in **2014** and **includes 14 of the PICs.**
- The FIPIC initiative marks a serious effort to expand (from the Indian Ocean) India's **strategic and commercial interests** in the **Pacific region**.

India's major assistance projects in the PICs:

- Setting up **a special USD 1 million fund** for adapting to climate change and clean energy, **establishing a trade office in India**, Pan Pacific Islands **e-network** to improve digital connectivity.
- India has **increased the annual "Grant-in-Aid"** from USD 125,000 to 200,000 to each of the 14 PICs for community projects of their choice, and **launched a new Visitors Programme for PICs**.
- At the FIPIC-2 (Jaipur, 2015), FICCI launched the **Business Accelerator** for FIPIC to provide necessary information and facilitation to businessmen on both sides.

The advantage to India: Presence of a sizable Indian Diaspora – nearly 40% of Fiji's population is of Indian origin and about 3000 Indians live in PNG.

Challenges: India's interaction with the PICs **still largely revolves around its engagement with Fiji and PNG.**

Way ahead:

- **Climate change** is a crucial area of common concern where closer partnerships can be developed for effective and concrete solutions.
- For India, it is important to develop **a comprehensive and clearly defined strategy to engage with all the PICs.**

Conclusion:

- The PM of India (at the FIPIC-3) called PICs "**large ocean states**", highlighting their strategic-commercial importance for India.
- The recent efforts have brought India much closer to PICs and to further strengthen its ties, **India should assist the development goals of the PICs.**

13.G7: DE-RISKING AND EFFECTIVE CLIMATE ACTION

Context:

The 49th annual summit (Hiroshima, Japan) of the G7 leaders concluded recently.

Highlights of the summit:

- G7 countries said that they would **build economic resilience** for themselves, based on a strategy of **diversifying and deepening partnerships and de-risking, not decoupling**.
- G7 acknowledged the urgency for effective climate action but offered little in terms of scaled-up action.

What does de-risking and decoupling mean?

De-risking	Decoupling
To **move business away from areas** that are considered risky in terms of the returns they could generate.	It is used as an alternative to an economic boycott **to reduce correlation between markets.**
To have **resilient, effective supply chains** to prevent coercion of any other country.	

Why was 'de-risking' used by G7 countries? To describe their stance towards China on economic matters.
De-risking in the context of China: It can be **interpreted as a reduction of the reliance on China** in the economic sphere - for the supply of materials or as a market for finished goods, so that potential risks to trade and disruption of supply chains are reduced.

G7 on effective climate action	
Need	• **The 1.5 degree Celsius threshold** was likely to be temporarily breached over the next five years (WMO). • Surpassing 2016, **2023 is on track to become the warmest ever**. • **The probability of occurrence of heat waves** in India and neighbouring countries has increased by 30 times due to global warming.

Milestones listed for effective climate action	• **A global peak by 2025:** The G7 claimed that their GHG emissions had already peaked, and asked all major economies (India, China, Brazil, South Africa, and Russia) to ensure that their individual emissions peak by 2025. • **Net-zero by 2050:** It is essential in order to meet the 1.5 degree Celsius target. The G7 asked all major economies to come up with detailed road maps to reach the target. • **Eliminating "inefficient fossil fuel subsidies" by 2025.**
Challenges in meeting the milestones	• **The 2025 peak year** is not mandated under the Paris Agreement. **India** has indicated that its emissions will grow in the next decade as well. **China**, the world's largest emitter, would peak only towards the end of this decade. • **Only Germany** (among the major emitters like the US, EU) has said it would attain net-zero status by 2045. • **China** would turn net-zero in 2060, while **India** has set 2070 as the target. Some other countries. • **The G7 countries put no deadline to ending the use of fossil fuels.**

Insta Links:

Clean-tech as the next big thing in rural India

EFFECT OF POLICIES AND POLITICS OF DEVELOPED AND DEVELOPING COUNTRIES ON INDIA'S INTERESTS, INDIAN DIASPORA.

14.INDIAN DIASPORA: SRI LANKA'S MALAIYAHA TAMILS

Context:

The Malaiyaha Tamil community in Sri Lanka has released a declaration calling for **greater recognition, political rights, and improved living and working conditions**.

Who are Malaiyaha Tamil community?

The Malaiyaha Tamil community refers to a **historically marginalized group** in Sri Lanka who migrated from southern India **around 200 years ago** to work in British-run plantations. They mainly work in **tea and rubber estates**, contributing significantly to Sri Lanka's foreign exchange earnings. Their population is roughly **around 10 lakhs** (out of which around **1.5 lakh people** work in tea and rubber estates)

Problems faced by the Malaiyaha Tamil community in Sri Lanka:

Problems	Specific Examples
Structural Exclusion	Limited access to **resources and opportunities** compared to other communities. **Poor human development indices** compared to other communities.
Discrimination and Exploitation	Deprived of **citizenship rights until 2003**. Subjected to **discrimination and exploitation** in various aspects of life.
Inadequate Living Conditions	Many families still reside in **colonial-era line rooms** without basic amenities. A UN body highlighted in 2021 that the community is living in **"inhumane and degrading" conditions**
Economic Distress	The financial crisis in Sri Lanka further exacerbated their economic hardships. **More than half the population** living in estate areas is pushed into **acute poverty.**
Low wages	Their daily wage of **LKR 1,000 (about ₹373**) is tied to the target of **18-22 kg of plucked tea leaves every day**, while braving leeches and wasp attacks.
Limited Political Representation	**Lack of recognition** as a distinct identity and equal citizens. Demand for **appropriate political power** sharing and proportional electoral arrangements.

To alleviate these problems, the Malaiyaha Tamil community has released a declaration demanding the following:

- **Design, resource, and implement a 10-year development plan** based on affirmative action to address decades of structural exclusion.
- **Reduce poverty, provide land and housing**, and enhance public health and education access.
- **Ensure labour rights**, including fair living wages and legal protection.
- Recognize the Malaiyaha Tamils as a community with a **distinct identity** and **equal citizenship.**
- Establish appropriate **political power sharing** and a proportional system of electoral arrangements.

Assistance provided by India:

- Grant projects cut across sectors such as **education, health, livelihood, housing, and industrial** development.

- The **Indian Housing Project** aims to build **50,000 houses in war-affected** areas and estate workers in the plantation areas. However, the progress on it has been slow.
- India now offers **about 710 scholarship slots** annually to Sri Lankan students.
- The reconstruction work of a **century-old railway track** in **northern Sri Lanka** under India›s assistance

Conclusion:

India and the International community must pressure Sri Lanka into providing the community with **greater recognition, political rights, and improved living and working conditions** through affirmative action and long-term development plans.

Insta Links

Sri Lankan Tamils issue

Mains Links

Q. 'Indian diaspora has a decisive role to play in the politics and economy of America and European Countries. Comment with examples. (UPSC CSE 2020)

IMPORTANT INTERNATIONAL INSTITUTIONS, AGENCIES AND FORA-THEIR STRUCTURE, MANDATE.

15.76TH WORLD HEALTH ASSEMBLY

Context:

The 76th World Health Assembly (WHA) is being held in Geneva (Switzerland) with the theme: **WHO at 75: Saving lives, driving health for all**.

WHO and WHA:

- **WHO:** Since 1948, the World Health Organization (WHO) - the UN specialized health agency, leads and championed global efforts to give everyone, everywhere a safe and healthy life.
- **WHA:** It is the **main decision-making body** of WHO and comprises **194 Member States**. Every year, delegates from all Member States come together (generally in May) to agree on the Organisation's priorities and policies.

Highlights of the 76th WHA:

1. Health for All: Transforming economies to deliver what matters report:

- It was launched by the WHO Council on the Economics of Health for All - formed in 2020 in response to the COVID-19 pandemic.
- The report provides **a roadmap to focus on the links between health and sustainable, inclusive and innovation-led economic growth.**

It recommended reorienting economies to deliver health for all across four interrelated themes:

Significance:

Instead of health for all being seen as the servant of economic growth → **roadmap will structure economic activity** in a way that will allow all people faster with better access to essential health services.

2. Pandemic treaty:

- Negotiations on **new rules for dealing with pandemics** are underway at the WHA.
- The WHO already has binding rules known as the **International Health Regulations** - adopted in **2005 after the SARS outbreak.**
- These regulations are still considered appropriate for **regional epidemics**, such as Ebola but inadequate for a global pandemic.

What is the so-called Pandemic treaty?

- It should be a **legally binding** treaty (proposed by the EU and to be adopted by May 2024) for those who sign up.
- It would be **only the second such health accord** after the **2003 Framework Convention on Tobacco Control** - a treaty that aims to reduce smoking via taxation and rules on labelling and advertising.
- **Developing countries**, especially in Africa, are keen to use the negotiations to secure better access to vaccines.
- However, the proposed treaty has come under fire as **critics warn that it could lead to countries ceding authority to the WHO**.

Insta Links: WHO's the pandemic treaty

Mains Links:

Q. Critically examine the role of WHO in providing global health security during the COVID-19 pandemic. (UPSC 2020)

GS PAPER 3

INDIAN ECONOMY

1.GST HAS BEGUN TO SHOW SUSTAINED GROWTH

Context:

The article highlights the **trend in tax collection in India post-Covid**, specifically focusing on direct taxes and GST.

Direct Tax Vs GST

Direct Tax	GST
Direct tax refers to the taxes imposed on **individuals and entities** (levied directly on the taxpayer) based on their income, profits, or assets. It includes taxes like income tax, corporate tax, and wealth tax.	GST (Goods and Services Tax) is an **indirect tax levied on the supply of goods and services**. GST is a **consumption-based tax** that is charged at each stage of the supply chain, from production to the final sale.
During COVID, direct tax experienced a decline of nearly 10% but then saw a growth rate of **49% in 2021-22 and 18%** in 2022-23.	The **recovery in GST collection has been better compared to direct taxes.**
While the **growth of corporation tax** has been high, personal income-tax collection has declined.	**Better recovery in GST has been due to:** a) e-invoicing and procedural simplification, b) better compliance procedures, c) the rising inflation rate and d) the rise in import duties

About GST:

GST (introduced **on July 1, 2017) is a** multi-stage collection mechanism and aims to be a **unified indirect tax** across the country on products and services. The objectives of GST include **simplifying the tax system, preventing misclassifications and litigations**, avoiding an **inverted duty structure**, and ensuring a destination-based consumption taxation approach.

Implementation:

GST is implemented through a **dual GST model**, with the **Centre and States levying taxes** on a common base. The rates for GST range from **5%, 12%, 16% and 28%,** and it applies to most goods and services**, excluding alcoholic liquor for human consumption and five petroleum products (**petroleum crude, motor spirit (petrol), high-speed diesel, natural gas and aviation turbine fuel**).** The **GST Council**, headed by the Union Finance Minister, is the governing body responsible for making key decisions regarding GST.

Achievements of GST:

Achievement	Explanation
High GST revenues	GST revenues have shown a **high growth rate** (constantly reaching over 1.5 Lakh crore a month collection)
Technological achievements	The **GSTN, the technology platform for GST**, has been successfully stabilized, ensuring smooth operations and transactions.
E-invoicing implementation	Mandating **e-invoicing for businesses above Rs 100 crore** has improved invoice matching and detection of **fake invoices,** enhancing tax compliance.
Improved tax compliance and enforcement	E-invoicing, e-waybill and online processes have **improved tax compliance and enabled better enforcement,** reducing instances of fraud and disputes.
Reduction in transaction costs	GST has **significantly reduced transaction costs**, making business operations more efficient and cost-effective.
Removal of hidden and embedded taxes	By removing hidden and embedded taxes, GST has improved the **competitiveness of domestic industries** in the global market.
Seamless tax credits	The system of **seamless tax credits** throughout the value chain and across state boundaries has **minimized the cascading effect of taxes.**

Challenges/Limitations of GST:

Challenge	Explanation
Refund delay issues	There are concerns regarding **delays in export refunds**, impacting businesses reliant on timely refunds under the GST regime.
Rate differentiation	The presence of **multiple tax rates is seen as inefficient** for targeting benefits to the poor, leading to complexities and potential disparities in the tax system.
Lack of dispute redressal mechanism	The **absence of a statutory mechanism for uniform rulings by authorities** has resulted in a lack of clarity and consistency in resolving disputes under the GST regime.

Constant amendments	The **frequent amendments made to the GST law** have caused confusion among taxpayers and tax administrators, leading to misunderstandings and misconceptions.
Adaption and technical issues	**Small and medium businesses face challenges** in adapting to the tech-enabled GST regime, with IT glitches affecting the seamless flow of input credits and ease of compliance.
Complex penalties	Businesses often face **difficulties in monitoring vendor behaviour and believe they should not be penalized** for compliance deficiencies of their vendors after paying GST amounts.
15th Finance Commission concerns	The 15th Finance Commission has highlighted additional concerns, including the **multiplicity of tax rates**, shortfalls in GST collections, volatility in collections, and inconsistencies in return filing. The dependency of states on compensation from the centre is also a concern.

Conclusion:

Anti-profiteering measures and compliance procedures in GST need to be streamlined to ensure cost efficiency and price reduction benefits reach the common man. A group of ministers has proposed the **removal of exemptions on various services**, aiming to bring uniformity and broaden the tax base under GST.

Insta Links:

Decriminalisation of offences under GST

Mains Links

Q. Explain the rationale behind the Goods and Services Tax (Compensation to States) Act of 2017. How has COVID-19 impacted the GST compensation fund and created new federal tensions? (UPSC 2020)

Q. Enumerate the indirect taxes which have been subsumed in the Goods and Services Tax (GST) in India. Also, comment on the revenue implications of the GST introduced in India in July 2017. (UPSC 2019)

Prelims Links:

Q1. Consider the following items: (UPSC 2018)

1. Cereal grains hulled
2. Chicken eggs cooked
3. Fish processed and canned
4. Newspapers containing advertising material

Which of the above items is/are exempted under GST (Goods and Services Tax)?

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

Answer: C

Q. What is/are the most likely advantages of implementing 'Goods and Services Tax (GST)'? (UPSC 2017)

1. It will replace multiple taxes collected by multiple authorities and will thus create a single market in India.
2. It will drastically reduce the 'Current Account Deficit' of India and will enable it to increase its foreign exchange reserves.
3. It will enormously increase the growth and size of the economy of India and will enable it to overtake China in the near future.

Select the correct answer using the code given below:

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

Ans: A

INFRASTRUCTURE: ENERGY, PORTS, ROADS, AIRPORTS, RAILWAYS ETC.

DECARBONISING TRANSPORT SECTOR

Context:

According to the **ITF Transport Outlook 2023**, acting now and decarbonising transportation can help in achieving the goals of the 2015 Paris Agreement.

The ITF Transport Outlook 2023: It was released by the International Transport Forum (ITF) at the **Leipzig Transport Summit**.

ITF: It is a **think tank** (administratively integrated with the OECD yet politically autonomous) for transport policy that organises the Annual Summit of transport ministers.

Leipzig (Germany) Transport Summit:

- Transport ministers from across 64 member coun-

tries of the ITF gathered under the event theme of **'Transport Enabling Sustainable Economies'.**

- **The United Kingdom** holds the current Presidency of the annual Summit.

Highlights of the ITF Transport Outlook 2023

- If action to decarbonise transport is accelerated, the transport sector can still **reduce its CO2 emissions by about 80% over the next 25 years** (compared to 2019).
- This drop will enable **limiting the global temperature increase** to "well below" 2 degrees Celsius above pre-industrial levels - the Paris Agreement goal.

Reaching this high-ambition scenario requires:

- A combination of **complementary policies** that avoid unnecessary transport activity.
- **Shift to no-carbon transport** and improve the efficiency of transport.
- Scale up **cost-competitive technologies** and fuels to move people and goods with fewer emissions.

Advantage of reaching this high-ambition scenario:

The total capital investment needs of core infrastructure (road, rail, airports and ports) will be 5% lower with ambitious policies in place than carrying on with business as usual.

Policy recommendations:

Initiatives:

- **The Decarbonising Transport initiative of the ITF:** Promotes carbon-neutral mobility to help stop climate change.
- **India:**
  - **Forum for Decarbonizing Transport:** Launched by NITI Aayog and WRI India, the project aims at bringing down the peak level of GHG emissions (transport sector) in Asia.
  - **EVs:** National Electric Mobility Mission Plan, FAME Scheme, Incentives under PLI Scheme, etc.
  - Alternative fuels (CNG, etc), Ethanol blending, hybrid vehicles, BS (VI) norms, etc.

Insta Links: Decarbonizing Transport Project

SCIENCE & TECHNOLOGY

3.DECENTRALISED RENEWABLE ENERGY (DRE) TECHNOLOGIES

Context:

According to a new report, technologies that are powered by DRE could potentially impact 37 million livelihoods in India's agriculture and textile sectors.

DRE: Energy that is **generated close to where it will be used** and typically uses renewable energy sources, including small hydro, combined heat and power (CHP), biomass, solar and wind power.

DRE technologies include: Solar-run textile manufacturing units, biomass-powered cold solar storages and micro solar pumps, etc.

Current status in India:

DRE-powered technology	Existing installations (numbers)	Estimated livelihood impacted
Higher capacity pump	520,000	520,000
Silk-reeling machine	14,000	14,000
Dryer	8,000	16,000
Charkha	2,000	2,000
Micro pump	1,500	1,500
Small horticulture processor	600	1,200
Small refrigerator/deep freezer	500	500
Cold storage	350	10,500
Vertical fodder grow unit	210	737
Grain-milling machine	100	200
Loom	70	140
Bulk milk chiller	50	50
Total	**547,380**	**566,827**

Source: Authors' compilation

- India has **12 mature technologies** powered by DRE.
- There are **5.5 lakh installations** of these 12 technologies, with an estimated **livelihood impact of 5.6 lakh people.**

Potential:

- DRE has a market potential of **Rs 4 lakh crore in rural and peri-urban communities** in India and can impact 37 million livelihoods.
- **Solar-powered technologies** have the maximum potential to be deployed (**UP** leads in terms of estimated future adoption).
- **Solar pumps** are the most mature technologies due to the government subsidies provided.

Positive impacts of using DRE technologies:

Source: Authors' analysis

Barriers to DRE tech adoption:

- **The commercial viability** of such solutions, which are **capital intensive** in nature.
- One barrier faced by the users is the **lack of direct contact with the manufacturers** to address technology defects.

Way ahead:

- **Assessment of demand:** It will help in mapping the needs of beneficiaries with appropriate fit to DRE livelihood applications.
- **R&D and standardisation:** To offer tailor-made solutions important for their widespread adoption.
- **Pilot and up-scaling:** It is vital to ascertain the success of any technology innovation on the ground.
- **Access to finance:**
  - Introducing long-period, low-interest loans to users to enable ease of adoption of such solutions.
  - **State Rural Livelihoods Missions** (SRLMs) can leverage their existing institutional set-up to provide financial support for the women SHG members.
- **Skill development and capacity building:**
  - This has the potential of creating new local job opportunities in operations, maintenance and installation/fabrication.
  - Linkages will be established in existing government schemes like **MUDRA to support micro-entrepreneurship** in the value chain for DRE livelihood applications.
- Public information and awareness

HEALTH

4.INDIAN PHARMA INDUSTRY

Context:

The article emphasizes the need to **improve India's drug regulatory regime** to ensure credibility in the pharmaceutical industry.

Status of India's pharmaceutical industry:

Generic medicines	India is the **largest manufacturer of generic medicines** globally (valued at US$50bn currently and expected to reach US$130 Bn by 2030)
India's ranking in production	Indian Pharma **ranks third in pharmaceutical production** by volume. India is often referred to as the '**pharmacy of the world'**
Vaccine supplier	India is the **largest vaccine supplier** in the world by volume (over 50% of all vaccines manufactured in the world)
Major pharmaceutical hubs in India	Vadodara, Ahmedabad, Ankleshwar, Vapi, Baddi, Sikkim, Kolkata, Visakhapatnam, Hyderabad, Bangalore, Chennai, Margao, Navi Mumbai, Mumbai, Pune and Aurangabad, Pithampur.

Various issues associated with regulating the pharmaceutical industry in India:

Issues	Description	Example
Quality control failures	Instances of **contaminated medicines and substandard drugs** raise concerns about product safety.	Contaminated medicine causing deaths in **Gambia or Uzbekistan (2022)**
Intellectual Property Rights (IPR)	Allegations of **violating IPR laws**	Patent infringement case between **Roche and Cipla.**
Pricing and affordability	Challenges in **balancing the need for affordable medicines** for the poor with the profitability of pharmaceutical companies.	Concerns by pharma companies overpricing of drugs within **National List of Essential Medicines (NLEM)**

Healthcare infrastructure and access	Issues related to inadequate healthcare infrastructure, uneven distribution of facilities, and low insurance coverage.	Limited access to healthcare in rural areas of the country.
Global reputation	Maintaining a strong global reputation as a reliable supplier of high-quality pharmaceutical products.	**Global Pharma Healthcare** had to recall a batch of eye drops exported to the **US due to links with vision loss (Feb 2021)**
Regulatory framework	India has 36 drug regulatory bodies causing confusion and non-effective enforcement of regulations.	
Transparency and credibility	Lack of public disclosure of drug application reviews.	
Environmental sustainability	E.g., Implementing green chemistry and waste reduction measures has been found to be non-existent.	

In India, drugs and cosmetics are regulated by:

- **Act: Drugs and Cosmetics Act, 1940 and Rules 1945:** It assigns various responsibilities to central and state regulators.
- **Agencies:**
  - **Drugs Controller General of India (DCGI)**: It is responsible for approving licenses for **specified categories of drugs**, setting standards for manufacturing, sales, import, and distribution of drugs in India, and heads the department of CDSCO.
  - **Central Drugs Standard Control Organisation (CDSCO)**: It prescribes standards for ensuring the safety, efficacy, and quality of drugs, cosmetics, diagnostics, and devices. It also regulates the **market authorization of new drugs** and **clinical trial standards.**
  - **National Pharmaceutical Pricing Authority (NPPA):** It controls the pricing of pharmaceutical drugs in India

Steps that can be taken by the government:

Steps	Description
Amend the Drugs and Cosmetics Act (1940)	Modify the existing legislation to align it with **current requirements** and enhance regulatory oversight.
Create a centralized drug database	Establish a comprehensive database to facilitate **effective surveillance** of all pharmaceutical manufacturers.
Merge India's 36 regional regulators	**Consolidate the regional regulatory authorities** into a unified entity to streamline the regulatory process and reduce the risk of inconsistent enforcement.
Set common quality standards across states	Implement uniform **quality standards across all states** to ensure consistent product quality and reduce the risk of varying regulatory enforcement.
Increase budgetary support	Allocate additional funds to strengthen **inspection teams and conduct more frequent inspections** related to product quality.
Impose clear penalties for firms exporting spurious drugs	**Establish strict penalties for companies** involved in exporting counterfeit or substandard drugs. This will deter such practices and safeguard public health.
Create a public database of safety data	Develop a **comprehensive safety database** that contains information on drug-related adverse events, side effects, and other safety concerns.
Enact a national law on drug recall	This will **ensure swift and effective recall processes**, protecting the public from potentially harmful drugs.
Strengthen CDSCO	Strengthen the Central Drugs Standard Control Organisation (CDSCO) and provide it with statutory backing
WHO's Good Manufacturing Practice certification	Promote and incentivize pharmaceutical manufacturers to adhere to the WHO's Good Manufacturing Practice (GMP) standards.

Conclusion:

Indian government can enhance the **quality and regulation** of the pharmaceutical industry through legislative amendments, centralized drug databases, and the merging of regulators. It will **build confidence, ensure high-quality generics**, and uphold India's reputation as a **reliable supplier, benefiting both domestic and global healthcare** while protecting public health.

Insta Links:

Spurious Drug Menace

Mains Links:

Q. India enjoys an important position in the global pharmaceuticals sector. Analyse the strength and weaknesses of India in this sector. Suggest steps to overcome the weaknesses. (250 Words)

CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

5.METHANE MITIGATION POLICIES

Context:

According to a new study, **only 13% of methane emissions are covered by global methane mitigation policies.**

Methane (CH4)	
• **A greenhouse gas** (GHG) responsible for **30% of the warming** since preindustrial times, **second only to carbon dioxide (CO2)**. • However, it is **80 times more potent** at warming than CO2. • **Agriculture, fossil fuels as well as solid waste and wastewater** are the three major sources of methane. • In India (3rd largest emitter of CH4) **~20% of its anthropogenic CH4 emissions** come from agriculture (manure management), coal mines, municipal solid waste, etc. • According to the **IPCC**, the world must cut methane emissions by at least 30 % by 2030.	
Efforts to curb methane emissions	
Global	**India**
Global Methane Pledge - Both the US and the EU have planned to cut methane emissions by 30% (by 2030) compared with the 2020 levels.	According to the Ministry of New and Renewable Energy, a nationwide strategy **to boost biogas production** has received significant funding**.**
UNEP's International Methane Emissions Observatory (IMEO) strategy - To get policy-relevant data into the right hands for emissions mitigation.	**ICAR's National Innovations in Climate Resilient Agriculture (NICRA) project:** Technologies (like System for Rice Intensification, Direct Seeded Rice) were developed to reduce methane emissions.
Methane Alert and Response System (MARS) - Launched at the COP27 to the UNFCCC in Sharm El-Sheikh, Egypt	**Crop Diversification Programme:** Methane emissions are avoided due to the diversion of paddy to alternate crops like pulses, oilseeds, maize, cotton, and agro-forestry.

Highlights of the study:

- Since the 1980s, the rate of increase in methane emissions is **higher than ever before.**
- **Methane policies are actions by governments** that explicitly aim to monitor, prevent, or reduce methane emissions from anthropogenic sources.
- 90% of identified national policies were from three regions: North America, Europe and Asia Pacific.
- **The policies targeting fossil methane** (coal, oil, and gas) are lower than biogenic methane (released by living organisms).

Concerns:

- This trend has emerged **despite readily available solutions to cut methane emissions** from the fossil fuel sector.
- **Impact of methane mitigation policies on industries** (like agriculture) important to the national economy, energy and food security or rural poverty considerations.

India-specific findings:

- **No effective policies** targeting methane emissions from rice cultivation and biomass burning (burning of crop residues).
- While policies targeting biomass burning have quite broad coverage, their **implementation remains challenging.**
  - **For example,** the 1997 Coalbed methane policy was ineffective in incentivising coalbed methane production.

Way ahead:

- The policies should focus on **super emitters**, which are facilities, equipment, and other infrastructure, typically in the fossil-fuel, waste, or agriculture sectors, that emit methane at high rates.
- While reducing livestock or rice-production-related emissions is challenging, **India can contribute by reducing emissions associated with coal production.**

Insta Links:

Fossil fuels firms failed to curb methane emission: What IEA's annual report says

6.MAKING CITIES CLIMATE-READY

Context:

A recent report by the World Bank titled **"Thriving: Making Cities Green, Resilient, and Inclusive in a Changing Climate"** provides guidance to local and national policymakers on how to create greener, more resilient, and inclusive cities.

Status of Cities in terms of their greenness, resilience, and inclusiveness (as per the report):

Aspect	Findings	Example
Greenness	Cities in **high- and upper-middle-income** countries contribute significantly to global greenhouse gas emissions.	Cities in North America are among the **largest per capita emitters of greenhouse gases**.
Resilience	Cities in low- and lower-middle-income countries face the **highest exposure to climate change-related hazards**.	Cities in **Bangladesh and India** are more vulnerable to floods, heat stress, and cyclones, resulting in severe economic consequences.
Inclusiveness	**Lack of inclusiveness contributes** to the **vulnerability and lack of resilience** in cities of low- and lower-middle-income countries.	Cities in **low- and lower-middle-income countries** often struggle with inadequate access to healthcare, education, and essential utilities such as water and electricity.
Air Pollution	Cities in low- and middle-income countries have **higher levels of air pollution, particularly PM2.5**, compared to cities in high-income countries.	**Delhi, Kanpur, Patna** etc. have experienced high levels of PM2.5, especially during the winter season
Vertical Development and Prosperity	Cities that develop vertically consume less land, accommodate more people, and show increased prosperity.	**New York City**, have **higher population density and economic activity** compared to cities with sprawled development.
Lack of Vegetation and Heat Impact	Cities with less vegetation, particularly in **upper-middle-income countries**, experience exacerbated impacts from extreme heat events and urban heat island effects.	Cities like **Tokyo**, with limited green spaces, **face higher temperatures during heat waves** due to the lack of vegetation and increased heat retention.

Five sets of instruments to improve the greenness, resilience, and inclusiveness of cities (as recommended by the report):

5 I's	Description	Example
Information	Policies and measures to provide **credible and timely information** to individuals, businesses, and local governments **about climate change risks,** mitigation and adaptation measures	Establishing a **climate change information centre** to provide climate risks data specific to their city.
Incentives	It includes **removing subsidies that encourage activities with negative environmental externalities,** Implementing tax incentives or rebates for installing energy-efficient technologies	FAME I and II scheme, EU's **Carbon Border Adjustment Mechanism (CBAM)**
Insurance	Developing **climate risk insurance schemes that provide coverage for businesses and households** against losses from extreme weather events, encouraging investment in climate-resilient infrastructure and enabling quick recovery.	
Integration	Policy interventions promoting **compact cities and better integration between urban and rural areas;** Developing **efficient public transportation networks** that connect urban and rural areas	E.g., Smart City mission, **PURA Scheme** (provide urban amenities and livelihood opportunities in rural areas)
Investments	Investments by **national and local governments in green, resilient, and inclusive urban infrastructure**. This includes **nature-based solutions and measures** to attract private-sector finance for sustainable development.	Allocating funds for the **construction of green buildings, renewable energy projects, and urban parks**.

Conclusion:

Addressing the challenges of **climate change and creating sustainable cities** requires a multi-faceted approach. It involves prioritizing green practices, building resilience to climate impacts, and promoting inclusiveness in urban development. Taking action at the city level is crucial in mitigating climate change and ensuring a sustainable future for generations to come.

Definitions:
Greenness: Greenness refers to **the environmental sustainability and ecological balance** of a city.

Resilience: Resilience refers to the **ability of a city to withstand and recover from shocks**, stresses, and climate change impacts.

Inclusiveness: Inclusiveness refers to **creating cities that are socially and economically equitable,** where all individuals and communities have equal access to opportunities, resources, and services.

Insta Links:
Climate resilience plans in Indian Cities

Mains Links:
Q. Discuss global warming and mention its effects on the global climate. Explain the control measures to bring down the level of greenhouse gasses which cause global warming, in the light of the Kyoto Protocol, 1997. (UPSC 2022)

7.THE 2023-2033 IMPLEMENTATION PLAN FOR ADVANCING CLIMATE, ENVIRONMENT AND HEALTH SCIENCE

Context:
The World Meteorological Congress, the supreme body of the World Meteorological Organization (WMO), is currently holding its 19th session (Cg-19).

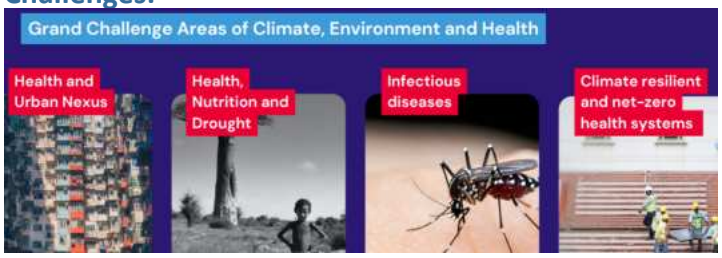
The outcome of the Congress: It recognised climate change as a threat to human health and endorsed a 10-year plan - *The 2023-2033 Implementation Plan for Advancing Climate, Environment and Health Science and Services by the WHO-WMO*, to scale up health services.

About the plan:
Aim: To achieve better health and well-being for people facing existing and emerging extreme weather events, climate change and environmental risks.

How?
- Through the **effective integration** of climate, environment and health science and services across the world.
- **It will promote a coordinated approach** to managing the impact of climate, weather, air pollution, ultraviolet radiation, extreme events, etc., on health.

Significance: It is significant when
- **Climate-related illnesses** (like malaria and dengue), premature deaths, malnutrition and threats to mental health and well-being are increasing.
- Climate-related cascading risks of **extreme heat (**15,000 people died in Europe in 2022**), wildfire and air quality**-related health risks are increasing.

Significance for India:
- **In 2022, India recorded its hottest March** which triggered an **early onslaught of heat waves** across north, central and east India from March-May.
- **Extreme heat will oust 600 million Indians** from their climate niche, exposing them to extreme temperatures by 2030.

Challenges:


Way ahead:

- **The Early Warnings for All initiative:** Extreme heat is a focus area of this UN initiative, which is one of the top strategic priorities at Cg-19.

Insta Links: Is climate change affecting global health?

8.THE ROLE OF SMALL MODULAR REACTORS IN THE ENERGY TRANSITION

Context:
The NITI Aayog recently released a report on **'The Role of Small Modular Reactors in the Energy Transition'.**

Background:
- Apart from Renewable Energy (RE), **nuclear is also being explored as a clean energy option** to help the nations in achieving their **decarbonisation goals**.
- The IEA has projected the global nuclear-installed power capacity to rise from **413 GW in 2021 to 871 GW by 2050**.

- **Innovation in nuclear reactor technologies**, both in Large Reactors (LRs) and in the newer concept of **Small Modular Reactors** (SMRs) will be important.

Small Modular Reactors (SMRs)	
SMRs are	**Small** - physically a fraction of the size of a conventional nuclear power reactor.
	Modular - making it possible for systems and components to be **factory-assembled and transported** as a unit to a location for installation.
	Reactors - harnessing **nuclear fission** to generate heat for electricity production or direct application.
Capacity	Ranging from **less than 30 MWe to 300+ MWe.**
Classification	Land-based water-cooled SMRs, Marine based water cooled SMRs, High-temperature gas-cooled SMRs (HTGRs), Liquid metal-cooled fast neutron spectrum SMRs (LMFRs), etc
Status of development (globally)	At present, nearly **80 SMR** designs are in the development and licensing stages, and a few of them are in the deployment and operational stages.
Advantages	**Manufactured off-site:** This can significantly save construction time, unlike the conventional nuclear reactors that are built on-site.
	Low running costs (lesser fuel, fewer staff) and **increased efficiency.**
	Better control/flexibility: Generating less electricity when demand is down and are particularly useful for **remote locations -** have variable power generation requirements.
	Safety features: Don't need a power supply and can handle accidents without the assistance of a person or a computer.
	SMRs and SDGs: SMRs can play a key role in the **clean energy transition**, while also helping countries achieve **SDG 7** (universal access to energy).
Challenges	**Lack of development:** SMR industry is yet to realise a fully developed operational fabrication facility for large-scale serial manufacturing of SMR components.
	Economic benefits depend on the large-scale production of SMRs.
	A large number of technologies: For deployment of the SMRs at the same time, could not only create **regulatory challenges** for the nuclear industry but also take away some **degree of cost optimisation.**
	Mobilising finance: For technology development, licensing and construction of prototype plants.
Way ahead	**Standardisation of designs** of components and modules, **strategic partnerships**, and **harmonisation** of regulatory and licensing processes will facilitate the adoption of SMRs at a large scale.
	The existing safety assessment methodology should be updated.
	Availability of low-cost finance, inclusion in green taxonomy and utilisation of innovative financing instruments such as green bonds, etc.
	Availability of required skilled personnel across the value chain of engineering, design, testing, inspection, construction, etc.

Conclusion:

- **SMR may complement large-size reactors** to increase the nuclear share in the energy mix and achieve **Net Zero Emissions goals.**
- The respective governments have to play a major role in **consensus building** towards nuclear energy by engaging relevant stakeholders.

Insta Links: The Future of Nuclear Power in India

Mains Links:

Q. Give an account of the growth and development of nuclear science and technology in India. What is the advantage of a fast breeder reactor programme in India? (UPSC 2019)

CONTENT FOR MAINS ENRICHMENT

1.MARIA MIES

Context	Maria Mies, a **Marxist Feminist scholar**, recently passed away. She was known for her extensive work on how **patriarchy, capitalism, and colonialism exploit women and nature**.

Her works:

- **Ecofeminism**: She co-wrote the book "**Ecofeminism**" with Vandana Shiva, a scientist and activist. Ecofeminism recognizes the interconnectedness of humans with nature and women.
- Mies's work emphasized **women's contributions to the economy**.
- **"Indian Women and Patriarchy":** In this book, she highlighted how **capitalism and Patriarchy undermine women's control** over various sectors such as farming.
- **Impact of climate change on women:** Climate change disproportionately impacts women, denying their knowledge and vulnerability to climate disasters.

Usage	Her works and views can be directly quoted in the Essay/Indian Society/ Sociology paper.

2.NEERAJ CHOPRA

Context	**Indian javelin thrower and Olympic Gold medalist Neeraj Chopra** has achieved the top spot in the World Athletics men's javelin throw rankings. This marks the first time Chopra has reached the **number-one position in his career**. Previously, he had secured the second spot in the rankings.
About Javelin throw	The javelin throw is an **athletic event** in which athletes throw a spear-like object called a javelin as far as possible. It is one of the **track and field events**. The javelin is made of **metal or fibreglass** and has a pointed tip.
Usage:	You can use the example to highlight the values of Dedication, Perseverance, Focus, Resilience, Sportsmanship, etc.

3.GEORGI GOSPODINOV

Context	**Bulgarian writer Georgi Gospodinov** and translator **Angela Rodel** have won the International Booker Prize for their novel **"Time Shelter."**
About the book	The book explores the **impact of nostalgia and memory through** a story set in a clinic that recreates different decades of the past. It examines the **allure of escaping the present** and the **consequences of vanishing memories**.
Lessons that can be drawn from the book	The book cautions against **excessive nostalgia** and the temptation to **escape from the present**. It highlights the **importance of living in the present** and embracing the opportunities it brings."Time Shelter" underscores the importance of striking a **balance between preserving the past and embracing the future**.
Usage:	**The example can be used in Essay/Ethics paper.**

4.L. ELAYAPERUMAL

About	**L. Elayaperumal, a late Dalit leader**, played a crucial role in the **abolition of hereditary priesthood** in Tamil Nadu. The recommendations of the committee headed by Elayaperumal formed the basis for the **historic amendment to the Tamil Nadu Hindu Religious and Charitable Endowments Act,** passed by the Tamil Nadu Assembly in 1970. This amendment aimed to **abolish the system of hereditary priesthood** and allow individuals of all castes to become priests.
Usage:	Values that we can use from his life: Equality; Social justice; Human dignity; Integrity; etc

5.TINA TURNER

Context	Tina Turner, the **legendary musician**, passed away at the age of 83. She was a trailblazer, especially as **an African-American woman** in **rock and roll**. Her singing talent and on-stage persona highlighted the pivotal role of **African-American women in the genre**.

About	Tina's journey, marked by her **escape from an abusive marriage**, served as an inspiration to many. Her reinvention **as a pop icon in the 1980s** solidified her place in music history. Tina Turner's contributions were widely celebrated, and she received numerous accolades, including **Grammy Awards and induction into the Rock and Roll Hall of Fame**. Her impact **extended beyond music**, with a **bestselling autobiography and a stage show** based on her life. Tina Turner's legacy as a **pioneer across genres will continue to resonate**.
Usage:	Her life can be used as a story in an Essay paper. Also, values from her life e.g., Resilience and Perseverance; Overcoming Obstacles; Self-Belief and Empowerment; Embracing Change and Reinvention; etc. can be used in the Ethics paper

6.RACISM IN FOOTBALL

Context	**The La Liga game between Valencia and Real Madrid** had to be temporarily stopped after the Brazilian footballer Vincius Jr's said he was racially abused by a fan.

Some of the ways of Racism in football are:

- **Monkey chants** directed at black players during matches
- **Racial slurs and insults** hurled at players
- **Lack of diversity** in club ownership and leadership positions
- **Underrepresentation of black referees** at the top level

Other examples:	The racist incident **involving England players Jadon Sancho, Marcus Rashford, and Bukayo Saka** after they **missed penalties in the Euro 2020 finals**. They received online racist comments and abuse, highlighting the persistent issue of racism in football.
Usage:	These examples can be used to highlight the ethical issues of Discrimination and inequality; lack of respect and dignity; biased media and representation

7.CHANGATHI LITERACY EXAMINATION

Context	The Literacy Mission in Thrissur organized the **Changathi literacy examination**, aiming to teach migrant workers to read and write Malayalam and Hindi. A total of 92 labourers attended the examination.
About	The Changathi project **addresses the exclusion faced by migrant** workers in Kerala by enabling them to understand the **socio-cultural aspects of the state**. The examination was based on the specially prepared textbook **"Hamari Malayalam,"** covering topics such as hygiene, health, values, and workers' rights.
Usage:	Such examples can be used in an **Indian Society/ Governance** paper to highlight the ways to integrate migrants into the local society.

8.TOTAL E-GOVERNANCE KERALA'S DECLARATION

Context	**The Chief Minister of Kerala** has announced that the **state has achieved full e-governance coverage.** It has **digitized a range of government services**, ensuring prompt and transparent delivery to its citizens.
Initiatives	Some of the initiatives of Kerala are **Kerala Fibre Optic Network (KFON) project**, which has made **internet access a citizen's right**. **e-Sevanam**, a single portal for **900 public services** to taluk-level offices.
Usage:	The example can be quoted in Governance/ Ethics/ Essay question

9.TECHNOPHOBIA

Technophobia is the tendency of individuals or societies **to exhibit resistance, fear, or negative attitudes** toward emerging technologies.

Examples of Technophobia:

Technology	Description
Railroads	In the early days of railroads, some people perceived them as the **work of the devil**, expressing fear and concerns about the **speed, vibrations, and potential health impacts** associated with train travel.
Nuclear Energy	The development of nuclear energy sparked widespread fear and worry, particularly after incidents like the **Three Mile Island accident** and the Chornobyl meltdown.

Artificial Intelligence	The rapid advancement of artificial intelligence has generated **fears of job displacement, loss of human control, and potential misuse** of AI technology.
Genetically Modified Organisms (GMOs)	Genetically modified organisms have faced **resistance and criticism due to concerns about potential health risks, environmental impacts**, and ethical implications of manipulating the genetic makeup of plants and animals.
Reason for "technophobia":	
It can be attributed to various factors such as **complexity, lack of knowledge, fear of losing control**, and emotional responses.	
Usage:	Such terms and related examples can be used in the Essay to highlight psychological fear related to 'new technologies'.

10.GANGA PRAHARI

About Ganga Prahari	It refers to the **volunteers** (about 4000 in number) who are part of the **task force called "Guardians of the Ganga."** They are individuals who **have joined** the National Mission for Clean Ganga and Namami Gange initiative to protect and preserve the Ganga River in India.
Training:	The Wildlife Institute of India provides training in conserving biodiversity as well as livelihood training opportunities to the volunteers.
Responsibilities:	Monitoring the river, preventing littering, and reporting instances of poaching.
Usage:	This example can be quoted in the Essay/Ethics and Environment paper. Also, Ganga Prahari shows the values of **Environmental Stewardship, Respect for Life, Civic Duty, Courage and Resilience, Collaboration and Community Engagement,** etc.
The United Nations in December 2022 recognised the **Namami Gange initiative** as one of the top **10 World Restoration Flagships** involved in reviving the natural world.	

11.DISPOSABLE DIAPERS

About	• Disposable diapers are **single-use, absorbent diapers made of materials like plastic, absorbent polymers, and soft fibres**. They are commonly used for infants and young children as a convenient alternative to cloth diapers. • Scientists have found a unique solution to make **building materials cost-effective and environmentally friendly** by incorporating disposable diapers into them.
Benefits:	By using disposable diapers in construction, it can help reduce the environmental impact of **traditional building materials like concrete.** Recycling diapers in this way can make a positive difference by **shrinking their carbon footprint** and **creating durable materials.**
Usage:	Such an example can be used in the Environment question to highlight the use of alternative materials in construction and minimization of wealth.

12.APPOINTMENT OF SULTAN AL JABER AS THE PRESIDENT-DELEGATE OF COP28

About	Dozens of **US Congress and European Parliament** members are urging for the removal of **oil executive Sultan Al Jaber** as the **president-delegate of COP28**, the United Nations climate summit. Al Jaber, who heads the **Abu Dhabi National Oil Company (ADNOC),** is overseeing significant **oil and gas expansion plans** that **conflict with net-zero goals**.
Ethical Issues:	Conflict of Interest; Lack of Credibility; Greenwashing Concerns (misleadingly presenting an environmentally harmful activity as environmentally friendly); Inadequate Representation; Lack of Accountability; and Erosion of public trust in the COP process and international efforts to combat climate change.
Usage	The example can be used in Ethics/Essay/ Environment questions.

13.BUSHFIRE MANAGEMENT PROGRAM

Context	Bushfire is a wildfire that **occurs in bushland or forested areas**. It is characterized by **uncontrollable flames** that rapidly spread and can **cause significant damage** to vegetation, wildlife, and property.
About	• **Australia faces frequent bushfires** due to its **hot and dry climate, flammable vegetation** like eucalypt forests, weather patterns including droughts and strong winds, and human activities like land clearing and arson. • To deal with it, a highly effective bushfire management program has been developed over the past 20 years. From April to June each year, **fire managers use small controlled fires** to reduce **fuel loads** and make the landscape safer. This practice, known as "**painting with fire**," combines satellite data with **Indigenous knowledge** and expertise from pastoralists and park rangers.
Significance:	The program has led to **significant declines in fire across** the region and has gained international attention as a **model for fire management**. It highlights the importance of integrating **technology, local knowledge, and diverse skills** to achieve sustainable and resilient environmental management.
Usage:	Such techniques can be used for Indian forest fire management as well. Such solutions can be used in Disaster Management/ Environment/ Geography Questions.

14.SAVING OLIVE RIDLEY TURTLES

Context	The documentary **"Give Me A Little Land - A Loving Shore for The Sea Turtle**," produced by Kerala State Biodiversity Board, sheds light on the efforts of villagers along **Kerala's beaches in protecting** Olive Ridley turtles from extinction.
About	The documentary emphasizes the **transformation of local villagers** who were once involved in **poaching turtle eggs** but have now become **protectors of the turtles**. Collaborative efforts by the **Forest Department, naturalists, and environmental enthusiasts** have raised awareness among residents about the importance of conservation. Villagers now await the **turtles' arrival, ensuring their safety and transferring the eggs** to protected hatcheries.
Usage:	Such an example can be used to show attitudinal changes in local people and the use of media/films for ecological conservation.

FACTS FOR PRELIMS

GS PAPER 1

INDIAN HERITAGE AND CULTURE

1.SENGOL

About the Issue:

Renowned danseuse **Padma Subrahmanyam's letter** to the Prime Minister's Office (PMO) triggered a detailed investigation into the historic Sengol, a sceptre from Tamil Nadu. It was discovered that the **Sengol ceremony took place just minutes** before Nehru's iconic midnight speech on August 15, 1947. The sceptre had been kept at his **Prayagraj residence-turned-museum until now.**

Sengol

Context: During the inauguration of the new Parliament building, a sacred "sengol" sceptre (a Symbol of Transfer of Power) that was given to Jawaharlal Nehru on the eve of Independence will be handed over to Prime Minister Narendra Modi.

	Description
What is "sengol" sceptre?	The "sengol" sceptre is a long, stick-like item (about 5 feet in length) made of silver and covered in gold. The sceptre has a carving of a bull, called a Nandi, at the top.
Significance	It represents the idea that the person who holds it should rule with fairness and justice. It is believed to have a connection to the Chola dynasty, an ancient kingdom in Tamil Nadu.
Name	'Sengol' is derived from the Tamil word 'semmai,' which means excellence, the 'Sengol' represents the embodiment of power and authority.
Suggested by C Rajagopalachari	The idea of using the 'Sengol' sceptre for the symbolic transfer of power came from C Rajagopalachari, the last Governor-General of India. When Lord Mountbatten, the Viceroy of British India, asked for a suitable symbol, Rajaji suggested the 'Sengol' sceptre. He was inspired by a similar ceremony in the ancient Chola dynasty, where power was passed from one king to another.
'Aanai' Order Visit Insights IAS Daily CA	In the Chola tradition, during the transfer of power ceremony, in addition to the presentation of the sceptre, an order called 'aanai' in Tamil was bestowed upon the new ruler. This order symbolizes the responsibility to govern with unwavering adherence to the principles of 'dharma,' ensuring justice and fairness in the realm.
Crafted by Vummidi Bangaru Chetty	To bring the 'Sengol' sceptre to life, Chennai-based jeweller Vummidi Bangaru Chetty undertook the task of crafting this historic symbol.

2.PANDYA: TRADE ROUTES BETWEEN ROMANS AND MADURAI

Context:

The article discusses the **historical trade routes between Roman merchants** and the city of Madurai in India (Pandya Dynasty).

Pandya Dynasty

Aspect	
The Pandyan dynasty (ruled till 16th CE), also referred to as the Pandyas of Madurai, was an ancient Tamil dynasty of South India, and among the three great kingdoms of Tamilakam, the other two being the Cholas and the Cheras.	
Extent	From the Podukottai district to Kanyakumari in the south and Achankovil River in Kerala to River Vegai (Madura) in the east
Principalities	Divided into five principalities known as the "Five Pandyas"
Capital	Korkai, a significant port and commercial capital (Korkai was the centre of pearl trade, a chief source of wealth for the Pandya Kings); Later, the capital was shifted from Korkai to the port of Old Kayal and later to Madura (now Madurai)
Visit of Marcopolo	Marcopolo visited (in the 13th CE) the Pandya Empire and described it as the richest kingdom in existence
About Madura	Madurai was fertile land. Roman merchants known as "yavanas", sought the spice "Pepper". Roman traders introduced their rich pottery and gold to the region. Various routes, such as the Cumbum Pass and Thandikudi, were used for trade, leading to Madurai,
First Pandya Empire	Established by King Kadungon in the 6th century AD, fought with nearby Chera and Chola Kings
Chola Dominance	Pandya Empire became a tributary of the Chola Empire in the 11th century AD
Revival of Empire	Jatavarman Kulasekaran I rebelled against the Cholas in the 13th century, leading to the revival of the empire. Brother of Kulasekaran invaded the Chola Kingdom and drove the Chola kings out in exile. His successor Jatavarman Sundara Pandyan (1251-61) invaded Ceylon and carried off wealth (including the tooth relic of Buddha). He is called "Second Rama".
Invasion	Malik Kafur, an invasion from the Delhi Sultanate, sacked Madura in 1310
Decline	Pandya kings ruled sporadically, Madurai Sultanate and Nayak governors followed, until the arrival of the British

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3.INTERNATIONAL MUSEUM EXPO 2023

Context:

The Prime Minister inaugurated the **International Museum Expo 2023** in New Delhi to celebrate the 47th International Museum Day (IMD).

- Also, India will have the **world's largest museum, Yuge Yugeen Bharat**, that will capture 5,000 years of India's history.

More about Museums:

Topic	Description
Museum	A museum is a place that **preserves, collects, exhibits and interprets** various objects and artefacts of cultural, historical, artistic, or scientific significance.
About International Museum Day	Observed on **18th May every year** to raise awareness about museums.
About International Council of Museum (est. 1946; HQ: Paris)	Membership association and NGO that establishes professional and ethical standards for museums worldwide. The ICOM **Red Lists of Cultural Objects** at Risk are practical tools to curb the illegal traffic of cultural objects.
Importance of museums	It serves as a **repository of knowledge, providing visitors with opportunities to learn, explore, and appreciate** different aspects of human history, culture, and creativity. Provides inspiration from the past and a **sense of duty towards the future**.
Efforts by the Indian Government	**Annapurna statue** stolen from Banaras (recently returned from Canada), **Mahishasur Mardini statue** stolen from Gujarat (returned by New York's Met Museum in 2018), and **Chola Nataraja idols.**
Administration of Museums in India	Not all museums are administered by the Ministry of Culture. Some are run independently under a Board of Trustees.
Notable Museums in India	National Museum, New Delhi; National Gallery of Modern Art, Bengaluru; Victoria Memorial Hall, Kolkata; Asiatic Society, Kolkata; National Museum of Natural History, New Delhi.

GS PAPER 2

JUDICIARY

1.FREEDOM TO PROTEST

Context:

The Andhra Pradesh High Court recently struck down a government order that aimed to **regulate public meetings, processions, and assemblies** on roads, highways, and streets.

What was the issue ?

The Andhra Pradesh government contended that its action was necessary to regulate these activities in light of **recent accidents caused by processions on roads**. However, the Andhra High Court struck down the government order, stating that the **tradition of public meetings and assemblies** holds **historical, cultural, and political significance** in the country.

What did Andhra HC say:

Topic	Summary
About Police Act 1861	The court analyzed relevant sections of the Police Act, 1861, and concluded that they **give authorities the power to regulate** (e.g., in case of "road blockage"), **but not completely restrict, assemblies and processions** on public roads.
Fundamental Rights	The right to assemble, to protest peacefully, and to express one's opinion freely is an important freedom which cannot be taken away.
Constitutional Provision	**Article 19(1)(a) of the Indian Constitution** guarantees the right to freedom of speech and expression. **Article 19(1)(b)** protects the right to assemble peaceably and without arms.
Importance of freedom of speech and democracy	Freedom of speech is considered the **"bulwark" of democracy** and is regarded as the **first in the hierarchy of liberties**. It plays a crucial role in **safeguarding democratic principles** and ensuring open dialogue and expression of ideas.
SC guidelines	The Supreme Court, in the case of **Mazdoor Kisan Shakti Sangathan vs Union of India**, laid down guidelines for **regulating protests and demonstrations**. These guidelines include regulating **the intended number of participants, prescribing minimum distances**, imposing restrictions on certain routes, and disallowing the carrying of weapons.
Protest vs Strike	Protests are **broader expressions of dissent** or objection by individuals or groups on various issues. Strikes, on the other hand, specifically refer to **organized work stoppages** by employees seeking improved labour conditions.
Right to protest vs right to strike	In India, the **right to protest is a fundamental right** under Article 19 of the Constitution. However, the **right to strike is not a fundamental right** but a **legal right**, protected by specific labour laws and regulations.

2.'FORUM SHOPPING'

Context:

Recently, CJI Chandrachud has condemned **'forum shopping'.**

Forum shopping refers to the **practice of litigants or lawyers deliberately** selecting a particular **judge or court** where they believe the judgment will be **more favourable to their case**. This practice involves choosing a court that is likely to provide the **most favourable outcome,** rather than following the standard legal process.

Issues with Forum Shopping:

- It circumvents the **normal course of justice** and can lead to an **imbalance in the workload** of courts.
- The Supreme Court has condemned this practice. It has **no sanction in law** and must be discouraged.
- **Ethical issues**: Unfair advantage; Manipulation of the legal system

Recourse available with courts in case of 'forum Shopping':

- Courts may **exercise discretionary powers and refuse jurisdiction** over a matter if another court or forum is more suitable. This ensures that cases are allocated to the appropriate bench and promotes fairness and justice.
- Courts can impose fines on litigants

SC judgements on 'Forum Shopping':

- **SC in 1998 (Chetak Construction Ltd. vs. Om Prakash):** "A litigant **cannot be permitted choice of the forum**," and that **every attempt at forum shopping** "must be crushed with a heavy hand."
- **SC (2017) ('Union of India & Ors. vs. Cipla Ltd.'):** SC laid down a **"functional test"** to be adopted for forum shopping.
- **SC (2022) (Vijay Kumar Ghai vs. State of W.B.):** Supreme Court termed forum shopping as a "**disreputable practise by the courts**" that "has no sanction and paramountcy in law".

Related term:
The practice of "bench hunting" refers to **petitioners attempting to have their cases** heard by a specific judge or court in order to obtain a favourable order.

3.INDEPENDENCE OF DISTRICT JUDICIARY

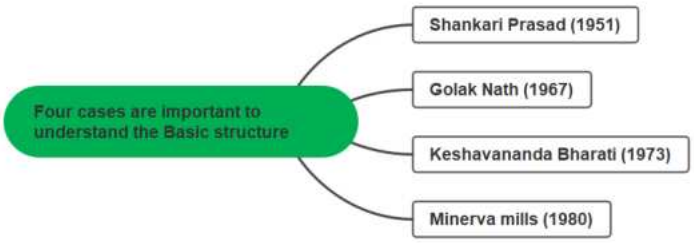
Context:
SC has held that the **independence of the district judiciary** is part of the basic structure of the Constitution and **judicial independence** from the executive and the legislature requires the judiciary to have a **say in matters of finances**.

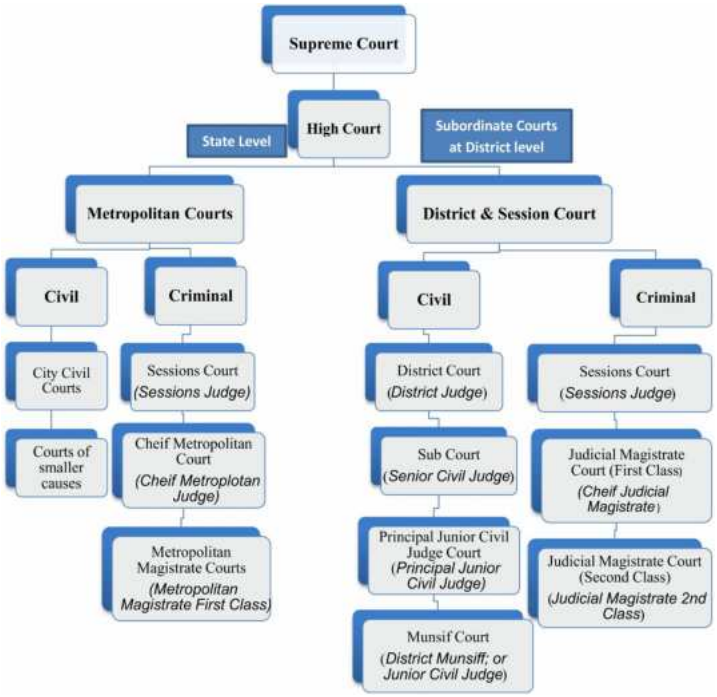
SC observations:

- **The independence of the district judiciary** is a vital part of the independent judicial system, which is, in turn, part of the **basic structure** of the Constitution. District judiciary was the backbone of the judicial system
- **'Doctrine of Inherent Powers of the Judiciary'**: Judiciary must possess **the inherent power** to **compel payment** of those **sums of money** which are **reasonable and necessary** to carry out its mandated responsibilities, and its powers and duties to administer justice. This doctrine is only the **logical conclusion of separation of powers** and ensures that the independence of the judiciary is secured
- **Significance of District Judiciary**: The district judiciary is, in most cases, also the court which is **most accessible to the litigant.** On a single day, the **district judiciary** handled nearly **11.3 lakh cases**. Even during the period of the pandemic, the district judiciary was **efficient and undertook its functions** to ensure that justice was delivered in a timely manner.

About the Basic Structure Doctrine:

The Kesavananda Bharati judgment introduced the **Basic Structure doctrine** which limited **Parliament's power** to make drastic amendments that may affect the core values enshrined in the Constitution like secularism and federalism. The verdict upheld the power of the **Supreme Court to judicially review the laws of Parliament**.





IMPORTANT ASPECTS OF GOVERNANCE, TRANSPARENCY AND ACCOUNTABILITY, E-GOVERNANCE

4.E-MALKHANA

Context:
Visakhapatnam City police is set to introduce e-Malkhana in all police stations by June this year.

What is e-Malkhana?
e-Malkhana is a scientific storage system implemented by the Visakhapatnam Police Commissionerate to preserve and organize **items and evidence recovered** from crime scenes.

Features:
The system uses standardized **cardboard boxes labelled with unique numbers and QR codes** for easy retrieval and access to case-related information.

- **Benefits**: It enhances efficiency, transparency, and the chain of custody for law enforcement officials.

Other such measures are: Crime and Criminal Tracking Network and Systems (CCTNS), e-Courts, e-Prisons, National Database on Sexual Offenders (NDSO), Integrated Criminal Justice System (ICJS), etc.

5.NATIONAL E-VIDHAN APPLICATION (NEVA)

Context:

The Ministry of Parliamentary Affairs is organizing a two-day National Workshop on the **National e-Vidhan Application (NeVA)** in New Delhi.

What is NeVA?

NeVA, the National e-Vidhan Application, is a **workflow system** deployed on the NIC Cloud, MeghRaj, designed to **facilitate smooth proceedings of the Parliament or State Assembly House** and **efficient handling of legislative business** in a **paperless manner**.

Aim: NeVA aims to eliminate the **need for physical notices or data collection requests** and brings all legislatures onto a single platform, creating a centralized data repository.

Features:

It is a **device-neutral and member-centric application** that provides members with comprehensive information, such as **contact details, rules of procedure, a list of business**, notices, bills, questions and answers, committee reports, and more, directly on their handheld devices or tablets. **Nagaland** and **Himachal Pradesh** have become **paperless assemblies** using the NeVA application.

About e-Vidhan: It is a **Mission Mode Project (MMP)** under the Digital India Programme being implemented by the Ministry of Parliamentary Affairs (MoPA) with **technical support** from the Ministry of Electronics and Information Technology (MietY). It is a Central Sponsored Scheme. It aims to digitize and bring all the legislatures of the country together, in one platform thereby creating a **massive data depository.**

6.LINK DEATH AND BIRTH REGISTER

Context:

A Bill to **link birth and death register** with electoral rolls will be introduced in the Parliament.

Need:

- If the **birth and death certificate data** are preserved in a special way, d**evelopment works can be planned properly.**
- **Interlinking of various schemes**

For Example:

As soon as a person turns 18, **the Election Commission will intimate him and make his voter card**.

In case of someone's death, the **Census registrar will send a notice to the family that they have received information about the person's death and the family has 15 days to object,** following which the Election Commission will remove his name from the voter list.

Unique features in the Bill:

'Geofencing of blocks' to be covered under the **Sample Registration System (SRS)** is being done so that the **enumerator cannot fudge the data and responsibility is fixed**.

- Geofencing refers to the **creation of virtual boundaries** or perimeters around specific geographical areas.

About Birth rate:

It refers to the **number of births per 1,000 individuals** in a population over a specific period, typically measured per year. It is an indicator of the fertility level within a population.

About the Death rate:

Also known as mortality rate, it refers to the number of **deaths per 1,000 individuals** in a population over a specific period, usually measured per year. It represents the mortality or death occurrence within a population.

A.CENSUS IN INDIA

Context:

The next Census form in India will only include **six religion options: Hindu, Muslim, Christian, Buddhist, Sikh, and Jain,** despite demands from several communities to be counted as separate religions.

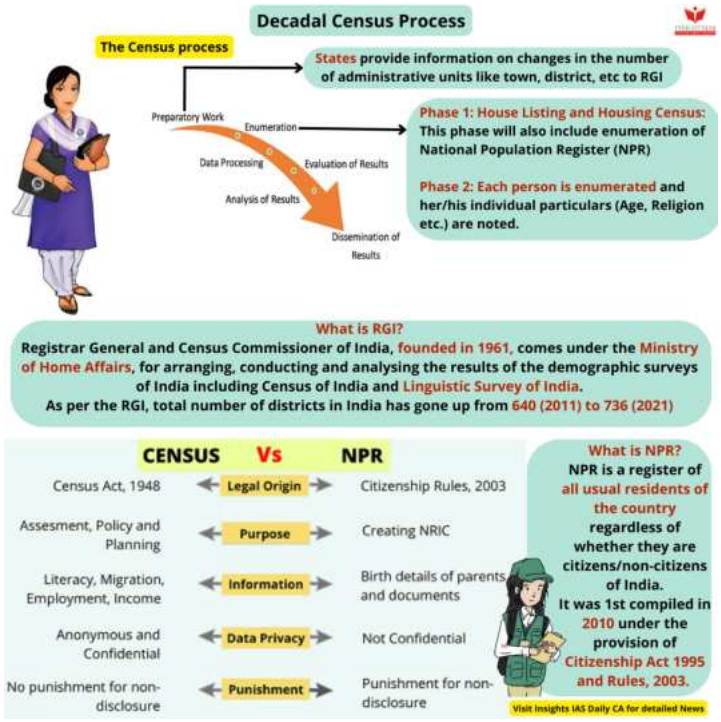
Definition of Population Census	The total process of collecting, compiling, analyzing and disseminating demographic, economic and social data pertaining, at a specific time, to all persons in a country or a well-defined part of a country.
Constitutional Backing	The population census is a Union subject under **Article 246** of the India Constitution; **69th in the seventh schedule** of the constitution

Changes introduced in the upcoming Census:

- **On religion:** The Census officials dropped the **detailed codes for religion** (e.g., Sarnaism, the Lingayat religion, etc.) that were designed based on **data collected during the 2011 Census**. Respondents can **write the name of any other religion**, but no separate code will be provided.
- **New questions introduced**: The Census will introduce new questions, such as whether individuals **consume**

packaged or bottled water and **factors responsible for migration**, including natural calamities. There will be additional questions about travel time, modes of transport, types and causes of disabilities, and property ownership.

- **Digital Census**: The next Census will be the **first digital Census,** allowing respondents to fill in the questionnaire from their homes.
- **Code directory:** For the first time, **a code directory** — containing possible **responses and their matching codes for questions** involving descriptive and non-numeric entries — has been prepared for the use of enumerators during the second phase of Census 2021. It will facilitate **data processing and reduce bias** and **errors** in the descriptive responses.



Census 2021, which was to be conducted in two phases, has been **postponed indefinitely**, due to the COVID-19 pandemic. The **31 questions for the first phase** — House listing and Housing Schedule — were notified on January 9, 2020. As many as **28 questions have been finalised for the second phase** — the Population Enumeration — but are yet to be notified.

ISSUES RELATING TO DEVELOPMENT AND MANAGEMENT OF SOCIAL SECTOR/SERVICES RELATING TO HEALTH, EDUCATION, HUMAN RESOURCES.

7.INDIA'S CHILD WASTING

Comparision of Stunting, Wasting and Malnutrition

Context: According to the latest UN inter-agency estimates, India has the highest child-wasting rate globally, with over 18% of Indian children affected by wasting in 2020.

	Stunting	Wasting	Malnutrition
Definition	Low height-for-age due to chronic or recurrent undernutrition	Low weight-for-height due to recent and severe weight loss	Deficiencies or excesses in nutrient intake, imbalance of essential nutrients, or impaired utilization
Causes	Poverty, poor maternal health and nutrition, frequent illness, inappropriate feeding and care in early life	Inadequate food intake and/or frequent illnesses	Inadequate nutrition, poor dietary diversity, poverty, food insecurity
Impacts	Physical and cognitive developmental delays	Increased risk of mortality, weak immunity	Impaired growth and development, increased susceptibility to diseases
Prevalence	Globally, over 22% of children under 5 were affected by stunting in 2022	Globally, around 7% of children under 5 were affected	The double burden of undernutrition and overweight coexisting
Long-term consequences	Permanent physical and cognitive impairments, reduced productivity	Without timely treatment can result in death	Increased risk of noncommunicable diseases
Interventions	Improving maternal health and nutrition, promoting breastfeeding, access to nutritious food, improving sanitation and hygiene	Timely detection and treatment, therapeutic feeding, access to healthcare services	Promoting balanced and nutritious diets, improving food security, and addressing socioeconomic factors
World Health Assembly (WHA) global nutrition targets	In 2012, the World Health Assembly identified six nutrition targets to be met by 2025. These are: • Reduce stunting by 40% in children under 5 • Reduce the prevalence of anaemia by 50% among women in the age group of 19-49 years • Ensure 30% reduction in low-birth-weight • Ensure no increase in childhood overweight; Increase the rate of exclusive breastfeeding in the first six months up to at least 50% • Reduce and maintain childhood wasting to less than 5%		

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Other findings:

- India had a **stunting** rate of **31.7 per cent** in 2022, down from **41.6** per cent in 2012
- India had an **overweight percentage** of **2.8 per cent in 2022**, compared to **2.2 per cent** in 2012.
- India is the **largest country in southern Asia**, where **half of all children** with wasting in the world live
- More than **three-quarters of all children** with severe wasting live in Asia
- There is **insufficient progress** to reach the **2025 World Health Assembly (WHA)** global **nutrition targets** and UN-mandated Sustainable Development Goal **target 2.2.**

8.PARAKH

Context:

The Ministry of Education organised a workshop with the aim of **unifying the 60 school examination boards** operating in **different States and union territories under one umbrella.**

- The main component of this plan is **PARAKH or the National Assessment Centre** which has been set up as an organisation under the **National Council of Educational Research and Training.**

Need for unifying various school boards:

- To establish a **common platform and framework** that ensures fairness, equity, and seamless transitions for students across different boards and regions.
- To **align curriculum standards, grading systems**, and evaluation methodologies to enhance credibility, recognition of certificates, and grades obtained across boards.
- Unification also aims to **address the prevailing rote ex-**

amination culture and promote **holistic assessments** that encompass various dimensions of a student's abilities and potential.
- It emphasizes the **importance of well-designed question papers, balanced assessments**, and reducing the burden of high-stakes examinations while effectively measuring student progress.

About PARAKH:
It has been launched **as part of the implementation of the National Education Policy (NEP)-2020** which envisaged a standard-setting body to advise school boards regarding **new assessment patterns and the latest research and promote collaborations between them**.
- **It will be tasked with holding periodic learning outcomes tests like the National Achievement Survey (NAS) and State Achievement Surveys.**
- It will work on three major assessment areas: **large-scale assessments, school-based assessments, and examination reforms.**

INTERNATIONAL RELATIONS

9.INDIA-BANGLADESH RAIL LINK

Context:
The Indian Ministry of Railways has **handed over 20 Broad Gauge locomotives** to Bangladesh to support the **increasing volume of passenger and freight train operations**.

Currently, **three pairs of passenger trains** operate between India-Bangladesh. These are:
- Kolkata-Dhaka: **Maitree Express**
- Kolkata-Khulna: **Bandhan Express**
- New Jalpaiguri- Dhaka: **Mitali Express**

Further planned sections are:
- Akhaura-Agartala rail link
- Mahihasan-Shahbazpur rail link

Other train links between India and its neighbouring countries:
- **India-Nepal**: Janakpur-Jaynagar Railway (Jaynagar-Kurtha)
- **India-Pakistan**: Thar Express (Jodhpur-Karachi) (suspended indefinitely)
- **India-Myanmar**: The India-Myanmar-Thailand Trilateral Highway (Under construction)

Additionally, the Indian government has offered Bangladesh the use of the IT system deployed by the **PM-GATI SHAKTI scheme**, which provides detailed geospatial information for better planning and streamlining.

10.MIGRATION, MOBILITY PACT WITH AUSTRALIA (MMPA)

Context:
India and Australia signed a migration partnership agreement during Prime Minister Narendra Modi's visit to Australia.

Features of the Agreement:
- **Aim:** It is aimed at promoting **two-way exchange of students, graduates, researchers, and business people**, and expanding people-to-people ties.
- **New Pathway:** Their mobility will be facilitated through a new skilled pathway named **MATES (Mobility Arrangement for Talented Early Professionals Scheme**) specifically created for India.

Other developments:
- India announced the **opening of a consulate in Brisbane**, adding to its existing consulates in Perth, Melbourne, and Sydney.
- The India-Australia hydrogen task force was established, to explore opportunities in green hydrogen and address energy targets.

To know details of India-Australia relations: Click here

11.NEW DEVELOPMENT BANK (NDB)

Context:
The New Development Bank (NDB) has launched its Indian Regional Office (IRO) in **Gujarat International Finance Tec-City (GIFT City).**

Objective: The establishment of the IRO aims to **address infrastructure and sustainable development needs in India and Bangladesh**, contributing to economic growth and sustainable development in South Asia.

Other offices of NDB: The NDB already has regional offices in Africa, the Americas, and Eurasia.

About the New Development Bank (NDB):

Dimensions	Description
About	NDB (**est. 2014; HQ: Shanghai**) is a **multilateral development** bank founded to mobilise resources for **infrastructure and sustainable development projects** in emerging markets and developing countries. It received **observer status** in the United Nations General Assembly in 2018.

Member	BRICS nations, Bangladesh, UAE, Egypt
Major Projects	Committed funding to major **infrastructure projects in India**, including Mumbai Metro rail, Delhi-Ghaziabad-Meerut Regional Rapid Transit System, and Renewable Energy projects; Approved **14 Indian projects** with a total funding of nearly USD **4.2 billion**; Signed a **1 billion USD loan pact** with India in 2020 for rural employment and infrastructure. India is the **second-largest recipient** of NDB's financial support after China.
Achievements	Innovated in areas such as lending in local currencies; Holds an **AA+ credit** rating; Successfully launched bonds, **including 'green bonds'**.
Issues	Low disbursal of loans despite approving over USD 12 billion; Challenges due to political turmoil and economic crises in member countries; Difficulty in lending to Russian companies due to sanctions and strained China-India relations
About GIFT City	Gujarat International Finance Tec-City is a **central business district under construction in Gandhinagar district** in Gujarat, India. It is **India's first operational greenfield smart city** and **international financial services** centre.

12.INTERNATIONAL FINANCIAL SERVICES CENTRES (IFSCS)

Context:

The Indian finance ministry has announced that **courses in financial management, fintech, science, technology, engineering, and mathematics (STEM)** offered by foreign institutions in **International Financial Services Centres (IFSCs) (such as GIFT City)** will be exempt from **certain provisions of the University Grants Commission Act** and the All-India Council for Technical Education Act.

Regulation: Regulatory framework of the **respective home country shall apply** in all academic matters in such FIs. Also, the regulatory authority for IFSCs, the **IFSC Authority** (IFSCA), will have limited jurisdiction over these courses.

Aim: This move aims to provide **flexibility and encourage the participation** of foreign institutions in offering specialized courses in the financial and technology sectors within IFSCs.

About IFSCs:
International Financial Services Centres (IFSCs) are designated areas within a country that **facilitate the conduct of global financial services**. They are designed to attract international financial institutions, banks, and other financial service providers by offering a business-friendly environment and a range of tax benefits. It caters to customers **outside the jurisdiction of the domestic economy**.

Examples: Dubai International Financial Centre (DIFC); GIFT City; Singapore International Commercial Court (SICC); Shanghai International Financial Centre (SIFC)

GS PAPER 3

ECONOMY, BANKING/ FINANCIAL INCLUSION, ENERGY, INFRASTRUCTURE

1.RBI PAYOUT TO GOVERNMENT

RBI's payout to Government

Context: RBI has tripled its payout to the Indian government (transfered ₹87,416 crores as surplus for 2022-23). Also, It has increased the Contingency Risk Buffer to 6% up from 5.5% in the previous year.

	Details
Definition	RBI's surplus transfer to the government refers to the transfer of excess income over expenditure by the Reserve Bank of India (RBI). This transfer is mandated by the Reserve Bank of India Act of 1934 and is done annually. The recent surplus transfer policy was finalized based on the recommendations of the Bimal Jalan committee.
RBI's Earning	Returns earned on foreign currency assets (such as bonds, treasury bills) and deposits with other central banks; Interest on holdings of local rupee-denominated government bonds; Management commission on handling the borrowings of state governments and the central government.
RBI's Expenditure	Printing of currency notes, Commission given to banks and primary dealers for underwriting borrowings, contingency funds and staff expenses.
Reasons for the transfer	Perception of RBI being overcapitalized compared to other central banks; The excess capital could be put to productive use by the government; Increased earnings on investments, valuation changes on dollar holdings, revaluation of forex assets
Implications	Helps government in bank recapitalization during economic slowdown; Enables government to stimulate the economy; Helps meet the fiscal deficit target
About Contingency Risk Buffer	It refers to a reserve maintained by the RBI to protect the economy against potential financial stability crises or unforeseen risks. It serves as a cushion to absorb any adverse shocks. In view of the RBI's function as a lender of last resort, it needs to maintain some Contingent Risk Buffer (CRB) to insure the economy against any tail risk of financial stability crisis. The Bimal Jalan Committee recommended that the CRB needs to be maintained at a range of 5.5% to 6.5% of the RBI's balance sheet.

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2.SAMARTH CAMPAIGN

Context:

SAMARTH campaign was launched to **promote digital transactions** at Gram Panchayat Level

About the Campaign:

The SAMARTH campaign is an initiative launched by the **Ministry of Rural Development**, Government of India, to promote **digital transactions at the Gram Panchayat** level in rural areas.

Aim:

- To increase the **adoption of digital payment methods**, particularly among women, in 50,000 Gram Panchayats across the country.
- It seeks to **empower rural communities** by enabling them to participate in the digital economy and access the benefits of digital transactions.

It is part of the larger **AmritMahotsav** celebrations and is being implemented under the AzadiKaAmritMahotsav, which commemorates **75 years of India's independence**.

Don't get confused with a similar named initiative: **Samarth Scheme (search in FFP section)** (under Ministry of Textiles)

3.MUMBAI TRANS HARBOUR LINK (MTHL)

Context:

Maharashtra Deputy Chief Minister Devendra Fadnavis recently reviewed the Mumbai Trans Harbour Link (MTHL)

About MTHL:

The Mumbai Trans Harbour Link, also known as the **Sewri–Nhava Sheva Trans Harbour Link**, is an under-construction **21.8 km 6-lane access-controlled expressway grade** road bridge, which will connect **Mumbai with Navi Mumbai**, its satellite city.

Features of the Bridge:

- When completed, it would be the **longest sea bridge in India (World's 10th longest sea bridge)**
- It is expected to **alleviate traffic congestion, promote economic development**, and reduce travel time between **Sewri and Chirle to just 15 to 20 minutes.**
- Fuel, transportation costs & **1 hour travel time will be saved**
- **1st project in India** with an **open road tolling system.**
- For the first time in India, **Orthotropic steel deck technology used**

About the Open road tolling system: It refers to a **method of collecting tolls on highways without requiring vehicles to stop** or slow down. Instead of traditional toll booths, open-road tolling uses **electronic sensors and cameras to detect vehicles** as they pass through designated tolling points.

About Orthotropic steel deck technology: It is a construction method **used in building bridges and other structures**. It involves **using steel plates that are specifically designed to be strong and stiff** in one direction while being flexible in other directions. This allows the steel deck to support **heavy loads**, such as vehicles while remaining lightweight.

4.INDUSTRIAL CORRIDOR DEVELOPMENT IN ANDHRA PRADESH

Corridor	States Covered	Funding
Delhi-Mumbai Industrial Corridor (DMIC)	Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat, Maharashtra	Government of India, Japanese loans; Japan depository receipts issued by Indian companies
Chennai-Bengaluru Industrial Corridor (CBIC)	Tamil Nadu, Andhra Pradesh, Karnataka	Japan International Cooperation Agency (JICA)
Bengaluru-Mumbai Economic Corridor (BMEC)	Maharashtra, Karnataka	Developed with the help of Britain (UK)
Amritsar-Kolkata Industrial Corridor (AKIC)	Punjab, Haryana, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal	Eastern Dedicated Freight Corridor is the backbone of this economic corridor. Being developed by the Government of India
East Coast Economic Corridor (ECEC)	West Bengal, Odisha, Andhra Pradesh, Tamil Nadu	Asian Development Bank (ADB)
Vizag-Chennai Industrial Corridor (VCIC)	Andhra Pradesh	ADB loans and grants

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The Clusters are:

- **Visakhapatnam node**: Rambilli and Nakkapalli industrial clusters; Nakkapalli cluster
- **Srikalahasthi-Chittoor node:** Chittoor–South industrial cluster; Naidupeta industrial cluster

The funds will be used to improve **roads, water supply systems, and electricity distribution** networks in the clusters.

Aim: To promote **industrialization, boost manufacturing, enhance competitiveness**, and create job opportunities in these areas. The project also includes measures to strengthen **resilience to extreme weather, improve disaster risk**

management, and promote gender-responsive and socially inclusive development.

5.GOVT CUTS SUBSIDY ON ELECTRIC 2-WHEELERS

Context:

The government has decided to **reduce the subsidy provided under the FAME-II** scheme for **electric two-wheelers** starting in June.

Ministry of Heavy Industries notified changes:

- The subsidy for electric two-wheelers would be reduced to **₹10,000 per kilowatt hour (kWh)** effective 1 June 2023 from **₹15,000 currently**.
- The cap on incentives for **such vehicles has been lowered to 15%** of the ex-factory price of vehicles from the earlier **40%**.
- But the **total amount allocated toward providing incentives** for these vehicles will be raised from the **current ₹2,000 crores**.

The rationale for changes:

The intention behind lowering the subsidy and increasing the funds for electric two-wheelers is to **support more consumers through the FAME scheme** with the available funds.

About the FAME Scheme:

Aspect	Details
Background	FAME India is part of the **National Electric Mobility Mission Plan** and aims to **encourage electric vehicles** through subsidies. It covers all vehicle segments.
Phases of the scheme	**Phase I:** Started in 2015 and completed on March 31, 2019. **Phase II:** Started in April 2019 and completed on March 31, 2022.
Technologies covered	Hybrid & Electric technologies, including Mild Hybrid, Strong Hybrid, Plug-in Hybrid & Battery Electric Vehicles.
Monitoring Authority	Department of Heavy Industries, Ministry of Heavy Industries and Public Enterprises.
Four focus areas	Technology development, Demand Creation, Pilot Projects, Charging Infrastructure.
Objectives	Encourage **faster adoption of electric and hybrid vehicles** through upfront incentives. Establish necessary charging infrastructure.
Salient features of Phase II	Emphasis on **electrification of public transportation**, including shared transport. Incentives are mainly applicable to **vehicles used for public transport** or registered for commercial purposes. Benefits extended to vehicles with **advanced batteries like Lithium-Ion.**

6.UDAN 5.1

Context:

The Ministry of Civil Aviation has **launched UDAN 5.1,** a new version of the Regional Connectivity Scheme (RCS) specifically designed for **helicopter routes**.

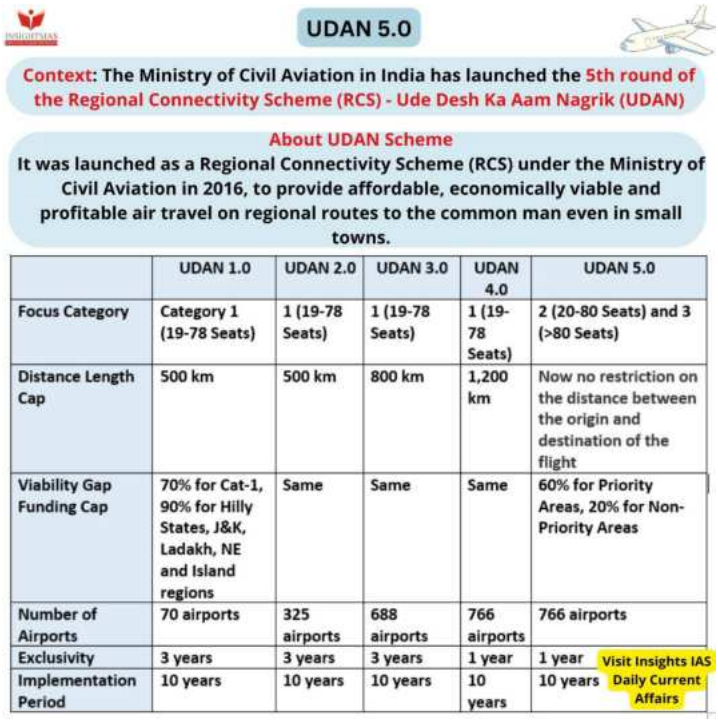
Key features of UDAN 5.1:

- **Allowing routes** where **one of the origin or destination locations** is in a priority area
- **Reducing airfare caps** by up to 25% to make helicopter travel more affordable
- **Increasing Viability Gap Funding (VGF) caps** for operators to improve financial viability

Aim: The scheme aims to **democratize air travel and promote tourism, hospitality, and local economies**.

Previous rounds of the scheme have already operationalized **46 helicopter routes**, benefiting hilly and North East states and the current round aims to cover a larger number of routes.

Read about UDAN 5.0:



	UDAN 1.0	UDAN 2.0	UDAN 3.0	UDAN 4.0	UDAN 5.0
Focus Category	Category 1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	2 (20-80 Seats) and 3 (>80 Seats)
Distance Length Cap	500 km	500 km	800 km	1,200 km	Now no restriction on the distance between the origin and destination of the flight
Viability Gap Funding Cap	70% for Cat-1, 90% for Hilly States, J&K, Ladakh, NE and Island regions	Same	Same	Same	60% for Priority Areas, 20% for Non-Priority Areas
Number of Airports	70 airports	325 airports	688 airports	766 airports	766 airports
Exclusivity	3 years	3 years	3 years	1 year	1 year
Implementation Period	10 years	10 years	10 years	10 years	10 years

AGRICULTURE

7.SUNFLOWER OIL

Context:
The Ukraine-Russia war had a significant impact on sunflower oil consumption in India.

Status of Sunflower Oil:

Globally:
- **Ukraine (the highest producer) and Russia account** for 60% of the world's sunflower oil production
- **Other top producers of sunflower oil** globally include **Ukraine, Russia, Argentina, Romania, and Bulgaria**

In India:
- **Sunflower oil is the fourth most** consumed edible oil in India, following mustard, soybean, and palm oil.
- **Domestic production of sunflower** oil has **significantly declined** over the past decade, unlike soybean oil, which has expanded its cultivated area.
- **India imports a substantial amount of sunflower oil** due to limited domestic production.
- **Major producers:** Karnataka (highest producer in India); Telangana and Maharashtra
- **Major Consumer:** Karnataka, Telangana, and Maharashtra

About Sunflower:
Sunflower (Helianthus annuus L.), popularly known as "**Surajmukhi**" (it follows the sun by day) is an **annual flowering plant,** native to **North and Central America** but is now cultivated worldwide for its versatile uses. It is known for its **large, bright yellow flowers**.

Sunflowers are relatively **easy to grow** and are **adaptable** to different climates and soil types. They require **full sun exposure and well-drained** soil. They are known for their ability to **extract heavy metals from the soil,** making them useful in **phytoremediation efforts** to clean up polluted areas.

8.WORLD FOOD INDIA 2023

Context:
India's Ministry of **Food Processing Industries** is organizing the second edition of **'World Food India 2023'** in New Delhi from 3rd-5th November.

Aim: The event aims to showcase **India's food culture and attract global investments** in the food processing sector. It will bring together **manufacturers, producers, investors, policymakers, and organizations** from across the global food ecosystem.

Focus areas: Leveraging millets as a superfood; positioning India as a global hub for food processing; unlocking growth potentials in strategic segments; establishing an efficient ecosystem, and promoting sustainable development.

The event is part of India's vision to become a global leader in the food processing industry and highlights the **country's production, consumption, and export potential** in various food sectors. India is taking steps to create an **inclusive and sustainable ecosystem**, attract foreign investment, and **enhance the ease of doing business, in the food processing system**.

The first edition of **World Food India was held in 2017. India leads the world** in the production of milk, bananas, mangoes, papayas, guavas, ginger, okra and buffalo meat, and **ranks second in the production** of rice, wheat, potatoes, garlic, cashew nuts.

The United Nations has declared **2023 as the International Year of Millets (IYM 2023)** with the aim of **increasing the production and consumption of millets worldwide**.

Prelims Links:
Q. Among the following, which one is the largest exporter of rice in the world in the last five years? (UPSC 2019)
(a) China
(b) India
(c) Myanmar
(d) Vietnam

Ans: B

9.CERTIFICATION OF INDIAN ORGANIC PRODUCTS

Context:
A European Union (EU) audit has found "**many weaknesses**" in the certification of Indian organic products for exports to the EU.

Issues highlighted:
- Farmers of various **organic producer groups (PGs) lacked knowledge** of organic farming.
- **Infringement of NPOP norms**, inadequate supervision and implementation of controls.

Regulator of Organic Products:
Food Safety and Standards Authority of India (FSSAI) (under the Ministry of Health and Family Welfare) regulates the **manufacture, distribution, sale or import** of Organic prod-

ucts through the Food Safety and Standards (Organic Foods) Regulations, 2017 (under FSSA 2006).

Certification of Organic products:

Certification	Description
Participatory Guarantee System (PGS)	Implemented by the **Ministry of Agriculture and Farmers Welfare.** Ensures organic product production adheres to quality standards. Does not require **third-party certification** agencies. Certification is carried out by local groups consisting of producers and consumers and is based on trust. Involves a documented logo or statement as proof of certification.
National Programme on Organic Production (NPOP)	Implemented by **APEDA, under the Ministry of Commerce & Industries**. Regulates organic farming certification. Involves accreditation of Certification Bodies. Sets standards for organic production. Promotes organic farming and marketing. It's Standards have been recognized by the EU, Switzerland, and the US.
Other Programs for Organic Production	**NMSA** (National Mission for Sustainable Agriculture): Promotes sustainable agriculture, including organic production. **Paramparagat Krishi Vikas Yojna (PKVY):** Promotes organic farming. **Mission Organic Value Chain Development for North East Region (MOVCDNER):** Supports the development of organic value chains in the North East region of India.

Comparison between Conventional, Organic and ZBNF

Context: As per the new study, Zero Budget Natural Farming (ZBNF) in Andhra Pradesh has led to significantly higher crop yield

Aspect	Conventional Farming	Organic Farming	Zero Budget Natural Farming
Use of chemicals	Uses chemical fertilizers and pesticides extensively	Discourages use (not prohibits) of chemical fertilizers and pesticides, relies on natural methods	Prohibits the use of any chemical or organic fertilizers or pesticides
Use of external resources	Relies on external sources for manures and fertilizers	Relies on organic manures and fertilizers from external sources	Relies only on locally available and farm-based resources e.g., Bijamrita and Jeevamrutha
Soil preparation	Relies on plowing, tilling, and mixing of manures	Still requires basic agro practices like plowing and tilting	No plowing, tilling, or fertilizers used, encourages decomposition of organic matter on soil surface
Weed control	Uses chemical herbicides or mechanical weeding	Encourages natural methods of weed control, such as mulching	Considers weeds as essential, uses them as living or dead mulch layer
Pest control	Uses chemical pesticides	Uses natural pest control methods, such as biological control and natural pesticides	Uses natural, farm-made pesticides like Dashparni ark and Neem Astra
Cost	Can be expensive due to the cost of external inputs and machinery	Can be expensive due to the cost of organic inputs and labour	Can be done almost in zero budget, using only locally available and farm-based resources
Sustainability	Has a negative impact on the environment, degrades soil quality and biodiversity	Promotes sustainability, protects soil quality and biodiversity	Promotes sustainability, works with the local biodiversity and ecology

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HEALTH

10.ARSENIC CONTAMINATION

Context:

A recent peer-reviewed study suggests that even low levels of arsenic consumption, commonly found in contaminated groundwater in India, can impact cognitive function in children, adolescents, and young adults.

What does the study say:

- **Arsenic exposure** leads to **reduced grey matter in the brain**, affecting concentration, information storage, and switching between tasks.
- **At the population level**, contamination leads to **increased school failures**, diminished economic productivity, and a higher risk of criminal and antisocial behaviour.
- **The major factor for contamination**: Arsenic intake from food, primarily through rice consumption; using contaminated groundwater.

Remedy: Modifying food preparation techniques, **such as cooking rice** in a specific way, can significantly reduce arsenic levels; **promoting piped water access** and installing arsenic removal plants; **encourage extraction from aquifers** (water channels below the ground) that are deeper than 100 m.

About Arsenic: Arsenic is an **odourless and tasteless metalloid** found naturally in the earth's crust and groundwater. It is **highly toxic** in its inorganic form and can cause arsenic poisoning. **Arsenicosis**, the accumulation of high levels of arsenic in the body, leads to adverse health effects and can result in **multi-system organ failure and death**. Efforts have been made under the **2030 Agenda for Sustainable Development** to provide safely managed drinking water free of arsenic contamination. **The Jal Jeevan Mission aims** to provide safe drinking water to all households in rural and **urban India by 2024.**

11.WHO'S ADVICE ON NON-SUGAR SWEETENERS

Context:

The WHO's new guidelines advise against the use of non-sugar sweeteners (NSS) as a "healthy" alternative to sugar.

Non-sugar sweeteners (NSS)	
Meaning	They are marketed as **low or no-calorie alternatives to free sugars** which aid in weight loss, and in controlling blood glucose in individuals with diabetes.

Categories	**Aspartame** (to sweeten diet colas), advantame, cyclamates, neotame, **saccharin** (to sweeten tea or coffee), sucralose, **stevia**, etc.
Rise in Popularity	In 2015, when WHO said that a **high intake of free sugars is linked to weight gain and obesity.**
WHO's new guidelines?	NSS **should not be used as a means of achieving weight control** or reducing the risk of diet-related non-communicable diseases. Long-term use of NSS could lead to **increased risk of Type 2 diabetes**, cardiovascular diseases, chronic kidney disease and cancer.
Concerns for India	**One in 9 women and one in 25 men are obese** (NFHS5), and an **estimated 25 million people** living with pre-diabetes in India (WHO).
WHO's nutritional advice	**Having alternative foods** which are minimally processed, unsweetened foods and beverages.

SCIENCE & TECHNOLOGY

12.INDUS-X UNDER THE ICET

Context:

India and the U.S. are exploring the possibility of **co-producing jet engines, long-range artillery, and infantry vehicles** with the upcoming launch of INDUS-X.

What is INDUS-X?

It is a major upcoming initiative under the **Initiative on Critical and Emerging Technologies (iCET),** with the aim to promote **partnerships and collaboration** between the defence innovation ecosystems of both countries.

- INDUS-X is focused on **advancing high-tech cooperation** and exploring opportunities for joint research, development, and production in the **defence sector**.

About iCET dialogue:

Aspect	Description
iCET was announced in **2021** and is spearheaded by the **National Security Councils** of both countries, to expand the India-US partnership for **critical and emerging technologies**	
Areas of Cooperation	R&D, Quantum computing, Defence innovations, Space, 6G, Semiconductors, etc.
Significance of iCET	Accelerates **America's technology partnership and strategic convergence** with India; Important for India's role as a trusted supply chain partner; Allows **gradual lifting of the US's export control** restrictions on India
Other India-US Technology Partnerships	NISAR (NASA-ISRO), Joint Indo-US **Quantum Coordination Mechanism**, Innovation Bridge; **Lockheed Martin-Tata partnership** for plane production; India-USA strategic clean energy partnership; Launch **of "Innovative Bridge"** connecting defence startups between India and the USA; **Readiness Assessment Development** for building resilient semiconductor supply chains; **ISRO-NASA partnership** on human space flight; CLPS Project Partnership in 56/6G; **Open RAN** using trusted sources, etc.

13.CALCIUM-41

Context:

A recent study has proposed **using calcium-41** as a new method for radiometric dating, similar to **carbon-14 dating** but with several advantages.

What is radiocarbon dating?

Radiocarbon dating, **also known as carbon-14 dating**, is a method used to determine the **age of organic materials** that originated from living organisms. It relies on the **radioactive isotope carbon-14**, which is a variant of the **element carbon**. Carbon-14 is unstable and undergoes radioactive decay over time.

Limitations of Carbon-14 dating:

- **Limited Time Range:** Carbon-14 dating is effective for objects up to approximately 50,000 years old due to the short half-life of carbon-14 (5,700 years).
- **Contamination Issues:** Contamination from modern carbon sources can affect the accuracy of carbon-14 dating, leading to inaccurate age estimates.
- **Incomplete Preservation**: Organic materials must be well-preserved to contain sufficient carbon-14 for dating. Poor preservation or exposure to environmental factors can compromise the reliability of carbon-14 dating.

Advantages of Calcium-41:

- **Longer Half-Life:** Calcium-41 has a **much longer half-life of 99,400 years**, allowing for the dating of much older materials compared to carbon-14.
- **Abundance in Earth's Crust**: Calcium-41 is found in the Earth's crust, making it available for dating various geological materials, including fossilized bones and rocks.
- **Atom Trap Trace Analysis (ATTA):** The technique of ATTA enables the detection of **calcium-41 atoms with high sensitivity** and selectivity, improving the accuracy of dating methods.
- **Potential for Extension**: The successful application of ATTA to calcium-41 opens the possibility of **using similar techniques for other metal isotopes**, expanding the range of dating methods available.
- **Earth-Science Applications:** Calcium-41 and ATTA can be used to **study geological processes,** such as determining how long rocks have been covered by ice, providing valuable insights into Earth's history and climate changes.

14.PANGENOME MAP

Context:

A pangenome reference map has been built using genomes from 47 anonymous individuals from **Africa, the Caribbean, the Americas, East Asia, and Europe**.

About Pangenome Map

Topic	Description
What is Pangenome Map?	A pangenome map is a **way of looking at the collective genetic information of a group** of related organisms or species. It goes beyond just one individual's genetic makeup and considers the genetic diversity within that group.
What is genome and genome sequencing?	The human genome refers to the **entire set of DNA in the nucleus of every cell in the human body**. It is like an **identity card (e.g., Aadhar) unique to each individual**. Genome sequencing is a method used to **determine the precise order and arrangement of the four letters** (A, T, G, and C) in the genome. It helps us understand **human diversity at the genetic level** and our susceptibility to **certain diseases.**
What is a reference genome?	A reference genome is a **complete set of genetic information** for a specific individual. When newly sequenced genomes are compared, they are matched against a **reference map** called a reference genome.
How pangenome map is different from the Reference genome?	While a reference genome represents **a single individual**, a pangenome map captures the **genetic diversity and variation across** multiple individuals or populations.
Principle	The concept of a pangenome acknowledges that a **species' genome is not a fixed entity and is different for different individuals.** This genetic variation contributes to differences in traits, disease susceptibility, and other biological characteristics.
Why is a pangenome map important?	A pangenome map provides a comprehensive understanding of a **species' genetic content.** This helps explain **genetic differences, and human diversity, study gene evolution,** identify disease-associated genes, and understand the overall genomic architecture of a species. This can shed light on **disease prevalence, aid in discovering new genes for rare diseases**, design **better diagnostic methods**, and facilitate the discovery of novel drugs for those diseases.
Pangenome map and India	The current pangenome map **does not include genome sequences from Indians.** However, it can still help map Indian genomes against existing **error-free and complete reference genomes**.

15.AI SUPERCOMPUTER 'AIRAWAT'

AI Supercomputer 'AIRAWAT'

Context: The AI supercomputer 'AIRAWAT,' located at C-DAC in Pune, India, has achieved a ranking of 75th in the world on the Top 500 Global Supercomputing List. It is part of the National Program on AI, with the vision of "AI for All."

Topic	Information
About Supercomputer	A supercomputer is an extremely powerful and high-performance computer capable of performing complex calculations and processing large amounts of data at incredibly fast speeds. It is used for tasks that require immense computational power.
Measurement	The processing speed of a supercomputer is measured in PETAFLOPS (ten to the power 15 floating point operations per second). FLOPS (floating point operations per second) are typically used to measure the performance of a computer's processor.
Maximum	China has the maximum number of supercomputers globally, followed by the United States, Japan, France, Germany, Netherlands, Ireland, and the United Kingdom.
Supercomputers in India	India's first supercomputer was PARAM 8000. It was followed by PARAM Shivay, PARAM Shakti, PARAM Brahma, PARAM Yukti, and PARAM Sanganak, installed at various institutions in India.
Previous AI supercomputer ranking	In 2020, PARAM Siddhi, the High-Performance Computing-Artificial Intelligence (HPC-AI) supercomputer, achieved a global ranking of 62nd among the Top 500 most powerful supercomputer systems in the world.
National Supercomputing Mission	The National Supercomputing Mission (launched in 2015) with the goal of enhancing research capacities and capabilities in India. It aims to connect various research institutions to form a Supercomputing grid using the National Knowledge Network (NKN).
Nodal Ministry	The National Supercomputing Mission is jointly steered by the Department of Science and Technology (DST) and the Ministry of Electronics and Information Technology (MeitY).
Implementation	The Centre for Development of Advanced Computing (C-DAC), Pune, and the Indian Institute of Science (IISc), Bengaluru, are responsible for implementing the National Supercomputing Mission.
Phases of the Mission	The mission is planned in three phases: Phase I focuses on assembling supercomputers, Phase II aims to manufacture certain components within the country, and Phase III involves designing a supercomputer in India.

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Significance:

This recognition places India among the top AI supercomputing nations globally.

About AIRAWAT:

It is part of the **National Program on AI** initiated by the Government of India, aligning with Prime Minister Narendra Modi's vision of **"AI for All."**

- Ministry of Electronics & Information Technology envisions scaling **AIRAWAT to a computing capacity of 1,000 AI Petaflops** to meet the current AI computational requirements.

Benefits:

The deployment of AIRAWAT will empower a**cademia, research labs, the scientific community, industry, and start-ups** to develop indigenous AI-enabled products and solutions, particularly for addressing India-specific challenges.

SPACE

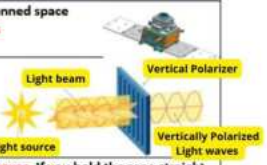
16.XPOSAT

Context:

XPoSat is **India's first polarimetry mission**, developed in collaboration between the **Indian Space Research Organisation (ISRO) and the Raman Research Institute (RRI)** (an autonomous research institute), to be launched later this year.

XPoSat to be Launched this Year

	Description
About	The X-ray Polarimeter Satellite (XPoSat) is an ISRO-planned space observatory to study the polarisation of cosmic X-rays
What is Polarisation?	Polarization refers to the direction in which waves vibrate, particularly in the context of light.
Explanation using an example	Imagine a rope being shaken up and down to create waves. If you hold the rope straight and shake it side to side, the waves will also move in that direction. This is similar to linear polarization.
Significance of the Study	Studying how radiation is polarised gives away the nature of its source, including the strength and distribution of its magnetic fields, understanding the geometry and inner workings of the light source and the nature of other radiation around it. XPoSat will study the 50 brightest known sources in the universe, including pulsars, black hole X-ray binaries, active galactic nuclei, and non-thermal supernova remnants
What are X-Rays?	X-rays are a type of electromagnetic radiation that has higher energy and shorter wavelengths than visible light. X-rays come from objects that are millions of degrees Celsius — such as pulsars, galactic supernova remnants, and black holes. Higher the temperature of source, shorter is the wavelength and higher is the energy of radiation coming out of it.
Payload	• POLIX (Polarimeter Instrument in X-rays): It will study 40 bright astronomical sources of different categories • XSPECT (X-ray Spectroscopy and Timing): It will study X-ray pulsars, black hole binaries, low-magnetic field neutron stars, active galactic nuclei (AGNs), magnetars
Orbit	The observatory will be placed in a circular low Earth orbit of 500–700 km
Duration	A planned lifetime of about 5 years
Goals	Understand emission mechanisms from complex physical processes; Provide valuable insights into the emission processes of X-ray sources
Other such missions	XPoSat is India's first, and only the world's second polarimetry mission that is meant to study various dynamics of bright astronomical X-ray sources in extreme conditions. The other such major mission is NASA's Imaging X-ray Polarimetry Explorer (IXPE) which was launched in 2021.



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17.COSMIC DUST PARTICLES

Context:

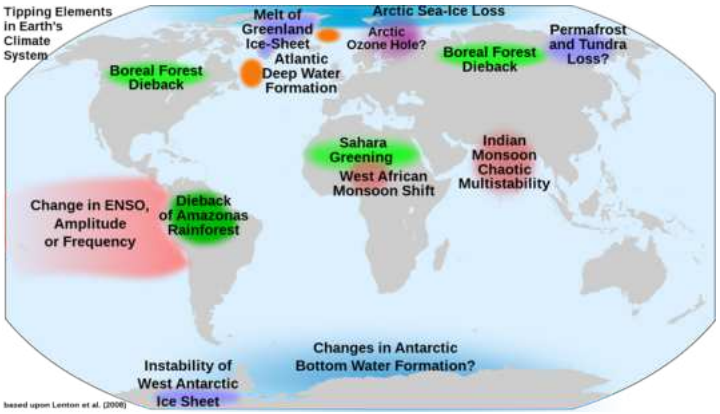
Indian scientists (from the Indian Institute of Astrophysics) have created a **computer model of cosmic dust particles** that can imitate the **unique way interstellar comet 2I/Borisov scatters light**.

Use: By studying the **way light scatters off these** cosmic particles, they can better understand **how comets behave**. The model accurately **reproduced the scattering of light** seen in experiments and observations. It revealed the presence of a large number of porous cosmic dust particles.

Cosmic dust particles:

	Description
About	Cosmic dust particles are **tiny solid particles that exist in outer space**. They are composed of various materials, including minerals, metals, ice, and organic compounds.
Shape	From **spherical to irregular** or fractal-like structures.
Size	Ranging from **nanometers to micrometres**
Composition	Amorphous silicate (Forsterite) and amorphous carbon
Found in	Cosmic dust particles can be found in **different environments**, such as interstellar space, planetary systems, and the atmospheres of planets and moons.

Role played	They contribute to the **formation of stars and planetary systems** by providing material for **accretion**. They also **scatter and absorb light**, affecting the radiation properties of **celestial objects**. Additionally, these particles serve as **building blocks for the formation of larger objects**, such as asteroids, comets, and planets.



CONSERVATION, ENVIRONMENTAL POLLUTION AND DEGRADATION

18.TIPPING POINTS

Context:

A study suggests that **climate change could push up to 30%** of species over tipping points as their geographic ranges experience unforeseen temperatures.

About Tipping Points:

	Description
Definition	'Tipping points' are **thresholds where the earth's systems** can no longer stabilize. Crossing these points becomes **more dangerous with increased warming.**
Explanation	For example, the melting of Greenland's ice can reach a tipping point where the ice loss accelerates, leading to a significant rise in sea levels.
Examples of tipping point	Melting of Greenland ice; Collapse of Antarctic glaciers (resulting in sea level rise); Destruction of Amazon forests; Melting of all permafrost, etc.
Recent Findings	**Five dangerous tipping** points may have already been passed due to **1.1°C of** global heating caused by human activity.
Impacts on Animals	When their geographic **ranges experience unfamiliarly hot temperatures**, up to 30% of species could be at risk. This can lead to **habitat loss and potential extinction**. Animals may need to **adapt or migrate to cooler regions**, but the short timeframe makes it challenging.
Actions Needed	Urgent action to **reduce carbon emissions is crucial to mitigate** harm and prevent an extinction crisis. Conservation efforts should be guided by early warning systems to protect vulnerable species.

19.CLIMATE REPARATIONS

Context:

A new study has found that the **world's top 21 fossil fuel companies** owed over US **$ 5 trillion** in climate reparations, to be disbursed over **a 26-year period from 2025 to 2050**. **The companies with the highest reparations**: ExxonMobil, Saudi Aramco, and Shell.

About Climate reparations:

	Description
Definition	Climate reparations aim to **rectify climate injustice** by requiring those most responsible for climate change to provide **support to those who have been wronged.**
Principles of Climate Reparations	**Polluter pays principle** (Polluters should be held liable for the costs of remedial action); **More responsibility of rich countries** (for past historical emissions); **Reparations-based approach** to climate refugees; Rich countries should provide financial and technological support to developing nations
Steps Taken	**Warsaw International Mechanism** (WIM) (Established in 2013 to compensate developing countries affected by climate disasters); **Green Climate Fund** (promise of $100 billion per year by 2020); Least Developed Countries Fund
Additional Measures Needed for Reparations	Establish an **international compensation commission** to handle claims from countries that have incurred adaptation expenses, similar to the **United Nations Claims Commission;** Prioritize adaptation measures; Establish a separate channel for loss and damages; **Long-term climate finance**; enforce legal measures for petroleum companies to share a part of their profit for GHG mitigation efforts

20.PEOPLE'S BIODIVERSITY REGISTER

Context:

The **National Campaign for Updation and Verification of People's Biodiversity Register (PBR)** was launched in Goa, by the Ministry of Environment, Forest and Climate Change.

Aim: It is aimed to **document and preserve India's rich** biological diversity.

About PBR:

The People's Biodiversity Register serves as a **comprehensive record** of locally available **Bio-resources including the landscape** and demography of a particular area or village. It is **prepared by Biodiversity Management Committees** (under Biodiversity Act 2002) in consultation with local communities.

About Biodiversity Management Committees

BMCs are **local bodies created** under the **Biological Diversity Act 2002**, with the **mandate** to ensure the **conservation, sustainable utilization and equitable sharing of benefits** from biodiversity.

The act has made it mandatory for **every local self-governing institution** in rural and urban areas to constitute **Biodiversity Management Committees** within their area of jurisdiction. BMC must **prepare a PBR in consultation** with local people.

Kolkata was **the first major metropolitan city** in India to make a detailed People's Biodiversity Register (PBR). Previously, the **Forest Survey of India's** report had flagged the **West Bengal Capital** for the least greenery among all metro cities.

21.WORLD BIODIVERSITY DAY 2023

World Biodiversity Day 2023

Context: International Day for Biological Diversity, celebrated on May 22 each year, is a reminder of the promise made during Kunming Montreal Global Biodiversity Framework (GBF) (December 2022)

	Description
About International Day for Biological Diversity	The United Nations General Assembly (UNGA) in 1993 proclaimed 22nd May as IDB to increase understanding and awareness of biodiversity issues. • 2011-2020: United Nations (UN) Decade on Biodiversity • 2021-2030: UN Decade of Ocean Science for Sustainable Development and the UN Decade on Ecosystem Restoration
Theme for 2023	"From Agreement to Action: Build Back Biodiversity"
About Kunming-Montreal Global Biodiversity Framework (GBF)	It is a non-binding international agreement that calls for urgent and integrated action to address biodiversity considerations in all sectors of the global economy.
Main Targets	Framework contains four goals and 23 targets for 2030. The four goals are: 1. Conserve and restore biodiversity 2. Ensure sustainable use of biodiversity 3. Share benefits fairly and equitably 4. Enable transformative change.
30 by 30 Target	One of the important targets is to make 30% of the Earth's land and oceans protected status by 2030.
Issues in meeting the targets	• Lack of Political will (similar targets set under the previous Aichi Biodiversity Targets in 2011 were not met by 2020); • Funding Gap (Developed countries were supposed to provide $20 billion in international finance to developing nations by 2025 and $30 billion by 2030)- not yet functional • Non-alignment of National Biodiversity Strategy and Action Plans (NBSAPs) with the GBF (only Spain has submitted the realigned NBSAP; even India has not done so) • Experts argue that the 'targets of protection of 30% of land and water', may infringe upon the rights of indigenous peoples.

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22.COLD-BLOODED ANIMALS

Context:

Scientists have disputed the idea **that as the planet warms, the bodies of cold-blooded marine species, including fish, will contract.**

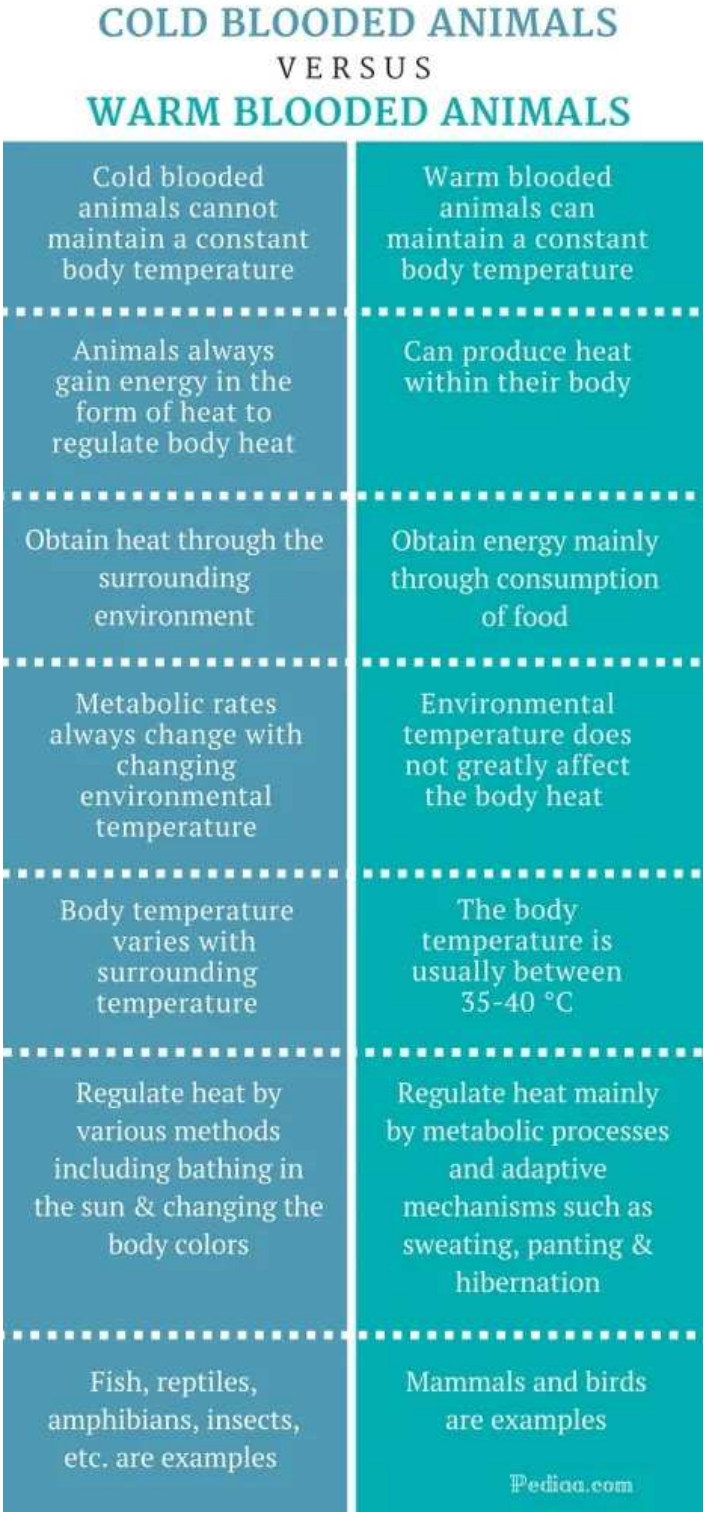
Conventional understanding:

Warming temperatures lead to smaller body sizes in cold-blooded marine animals, suggesting that they may actually grow larger in response to warmer waters.

The recent study challenges the expectation due to several reasons:

- **Warm water pollution**: The study suggests that warm water pollution, caused by the discharge of warm pollutants, can actually contribute to **the growth of aquatic animals**.
- **Accelerated growth at younger age:** Contrary to previous assumptions, the study found that cold-blooded animals, or ectotherms, experience faster growth at a younger age in warm waters.
- **Sustained growth throughout life:** The study discovered the positive effect of warmer waters on growth and they continue to experience growth throughout their lives, leading to a larger maximum body size.
- **Survival trade-off:** While the warmer waters provide favourable conditions for growth, they also come with higher death rates.
- **Influence of warm water on young populations**: The research revealed that even if the water becomes inhospitable to the fish due to excessive warmth, the growth boost is significant enough to create a larger population of young-and-large fish.

Highlights of the study: Aquatic animals/ectotherms/ cold-blooded animals such as fish would actually **grow larger due to warm water pollution**, i.e., water heated by warm pollutants.



What is an eco-sensitive zone?

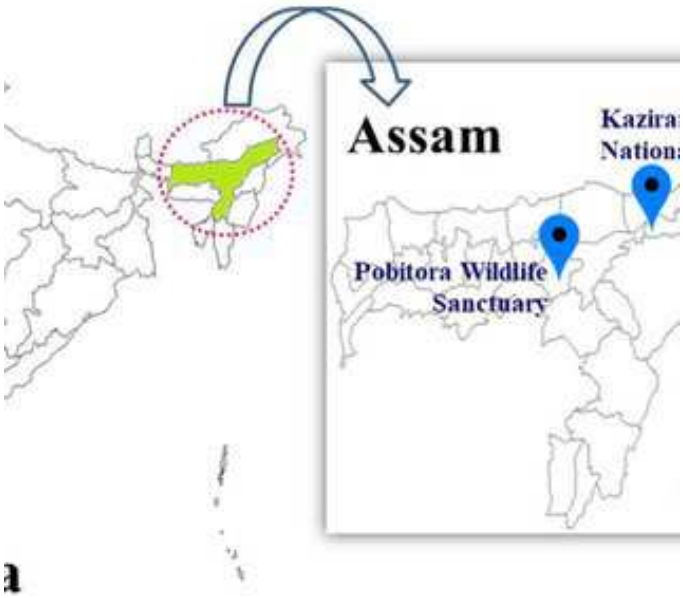
Eco-Sensitive Zones (ESZs) are **designated areas surrounding national parks** and wildlife sanctuaries that are deemed **ecologically fragile and important** for the conservation of wildlife and their habitats.

Areas mandated under ESZ:

MoEFCC has mandated the **declaration of land within 10 km of the park or sanctuary** boundaries as ESZs under the **Environmental (Protection) Act, 1986**. However, the application of the 10-km rule can vary, and areas beyond 10 km can also be notified as ESZs if they contain **significant ecological corridors**.

Categorization of Activities:

- **Prohibited:** Commercial mining, sawmills, polluting industries, major hydroelectric projects, and commercial use of wood
- **Regulated activities** include tree felling, the establishment of hotels and resorts, commercial use of natural water, the erection of electrical cables, and drastic changes in agricultural practices.
- **Permitted activities in ESZs** include ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, the use of renewable energy sources, and the adoption of green technology for all activities.



23.POBITORA WILDLIFE SANCTUARY

Context:

The Supreme Court has issued notices to the Ministry of Environment and Forests and the Assam government in response to a plea seeking the **declaration of the area around Pobitora Wildlife Sanctuary** in Assam as an **eco-sensitive zone**.

About Pobitora Wildlife Sanctuary:

It is located in the **flood plains of the Brahmaputra River in Assam**, and is known for having the **highest density of one-horned rhinos** (EN) in the world. It is often referred to as **'Mini Kaziranga'** due to its similar landscape and vegetation. Approximately 72% of the sanctuary is covered by **wet savannah dominated by Arundo donax and Saccharum,** while the rest consists of water bodies.

SPECIES IN NEWS

24.LEATHERBACK TURTLES

Context:

The government has granted approvals for an **international container port** on the **Great Nicobar Island**.

The approvals granted for the project have been **criticized for their violation of internationally accepted principles** of biodiversity offsetting. There is **no provision to compensate** for the damage to turtle nesting.

25.MALABAR PIED HORNBILL

Context:

A **two-decade-long community-based conservation** initiative in the **Vazhachal Forest division** of the Western Ghats (Kerala) has successfully restored the dwindling **hornbill population**, specifically the **Malabar Pied Hornbill**, to a viable level.

About the programme:

- **Communities involved:** Kadar tribal community
- **Agencies involved**: Western Ghats Hornbill Foundation and the Kerala Forest Department
- **The method used:** Monitoring hornbill nesting trees, addressing poaching issues, raising awareness about hornbills and protecting their habitat.
- **Impact**: The efforts resulted in the re-establishment of abandoned nests and the formation of new nesting hollows. The **Malabar Pied hornbill** population in the area grew to **around 100 individuals with 12 nesting sites**.

About Hornbills: Hornbills are birds found in **tropical and subtropical regions of Africa and Asia**. In India, there are **nine species of hornbills**, with the **northeastern region** being home to the **highest diversity** of these birds. The hornbill holds **cultural significance** for certain ethnic communities in the northeast, particularly the **Nyishi of Arunachal Pradesh**. The **Nagas** celebrate the **Hornbill festival,** named after this revered and admired bird. Hornbills are also called "**gardeners or farmers of the forest**".

Hornbill Species	Habitat
Great Hornbill (Vulnerable)	Western Ghats, Northeast and Himalayas
Rufous-necked Hornbill (Vulnerable)	North-East India
Wreathed Hornbill (Vulnerable)	North-East India
Narcondam Hornbill (Vulnerable)	Narcondam in Andamans
Malabar Pied Hornbill (Near Threatened)	Evergreen and moist deciduous forests in India, Western Ghats
Oriental Pied Hornbill (Least Concern)	Subtropical or tropical moist lowland forests, Northeast India
Austen's Brown Hornbill (Near Threatened)	Forests of North East India
Malabar Grey Hornbill (Vulnerable)	Western Ghats
Indian Grey Hornbill (Least Concern)	Foothills of Southern Himalayas

CYBERSECURITY

26.VOLT TYPHOON

Context:

Recently, Microsoft Corp has warned that "Volt Typhoon" was "pursuing the development of **capabilities that could disrupt critical communications infrastructure** between the United States and Asia region during future crises."

What is Volt Typhoon?

It is an **alleged hacking group** believed to be backed by China, having capabilities of intelligence gathering and digital sabotage.

Volt Typhoon is primarily focused on **stealing information from organizations** related to **the military or government in the United States**, suggesting their involvement in espionage rather than direct disruption.

Other such hacking groups used by security agencies:

- Equation Group (USA)
- Fancy Bear (Russia)
- Lazarus Group (North Korea)
- Turla (APT34) (Iran)
- APT29 (Cozy Bear) (Russia)
- SandWorm (Russia)
- Comment Crew (APT1) (China)

DEFENSE

27.NIA'S OPERATION DHVAST

Context:

NIA's Operation Dhvast was a **nationwide operation targeting terrorists, gangsters, and drug smugglers**. It involved raids at **129 locations across multiple states**, resulting in three arrests.

Aim: The operation aimed to **dismantle the terror nexus involved in targeted killings, terror funding, extortion, and smuggling of drugs and weapons**.

About NIA:

The National Investigation Agency (founded 31st Dec 2008; HQ: New Delhi; Under Home Ministry) is the primary anti-terror investigation task force of India. The agency is empowered to deal with the **investigation of terror-related crimes** across **states without special permission** from the states under a written proclamation from the Ministry of Home Affairs. It has the authority to **take over cases from state police** forces and other agencies. It seeks the **sanction of the Central government** for prosecuting accused individuals under the **Unlawful Activities (Prevention) Act (UAPA)** and other scheduled offences.