

CURRENT AFFAIRS

WEEKLY

WEEK: I
AUGUST
2022

MAINS

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- HEALTH INSURANCE FOR INDIA'S MISSING MIDDLE CLASS
- THE LAW FOR PROTECTING CHILDREN AGAINST CORPORAL PUNISHMENT
- THE LATEST GUIDELINES ON ARRESTS AND BAIL ORDERS
- LOK SABHA PASSES FAMILY COURTS BILL
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- 7 NEW DISTRICTS IN WEST BENGAL — HOW AND WHY ARE DISTRICTS CREATED OR ABOLISHED IN INDIA?
- LANGUAGE AS A BARRIER: INCLUDING MOTHER TONGUE IN HIGHER STUDIES
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- Members of Rzakar Bahini sentenced to death
- National Flag designer Pingali Venkayya birth centenary

POLITY & GOVERNANCE

- Kerala's own Internet network and service: KFON
- Bill for Gati Shakti University introduced in Lok Sabha

INTERNATIONAL RELATIONS

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- 'Chabahar Day' observed to promote Chabahar – Link to INSTC

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- World Overshoot Day: World has already overshoot nature's budget for rest of the year
- National Global Tiger Day Celebrations 2022
- Kerala's damselfly checklist gets a new member

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- Cryptojacking, the cyber-attack carried out by crypto miners
- The street, in 360-degree panoramic view
- Gluttonous cosmic 'black widow' is heaviest-known neutron star
- MiG-21 Fighter Jets and India

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- Joint exercise "EX VINBAX 2022" & "Military Exercise AL NAJAH -IV"
- IAF to take part in 'Pitch Black' in Australia

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- PM inaugurates 44th Class Chess Olympiad

SPECIAL

- Supreme Court overrides its own 2017 ruling to justify 'drastic' PMLA provision for bail

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— **Disclaimer** —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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SECTION: A
(MAINS)

CURRENT AFFAIRS

HEALTH INSURANCE FOR INDIA'S MISSING MIDDLE CLASS

CONTEXT

Under the Public health insurance policies, the middle segment of the population i.e. too rich to be covered by government health insurance and too poor to buy private insurance — has been one of Indian healthcare's most stubborn problems.

◎ BACKGROUND

According to NITI's Aayog document on how to cover the "missing middle", it was mentioned that 30 per cent of India's population — still lacked any form of financial protection for health.

- India's public expenditure on healthcare is a little over 1 percent, which is considerably low as compared to the vulnerable section of the society.
- The government launched the Pradhan Mantri Jan Arogya Yojana (PMJAY) — the tertiary care arm of Ayushman Bharat — in 2018.
 - The scheme aimed at helping over 10 crore households with "deprivations" — as defined in the socio-economic caste census (SECC) of 2011 — to access healthcare.
- Despite this, about **80 crore Indians** (at an estimated average family size of five) were left out of the scheme's ambit.
- Health insurance penetration in India is pegged at **35 per cent**.

◎ ANALYSIS

Why does Public Health matter?

- Public health promotes and protects the health of people and the communities where they live, learn, work and play.
- Public health works to track disease outbreaks, prevent injuries and shed light on why some of us are more likely to suffer from poor health than others.

What are the loopholes in present health insurance coverage for the middle man of India?

- Uncovered population:** In the absence of a low-cost health insurance product, the missing middle remains uncovered despite the ability to pay nominal premiums.

- Ignored segment:** Most health insurance schemes and products in the Indian market are not designed for the missing middle.
- Out of Budget:** Private voluntary health insurance is designed for high-income groups – it costs at least two to three times the affordable level for the missing middle.
- Affordable goes to BPL:** Affordable contributory products such as ESIC, and Government subsidized insurance including PMJAY are closed products. They are not available to the general population due to the risk of adverse selection.

What are its implications?

- High out-of-the-pocket expenditure (OOPE):** The private sector is characterized by high OOPE, leading to low financial protection, and is mostly self-employed or middle-income groups of the society.
- Impact on the standard of living:** The catastrophic health expenditure and its impact on savings and standard of living are experienced by a substantial share of the population, almost 1/4th at the 10% threshold level, connecting it to the purchase of health insurance as an investment for health security is not intuitive ex-ante (Ex-ante refers to future events, such as the potential returns of a particular security, or the returns of a company).

Who are those missing 'middle' people in the country?

- The **'missing middle'** is a broad category that lacks health insurance, positioned between the deprived poorer sections, and the relatively well-off organized sector.
- The deprived and poor sections receive Government subsidized health insurance, while the relatively well-off in the organized sector of the economy are covered under social health insurance or private voluntary insurance.
- The missing middle refers to the **non-poor segments** of the population who remain prone to catastrophic and even impoverishing health expenditure, despite the financial capacity to pay for contributory health insurance.

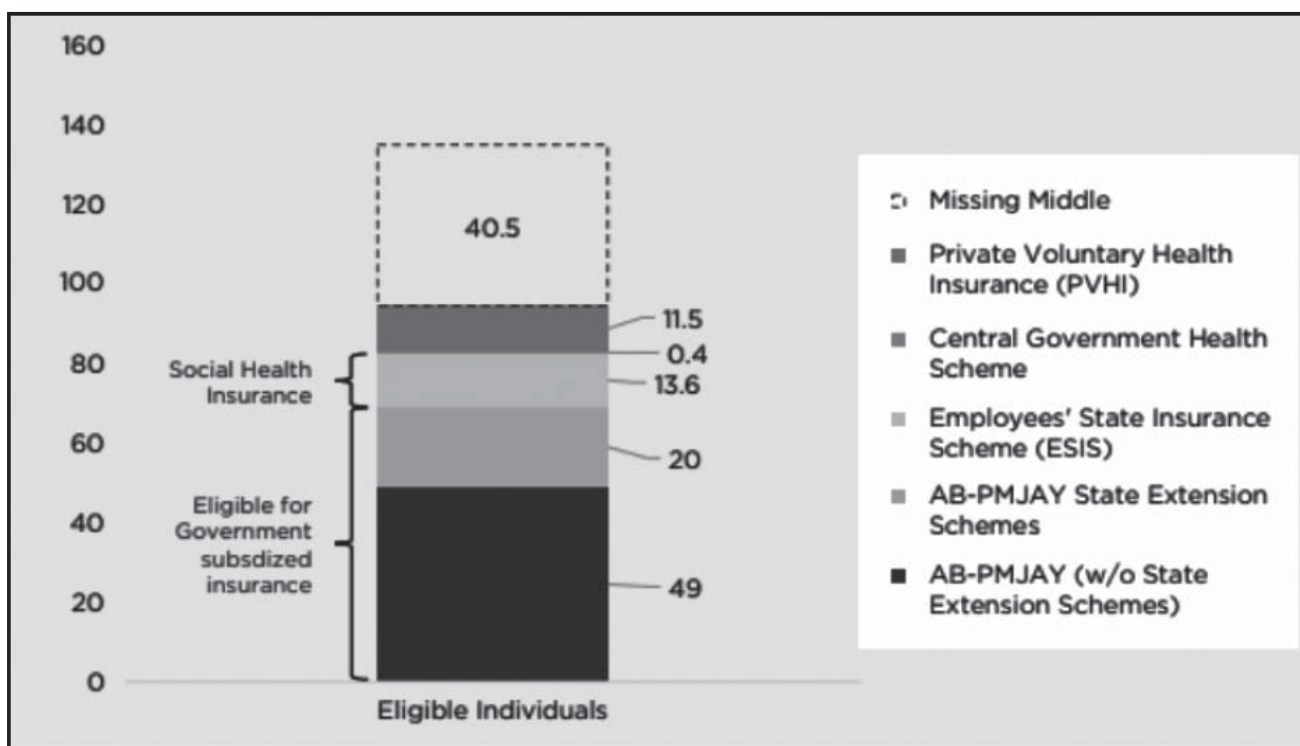
Health insurance policies in India

- **PMJAY (Ayushman Bharat: Pradhan Mantri Jan Arogya Yojana):** Pradhan Mantri Jan Arogya Yojana' (PMJAY) was launched in 2018.
 - ▶ Also known as Ayushman Bharat or the National Health Protection Mission, it was launched as the world's largest health scheme with an aim to serve a population equal to 27-28 European countries.
- **Rashtriya Swasthya Bima Yojana (RSBY):** It provides fully subsidized comprehensive secondary and tertiary healthcare packages with annual coverage of Rs. 5 lakhs per family on a floater basis.
- **Private voluntary health insurance (PVHI) schemes:** PVHI is a contributory and voluntary scheme.

- ▶ These are retail insurance products with coverage for nearly 11.5 crore persons.
- ▶ PVHI are broad of two **types — individual/family or group business** (excluding Government).
- ▶ The former is targeted by individuals and families, as the name suggests, and covers 4.2 crore persons.

How their numbers are estimated?

- The occupations or sources of income of the 'missing middle' can be inferred using the **NSSO's 75th Round (2017-18) health survey.**



Why does Public health needs 'insurance coverage'?

- **Achieving UHC:** Expansion of **health insurance/assurance coverage** is a necessary step and a pathway in India's effort to achieve **Universal Health Coverage (UHC)**.
- **To lower the expenditure burden:** **Low Government expenditure** on health has constrained the capacity and quality of healthcare services in the public sector. It diverts the majority of individuals – about two-thirds – to seek treatment in the costlier **private sector**.
- **To manage expensive treatments:** India's population is vulnerable to catastrophic spending and impoverishment from expensive trips to hospitals and other health facilities, which is not limited to the poor but it impacts all segments of the population.
- **Safeguarding from health shocks:** Pre-payment through health insurance emerges as an important tool for risk-pooling and safeguarding against catastrophic (and often impoverishing) expenditure from health shocks.

What are the challenges?	What can be done further to include the missing middle ones?
<ul style="list-style-type: none"> • Lack of Awareness • Identification and outreach to customers is the primary hurdle on the supply side. • Lack of infrastructure 	<ul style="list-style-type: none"> • Consumer education of health insurance is important to increase its uptake. • Targeting affordable solutions • Keeping the middle segment in focus during policy formulation • Effective government Policies

◎ CONCLUSION

The primary purpose of the government agencies is to recognize the policy issue of low financial protection for health in the missing middle segment. Health insurance is a potential pathway to addressing that, and improving the efficiency and quality of healthcare delivered. In doing so, broader discussions on solutions and specific products are required to improve insurance coverage for the missing middle.

THE LAW FOR PROTECTING CHILDREN AGAINST CORPORAL PUNISHMENT

CONTEXT:

Three private school teachers in Pune have been booked under the Juvenile Justice Act over allegedly thrashing three Class 10 students, and threatening to grade them poorly in internal assessments.

© WHAT IS CORPORAL PUNISHMENT?

- By definition, corporal punishment means punishment that is physical in nature.
- Currently, there is no statutory definition of corporal punishment of children in Indian law. Thus, the definition of corporal punishment can at best only be indicative.
- The Right of Children to Free and Compulsory Education (RTE) Act, 2009 prohibits 'physical punishment' and 'mental harassment' under Section 17(1) and makes it a punishable offense under Section 17(2).

- In keeping with the provisions of the RTE Act, 2009, corporal punishment could be classified as physical punishment, mental harassment, and discrimination.
 - ▶ Physical punishment is understood as any action that causes pain, hurt/injury, and discomfort to a child, however light.
 - ▶ Mental harassment is understood as any non-physical treatment that is detrimental to the academic and psychological well-being of a child.
 - ▶ Discrimination is understood as prejudiced views and behavior towards any child because of her/his caste/gender, occupation or region, non-payment of fees, etc.

- **UN Definition:** The United Nations Committee on the Rights of the Child defines corporal punishment as follows:
 - ▶ The Committee defines "corporal" or "physical" punishment as any punishment in which physical force is used and intended to cause some degree of pain or discomfort, however light.
 - ▶ These include, for example, a punishment that belittles, humiliates, denigrates, scapegoats threaten, scares, or ridicules the child.
 - ▶ This **definition is a useful benchmark** because it emphasizes the various physical forms that corporal punishment might take, and **establishes that this full spectrum of**

physical punishment – even acts that many consider 'mild' constitute corporal punishment. There is no threshold below which physical force against a child is acceptable.

Corporal Punishment in Schools:

- Corporal punishment is a **discipline method** in which a supervising adult deliberately inflicts pain upon a child in response to a child's unacceptable behavior and/or inappropriate language.
 - ▶ The immediate aims of such punishment are usually to halt the offense, prevent its recurrence, and set an example for others.
 - ▶ The purported long-term goal is to change the child's behavior and to make it more consistent with the adult's expectations.

What are the likely impacts of Corporal punishment on children?

- **Behavioral problems:** Corporal punishment increases children's behavioral problems over time and has no positive outcomes.
- **Violation of children's Rights:** Corporal punishment is a violation of children's rights to respect for physical integrity and human dignity, health, development, education, and freedom from torture and other cruel, inhuman, or degrading treatment or punishment.
- **Risk of Escalation:** Studies suggest that parents who used corporal punishment are at heightened risk of perpetrating severe maltreatment.
 - ▶ Corporal punishment is linked to a range of negative outcomes for children across countries and cultures, including physical and mental ill-health, impaired cognitive and socio-emotional development, poor educational outcomes, increased aggression, and perpetration of violence.
- **Risk of Criminal Behaviour:** Corporal punishment signals to the child that a way to settle interpersonal conflicts is to use physical force and inflict pain. Such children may in turn resort to such behavior themselves.
- **Damaged Relationship:** They may also fail to

develop trusting, secure relationships with adults and fail to evolve the necessary skills to settle disputes or wield authority in less violent ways.

- **Lowering of Cognitive abilities:** Impaired cognitive and socio-emotional development, specifically emotion regulation and conflict solving skills.

Provisions under the law against such punishment:

In theory, corporal punishment is covered by all the provisions under Indian law that punishes perpetrators of physical harm.

- **Section 17 of the Right to Education Act, 2009,** imposes an absolute bar on corporal punishment.
- **Section 75 of the Juvenile Justice Act** prescribes punishment for cruelty to children.
 - ▶ Violation would invite punishment of rigorous imprisonment of up to five years and a fine of up to Rs.5 lakh.
 - ▶ If the child is physically incapacitated or develops a mental illness or is rendered mentally unfit to perform regular tasks or has a risk to life or limb, then imprisonment may extend up to ten years.
- **Section 23 of the JJ Act, 2000:** It applies to personnel in childcare institutions regulated by the JJ Act; it arguably applies to cruelty by anyone in a position of authority over a child, which would include parents, guardians, teachers, and employers.
- **Section 323 of IPC:** pertaining to voluntarily causing hurt.
- **Section 325 of IPC:** is about voluntarily causing grievous hurt.

What do NCPDR guidelines say about eliminating corporal punishment?

- The NCPDR guidelines for eliminating corporal punishment against children require every school to develop a mechanism and frame clear-cut protocols to address the grievances of students.
- Drop boxes are to be placed where the aggrieved person may drop his complaint and anonymity is to be maintained to protect privacy.
- Every school has to constitute a '**Corporal Punishment Monitoring Cell**' consisting of two teachers, two parents, one doctor, and one lawyer (nominated by DLSA).

Who is entrusted with the responsibility to ensure children are protected?

- Under Section 31 of the **RTE Act**, the **National Commission for Protection of Child Rights (NCPCR)** and the **State Commissions for Protection of Child Rights (SCPCRs)** have been entrusted with the task of monitoring children's right to education.
- The state governments under their RTE rules have also notified block/district level grievance redressal agencies under the RTE Act.

WHO Response:

- World Health Organization (WHO) also advocates for increased international support for and investment in these evidence-based prevention and response efforts.
- The **Global status report on preventing violence against children 2020** tracks countries' progress toward the **SDGs** aimed at ending violence against children.
 - ▶ It is jointly published by WHO, UNICEF, UNESCO, the UN Secretary-General's Special Representative on Violence against Children, and the Global Partnership to End Violence against Children.

Ethics of Corporal Punishment:

- Ethicists have traditionally distinguished between three purposes of punishment: **retribution, correction, and deterrence**.
 - ▶ **Retribution** is regarded as the most fundamental. This is because punishment is chiefly a matter of justice: it is about giving a wrongdoer what he or she has come to deserve. Retribution, then, seeks to balance the scales of morality by inflicting deserved harm upon a wrongdoer.
 - ▶ **Correction and deterrence**, although desirable, are not essential to this goal. Indeed, both of these functions must presuppose retributive justice, for we cannot punish someone for the sake of correction or deterrence unless they first deserve it.
- The idea that corporal punishment to children is unjustified because it leads to diminished future outcomes in children is a puzzling one. Comparing children to hardened criminals is an inappropriate analogy.
- Corporal punishment irrespective of whom inflicted upon is hateful. The implicit assumption that punishment is justified by its effects on improving life outcomes can be easily challenged.

© **CONCLUSION:**

Corporal punishment and the associated harms are preventable through multispectral and multifaceted approaches, including law reform, changing harmful norms around child rearing and punishment,

parent and caregiver support, and school-based programming. Ultimately, punishment is a matter of justice, not correction, rehabilitation, or deterrence. The time has come to re-examine the saying '*spare the rod and spoil the child*'.

THE LATEST GUIDELINES ON ARRESTS AND BAIL ORDERS

CONTEXT:

The Supreme Court of India acknowledged the ‘ineffectiveness’ of India’s bail system and has pressed upon the need for reforms and enactment of separate Bail Acts in India.

Details:

- More than 75% of India’s prison population are under trial and the percentage further increases to 118% when it comes to Indian prison overcrowding.
- In recent times there have been several controversies regarding the arrest and subsequent bail of accused persons.
- The Supreme Court has cautioned against “**hasty and indiscriminate arrests**” and has issued specific guidelines.
- In **Satender Kumar Antil vs CBI (2022)** the court has laid down fresh guidelines on arrests in order to have strict compliance with the provisions of **Section 41 and 41A** of the Code of Criminal Procedure, 1973.

Sections 41 and 41A of the Code of Criminal Procedure:

- **Section 41** provides for the circumstances in which an arrest can be made by the police without a warrant and mandates reasons to be recorded in writing for every arrest and non-arrest.
- **Section 41A** provides for the requirement of a notice to be sent by the investigating agencies before arresting certain conditions prescribed by the Code.

Supreme Court’s latest Guidelines with respect to Bail:

- **Specific Legislation:** Court asked the Government of India for considering the introduction of a separate enactment, in the nature of a Bail Act (as in the United Kingdom) so as to streamline the grant of bails.
 - ▶ **United Kingdom Bail Act 1976:** It prescribes the procedure for granting bail and aims to reduce the size of the inmate population. The Act recognizes a “**general right**” to be granted bail and has provisions for ensuring legal aid for defendants.

▶ The Act provides specific grounds for rejecting bail.

- **Bail application:** The court held that there need not be any insistence on a bail application while considering the application under certain Sections of the Code.
 - ▶ These sections relate to various stages of a trial where a magistrate can decide on the release of an accused.
 - ▶ The Supreme Court held that in these circumstances, magistrates must routinely consider granting bail, without insisting on a separate bail application.
- **Adhering to Timeline:** The Court has directed that bail applications ought to be **disposed of within a period of two weeks** except if the provisions mandate otherwise.
 - ▶ The Court also held that “applications for anticipatory bail are expected to be disposed of within a period of six weeks except for any intervening application.
- **Compliance with earlier order:** The Court said that there needs to be strict compliance with the mandate laid out in **Siddharth vs State of U.P. 2021**.

About the Siddharth case: The court stated that “merely because an arrest can be made because it is lawful does not mandate that arrest must be made.” The Court further stated that in case the investigating officer believes that the accused will not abscond or disobey the summons, then until and unless he has been charged for a heinous crime, the officer is not compelled to arrest him during the investigation.

- **Directions to High Courts:** The High Courts have been directed by the apex court to identify under-trial prisoners who cannot comply with bail conditions and take appropriate action in light of Section 440 of the CrPC, facilitating their release.
 - ▶ **About Section 440 CrPC:** The amount of bond shall not be excessive, and high courts & sessions courts may reduce the amount prescribed by the magistrate or a police officer.

- **Direction to states:** The SC also directed all state governments and Union Territories to facilitate standing orders to comply with the orders and **avoid indiscriminate arrests.**
 - ▶ The High Court in consultation with the State governments will have to undertake an exercise on the **need for special courts** and vacancies in the position of Presiding Officers of the special courts will have to be filled up expeditiously.
 - ▶ The CJI has also raised the issue of **vacant positions and infrastructural requirements** in the judiciary.

Bail Adjudication and the Judicial Approach:

- **Ineffective use of discretion:** The power to grant bail is largely based on the court's discretion and depends on the facts of each case.
 - ▶ The Court guidelines sometimes **validate the denial of bail** or imposition of onerous bail conditions based on the gravity of the offense, character of the accused, and likelihood of the accused absconding or tampering with evidence.
 - ▶ In all such cases, courts rarely exercise their discretion for granting bail and are likely to take a more stringent approach against the release on bail.
- **Poor bearing the Burnt:** Marginalized persons are the most affected ones as either they are denied bail or granted bail with onerous conditions, in absolute disregard of their realities.

Challenges in Bail compliance:

- **Limited means to arrange for money/property and local sureties** are the most significant reasons accounting for an under-trial's inability to comply with bail conditions.
- In addition, **lack of residence and identity proof**, abandonment by family, and limitations in navigating the court system also **undermine an under-trial's ability to comply with bail conditions.**

Flawed assumptions

- It presumes that every arrested person will be propertied or have access to propertied social connections.

- It presumes that the **risk of getting penalized in monetary terms** is a necessary condition to **ensure the presence of the accused in court.**
- Assumptions and prejudiced jurisprudence have the effect of rendering the rule of **'bail not jail' meaningless** for a significant proportion of undertrial persons

Lack of safeguards

- **Arbitrary arrest:** A significant proportion of arrested persons, especially those from disadvantaged sections of society suffer due to a lack of effective enforcement of safeguards against arbitrary arrest.
 - ▶ This puts migrants, persons without assets, or those with no contact with family at higher risk of arrest because of their socio-economic conditions.
 - ▶ This is another reason for a large number of undertrials in our courts.

Need for an effective Bail Law:

- The foundations of the current bail law ensure that it is anti-poor and disproportionately burdens those from marginalized backgrounds. The solutions we intend to craft must be based on a deep and realistic understanding of the problem.
- An effective bail law must be based on the answers to current issues with the variables such as the demographics of undertrials, category of offenses, and timelines for bail, and also address socio-economic and structural barriers.

CONCLUSION

Arrest and detention in police lock-up of a person **can cause incalculable harm** to the reputation and self-esteem of a person. Compliance with bail conditions for the overwhelmingly structurally disadvantaged under-trials requires constant handholding. This is a crucial aspect of ensuring last mile delivery of justice that the extant bail law does not consider.

For any bail law to effectively provide relief, a **careful re-evaluation of the presumptions of the judiciary is crucial.** There is an urgent need for bail reform but it would be counterproductive without first developing to understand and diagnosing the problem.

LOK SABHA PASSES FAMILY COURTS BILL

CONTEXT:

Recently, the Lok Sabha passed the Family Courts (Amendment) Bill, 2022 which seeks to amend the Family Courts Act, 1984 to establish family courts in Himachal Pradesh and Nagaland.

◎ BACKGROUND

- In 1984, the Family Courts Act was passed and it came into force on September 14, 1984. It was enacted for the establishment of Family Courts with a view to **promote conciliation** and secure **speedy settlement of disputes** relating to marriage and family affairs and related matters.
- **Objective:** To take family and marital disputes away from the overcrowded intimidating and congested environment of traditional courts of law and bring them to congenial and sympathetic surroundings.
 - ▶ The aim was 'conciliation' between the estranged family members and not 'confrontation'.

How do the Family Courts come into existence?

- The need for a **non-adversarial method** of resolving family disputes and **promoting conciliation** and securing **speedy settlement of disputes** relating to marriage and **family affairs** was coming from several women associations, welfare organizations, and individuals.
- The need was, therefore, felt in the public interest to establish family courts for speedy settlement of family disputes.
- As a result of political mandate and on the recommendation of the **Law Commission in its 59th report (1974)** which also recommended for setting up of special courts where rules of procedure would be simpler to deal with family matters.
- In India first and foremost the family court was established in the state of Rajasthan on 19 November 1985.

Salient features of Family Courts Act, 1984:

- To make it **obligatory for the state to establish Family courts.**
- To **make mandatory conciliation proceedings in Family courts.**
- To provide social and medical assistance to assist the Parties to settle their disputes by conciliation.

- To **provide jurisdiction** to the family courts on the nullity of Marriage, divorce, judicial separation, restitution of Conjugal rights, the validity of marriage, property disputes between members of the family, legitimacy of the child, Guardianship, custody of children and maintenance, etc.
- The environment of family courts is expected to be different from regular courts. The atmosphere is supposed to be quite informal and relaxed. And the judges need not put on robes and judges need not set on the raised platform.
- **Two main pillars** of family courts are **Counseling and Conciliation.**

Jurisdiction of the Family Court Act 1984:

- A suit or proceeding for the decree of nullity of marriage, or restitution of conjugal rights, or for the dissolution of the marriage between the parties;
- A suit or proceeding for determining the validity of a marriage or matrimonial status of a person;
- A suit or proceeding in the matter related to the properties between the parties to a marriage;
- A suit or proceeding for an injunction or order arising out of a marriage;
- A suit or proceeding for declaring the legitimacy of a person;
- A suit or proceeding for maintenance;
- A suit or proceeding for the guardianship of the person, or custody of any minor.

About Family Courts (Amendment) Bill:

- It seeks to provide for the **establishment of Family Courts** in the **State of Himachal Pradesh** with effect from the **15th of February, 2019**, and in the **State of Nagaland with effect** from the **12th of September, 2008.**
- It also seeks to **insert a new Section 3A** to **retrospectively validate** all actions under the said Act taken by the State Government of Himachal Pradesh and Nagaland and the Family Courts of those states before the commencement of the Family Courts (Amendment) Act, 2022.

- According to the bill, all orders of appointment of a family court judge, and the posting, promotion, or transfer of such a judge under the Act will also be valid in the two States.

Need for an amendment and why does it only concern two States:

- There are **715 Family Courts** that are established and functioning in 26 States and Union territories, including **three Family Courts in the State of Himachal Pradesh** and **two-Family Courts in the State of Nagaland**.
- The issue of **lack of jurisdiction of Family Courts** in the State of Himachal Pradesh has been challenged before the High Court of Himachal Pradesh.
- A petition filed in the Himachal Pradesh High Court (Omkar Sharma vs. State of Himachal Pradesh) contended that family courts in the state of Himachal Pradesh and Nagaland were functioning without jurisdiction.
- The **Central Government had not issued any notification to bring into force the provisions of the Act in the State** to date.
- In the absence of any notification, anything done or any action taken under the said Act appears to be **void ab initio** (Having no legal effect from inception).
- Since there was no provision in the Act for the Centre to notify the establishment of family courts,

the Union Law Ministry brought **The Family Courts (Amendment) Bill, 2022**.

Changes Proposed:

- New Section 3A:** This addition will extend the application of the Act to Himachal Pradesh and Nagaland, with effect from the dates the family courts were set up.
 - Under Section 3A, **all actions taken, appointments made, and notifications issued under the Act in Himachal Pradesh and Nagaland before the commencement of the Family Courts (Amendment) Act, 2022 will be deemed valid**.
 - The document also says that all orders of appointment of a family court judge, and the posting, promotion, or transfer of such a judge under the Act will also be valid in the two States.

CONCLUSION

Lack of uniformity regarding the rules laid down by different states also leads to vagueness in the proper application of the Act. Though the Act was aimed at removing the gender biases in Statuary legislation. The goal is yet to be achieved. The family courts need to adopt various dynamic steps for the smooth and proper functioning of the family court, especially when the pending court cases, are touching new heights.

ANTI-DOPING BILL

CONTEXT:

The National Anti-Doping Bill 2021, which aims to establish a statutory framework for the National Anti-Doping Agency (NADA), was recently approved by the Lok Sabha.

About National Anti-Doping Agency (NADA):

- With a mission for drug-free sports in India, the National Anti-Doping Agency (NADA) was established as a registered corporation under the Companies Registration Act, 1860, on November 24, 2005.
- It implements anti-doping regulations in accordance with the WADA (World Anti-Doping Agency) code, overseeing the doping control program, supporting education and research, and raising awareness of doping and its negative impacts are the main objectives.
- It looks into the planning, coordinating, implementing, monitoring, and enforcing advances in doping control, cooperating with other pertinent national organizations, agencies, and other anti-doping organizations, etc. are all tasks that fall within the purview of NADA.

ANALYSIS

What are the key features of the Bill?

• Prohibition of Doping in the sports:

- According to the proposed law, doping is prohibited in sports. It applies to athletes, athlete support staff members, and other individuals engaging in the sport.

• Outcomes of a violation:

- Anti-doping regulations violations may lead to disqualification of the results, the confiscation of medals, points, and awards, disqualification from future competitions or events for a set amount of time, financial penalties, etc.

• Statutory status for the National Anti-Doping Agency:

- The bill envisages the establishment of this National Anti-Doping Agency as a statutory body.
- It will be headed by a director general appointed by the central government. The functions of the agency include, for example,
 - ▶ Planning, implementation, and monitoring of anti-doping activities,

- ▶ Investigation of anti-doping rule violations,
- ▶ Support of anti-doping research.

• National Board for Anti-Doping in Sports:

- The Bill establishes a National Board for Anti-Doping in Sports to make recommendations to the government on anti-doping regulation and compliance with international commitments on anti-doping.
- The Board will oversee the activities of the Agency and issue directions to it.

• Data related to athletes and doping:

- The Agency will also have the power to collect certain personal data of athletes such as:
 - ▶ sex or gender,
 - ▶ medical history, and
 - ▶ Where about information of athletes (for out-of-competition testing and collection of samples).

- The Agency will prescribe the procedure for collection, usage, processing, and disclosure of such personal data.

- It will publicly disclose certain information such as the name of the athlete, the anti-doping rule violated, and the consequences imposed.

• Disciplinary and Appeal Panels:

- The Board will constitute a National Anti-Doping Disciplinary Panel for determining the consequences of anti-doping rule violations.
- This Panel will consist of a chairperson and four Vice-Chairpersons (all legal experts), and ten members (medical practitioners and retired eminent athletes).

The Appeal Panel will consist of:

- ▶ A Chairperson (a retired High Court judge),
- ▶ A Vice-Chairperson (a legal expert), and
- ▶ Four members (medical practitioners and retired eminent athletes).

- Appeals against the decision of the Appeal Panel will lie with the Court of Arbitration for Sport (an international body with headquarters in Lausanne, Switzerland, that settles sport-related disputes).

- **Dope Testing Laboratories:**

- The National Dope Testing Laboratory will be deemed to be the principal dope testing laboratory.
- The central government may establish additional national drug testing facilities across the country.

Significance of the bill

- The law aims at **promoting inter-agency collaboration** in the fight against doping and achieving time-bound justice for sports persons.
- It is a step forward in the direction of fulfilling India's **commitment to international clean sports** obligations.
- The law would contribute to **building a powerful, impartial system** for determining anti-doping decisions.
- The legislation will also confer legal sanctity to **NADA** and the **National Dope Testing Laboratory (NDTL) in their operations.**

What are the major concerns related to the bill?

- **Qualifications of the Director General are not specified:** The Bill makes no mention of the CEO's credentials; instead, it leaves this up to notification via rules.
- **Discretionary provision related to the removal of Director General:** The Director General may be removed from office by the central government for bad behavior, incompetence, or "for any other cause."
- The independence of the CEO may be impacted if these requirements are left up to the central government's judgment.
 - ▶ Additionally, this goes against the World Anti-Doping Agency's directive that these organizations engage in their operations independently.
- The Board has powers to remove the members of the Disciplinary Panel and Appeal Panel on grounds that will be specified by regulations and are not specified in the Bill.
- Furthermore, it is **not necessary to give them a chance to be heard.** This could interfere with these panels' ability to operate independently.

7 NEW DISTRICTS IN WEST BENGAL — HOW AND WHY ARE DISTRICTS CREATED OR ABOLISHED IN INDIA?

CONTEXT:

The West Bengal cabinet has approved the creation of seven new districts in the state.

◎ BACKGROUND

- Historically, the district, in some form or the other, has been the most important unit of administration in the Indian sub-continent.

The new districts formed in West Bengal

- A new Sundarban district will be carved out of the **South 24-Parganas district**.
- 2 new districts will be created out of the **North 24-Parganas district**.
- A new district in **Basirhat**.
- A new district will be carved out of the existing **Bankura district**.
- 2 new districts will be created out of the **Murshidabad district**.

- According to "Know India", a website run by the Government of India, there are 718 Districts in India at present. This is more than **double** the number of districts in India in the **1971 Census**.
- Further, new districts are getting added to the Indian political map every year by citing governance and administration-related issues.
- According to the **2011 Census in 2001-2011** has many as **46 districts were added** within that time. Since the 2011 Census, approximately 100 districts were added in India.
- Recently Punjab Chief Minister has declared Malerkotla as the **23rd district of the Punjab State**.
- Similarly, **West Bengal**, Andhra Pradesh, and many more states have declared the formation of new districts in their states.

So, let us examine the scenario and its pros and cons of it.

◎ ANALYSIS

What is the District's role in the governance of a State?

- A District is a unit of administration that is responsible for the management of the task of

government so far as it lies within an area legally recognized as a district.

- The district collector or district magistrate is a member of the Indian Administrative Services (IAS) and is in charge of the administration of a district.

The main functions of the district administration are as follows:

- Maintaining law and order in the district.
- Providing relief work in case of emergencies like floods and famine.
- Maintenance of land records and revenue collection.
- Providing civic amenities and monitoring the overall development process.
- Supervising the working of the **Panchayati Raj System**.

What is the present scenario says regarding the formation of districts?

- The idea behind creating new districts is generally to provide effective governance. However, it is sometimes driven by local demands.
- The **number and size** of districts vary from state to state.
- The larger states predictably have a higher number of districts. For example, **Uttar Pradesh has the highest number of districts (75)**. This is followed by **Madhya Pradesh (52)**.
- The smallest state, Goa has the least **number of districts (2)**.
- However, the number of districts in a state is not always a function of the area of the state or its population. For example, Arunachal Pradesh has only **25 districts**.
- Most of the North-eastern states have smaller districts.

What is the Procedure to form a new District?

- The power to create new districts or alter or abolish existing districts rests with the **State governments**.

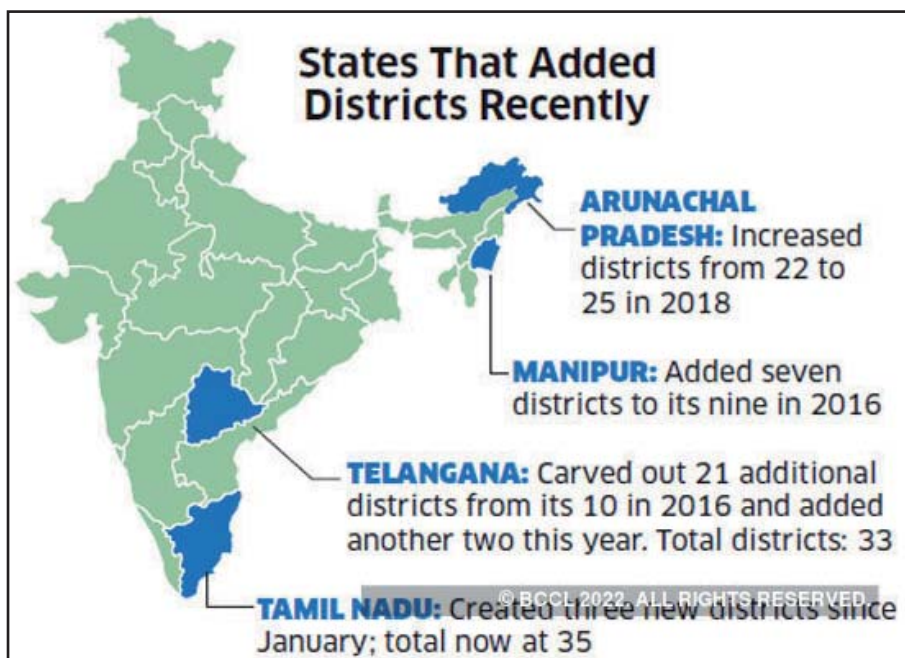
- This can either be done through an **executive order** or by **passing a law** in the State Assembly.
- Many States prefer the executive route by simply issuing a notification in the official gazette.
- The **Centre has no role to play** in the alteration of districts or the creation of new ones. States are free to decide on this matter.
- If the state government wants to change the name of a district or a railway station, then the Home Ministry comes into the picture.
- The State government will propose a new name to a district and forward the proposal to the Home ministry. The Home Ministry will forward the proposal to other departments.
- After that, the departments such as the Ministry of Earth Sciences, Intelligence Bureau, Department of

Posts, Geographical Survey of India Sciences, and the Railway Ministry, provide their clearance to the proposal of the state government.

- After examination of their replies, the state government receives a no-objection certificate. Then the name of the district stand changed.

Does districts are even abolished by some States?

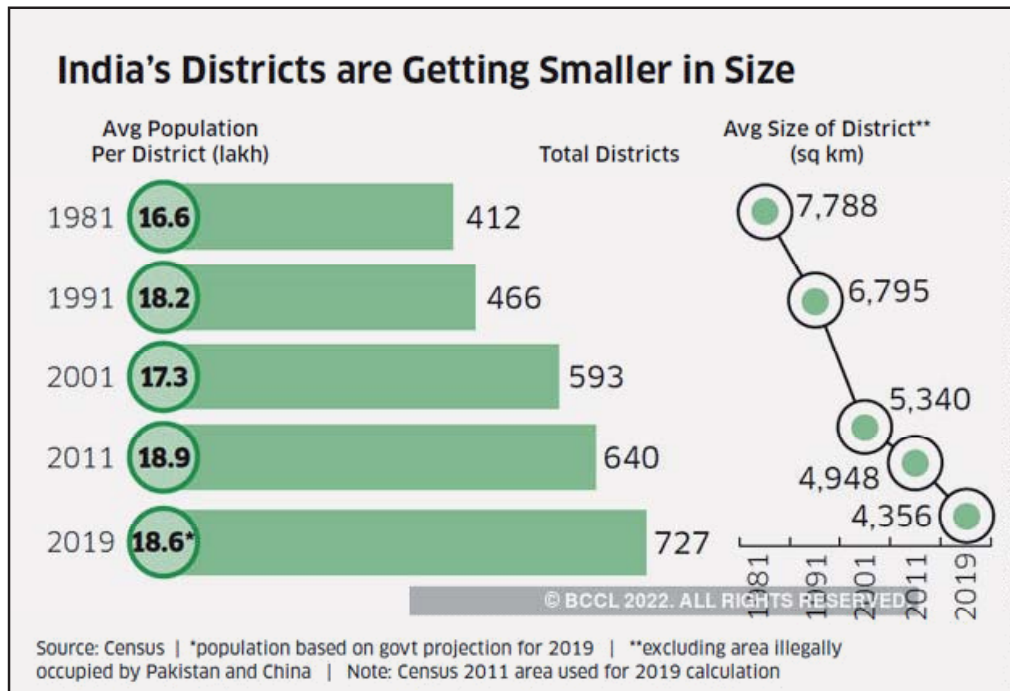
- States only have the power to abolish the district on account of the following reasons;
 - ▶ Mal-administration
 - ▶ Lesser population
 - ▶ Lack of staff



What are the Advantages of forming new districts?

- **Better administration and governance:** This is one of the foremost advantages stated by state governments during the creation of new districts.
- **The smaller district ensures better governance:** New districts will host a range of administrative machinery in the district. This will result in better implementation of government schemes, proper fund utilization, enhanced people coverage of scheme, etc. All this will improve governance in the new district.
- **Serve a large population:** Since 1981, the average district area has become 44% smaller in 2019. But, the average number of people in a district has risen from 16.6 lakh to 18.6 lakh in 2019. So the new districts can ensure better service delivery for the increased population.

- **Bring administration closer to the people:** Bigger districts hinder the administration process in some areas of that district itself.
 - ▶ For example, before the bifurcation of the Amravati district, the farthest taluka was around 150 km from the district headquarters.
 - ▶ So, people, and administrative officers in taluka have to travel nearly 3 hours to district headquarters. A new district can bring the administration closer to the people.
- **Decentralized Governance:** New districts might attract more district-specific schemes. For example, the government can set up an agricultural research and assistance **Centre** or a **residential school** for gifted children. The state government can provide better funding for backward districts. This will benefit the local population.



Increase employment: Since the new district will require new officials from the top-down, this will increase the employment in government directly. It will also spur employment opportunities indirectly. For example, government tender and associated employment for locals, new shops and services near government buildings, etc.

What are the challenges associated?

- **Increase in expenditure and resources:** The government has to find office space for different departments and fill many new positions. All this will require a huge government exchequer. The government will also face challenges with land acquisition.
- **Substitute for genuine decentralization:** Zilla Parishad and the Panchayat Samiti do not enjoy a lot of power in many states. So, these officials take most of their grievances to the collector. Creating smaller districts without empowering these bodies is against decentralization in the real sense.
- **The increased cost of living in new districts:** The growth centers created in new district headquarters will also make the land rates and other service costs go up. This will increase the cost of living in the new district headquarters in long run.
- **A Political move:** Many states reorganize the existing districts and form new ones due to political motives. For example, new districts containing a

support base of the ruling party can increase will be advantageous for it.

- **Underutilization of administration:** If the district is too small, then the administration and associated machinery will be underutilized. Further, the creation of more and smaller districts will also make the management of districts harder for states.

◎ WAY FORWARD

- **Ensure proper guidelines:** With new districts are added every year, the Center can prescribe certain criteria for the formation of a new district. For example, the Center may release a guideline that contains the minimum area of the district, its population, etc.
- **Invest in other alternatives:** Instead of creating new infrastructure, the States may conduct special camps and frequent field visits from officials. This will not only save the government exchequer but also serve the majority of the administrative and governance targets.

◎ CONCLUSION

Districts are the third tier of India's governance structure, after the Centre and the state. Smaller districts are better in terms of service delivery. But there should not be made for political gains and ensuring vote banks from a particular area.

LANGUAGE AS A BARRIER: INCLUDING MOTHER TONGUE IN HIGHER STUDIES

CONTEXT:

In sync with one of the focal points of the National Education Policy (NEP) 2020, the promotion of Indian languages in higher education, the Union minister has suggested introducing Indian languages in the study of Engineering, law, and medicine in the country.

◎ BACKGROUND

- The NEP provides for higher education institutions and programs in higher education to use the **mother tongue or local language as a medium of instruction**, besides offering programs bilingually.
- About **95% of students**, who receive primary education in their mother tongue, face difficulty during their Higher education and should not be left out in their pursuit of higher studies.
- The AICTE approved **19 engineering colleges in 10 States** for having engineering courses in **six Indian languages** effective from 2021-22 sessions.

spread of education and growth of mass literacy can only occur through the medium of the mother tongue.

- Democracy can become real to the common people only when politics and administration are conducted through a language they can understand.
- Hence language plays an important role in the social and economic development of the region.

The language policy of India is basically embodied in Part XVII of the Indian Constitution along with the 8th schedule in reference to articles 344 and 351 (which specify the languages of India for purposes mentioned in these 2 articles), and the articles concerning Fundamental Rights regarding language, education, and culture, etc.

◎ ANALYSIS

Is there an actual need to introduce the regional languages in higher studies?

- Language is closely related to culture and therefore to the customs of people. Besides, the massive

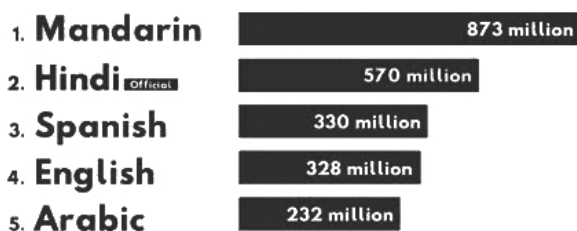
- While education has always bridged the gap between the **haves and have-nots**, the lack of programmes in regional languages, especially in higher education, has made it difficult for many

A CLOSER LOOK AT INDIA'S LANGUAGES

Official Languages: Hindi & English

National Languages: Bengali, Hindi, Maithili, Nepali, Sanskrit, Tamil, Urdu, Assamese, Dogri, Kannada, Gujarati, Bodo, Manipuri (otherwise known as Meitei), Oriya, Marathi, Santali, Telugu, Punjabi, Sindhi, Malayalam, Konkani and Kashmiri

Hindi is the second most spoken language in the world today
Bengali and Punjabi rank 7th and 10th. All three Indian languages outrank popular European languages



Hindi speakers total more than 200 million people or about 20% of the total population of 1.2 billion people living in India today



Isn't India a big country? Why does it only have few languages?

India is not limited to its Official and National languages

to continue with their education. Hence, Including Regional languages can be a move forward in filling gaps.

Positive Aspects of Higher Education in Regional Language

- **Subject-Specific Improvement:** Several studies in India and other Asian countries suggest a positive impact on learning outcomes for students using a regional medium rather than the English medium.
 - ▶ **Performance in science and math**, in particular, **has been found to be better among students studying in their native language** compared to English.
- **Higher Rates of Participation:** Studying in the native language results in **higher attendance, motivation, increased confidence for speaking up among students**, and **improved parental involvement** and support in studies due to familiarity with the mother tongue.
 - ▶ Poor grasp of English has been tied by many educationists to dropout rates at the premier engineering education institutions as well as poor performance of some students.
- **Additional Benefits for the Less-Advantaged:** This is especially **relevant for students who are first-generation learners** (the first one in their entire generation to go to school and receive an education) or the ones **coming from rural areas**, who may feel intimidated by unfamiliar concepts in an alien language.
- **Increase in Gross-Enrolment Ratio (GER):** This will help provide quality teaching to more students and thus **increase Gross Enrolment Ratio (GER)** in higher education.
- **Promotes Linguistic Diversity:** It will also **promote the strength, usage, and vibrancy of all Indian languages**.
 - ▶ This way, private institutions too will be motivated to use Indian languages as a medium of instruction and/or offer bilingual programmes.
 - ▶ It would also help **prevent language-based discrimination**.

Associated Challenges:

- **Insignificant for Institutions with Pan-India Admissions:** A regional language focus is not meaningful in a scenario where the institutes see entrants from across the country such as IITs.
- **Availability of Quality Material in Regional Languages:** Another challenge is the availability of study material such as textbooks and scholarly literature.

- ▶ Also, quality control of these translations will be of utmost importance to keep semantic irregularities at bay.
- **Availability of Faculty:** Given the English-medium legacy of higher education in India, attracting and retaining quality teachers who are willing and able to teach in regional languages will be a challenge.
- **Maintaining Pace with Global Standards:** Delivering technical courses in regional languages may prevent students from competing in global labour and education markets, where fluency in English yields a distinct edge.
 - ▶ A lack of opportunities for Indian students at the international level may prove counterproductive to the NEP, 2020's aim of bridging the gap between elites and the rest.
 - ▶ It also goes against the vision of promoting the internationalization of education.

◎ WAY FORWARD

- **To develop a hybrid approach:** While it may not be possible to translate technical terms verbatim in the regional languages, a hybrid approach can be developed.
 - ▶ This will enable a local-global integration with the latest knowledge and technology and give students global exposure and expertise.
- **Pre-planning:** In the NEP 2020, the government has urged universities to create study material in regional languages to enhance students' understanding and empower them.
- **Expand physical infrastructure of Institutions:** If higher education programmes are offered in regional languages, there is no doubt that student enrolment will increase exponentially. Hence Infrastructure needs to be enhanced for more admissions.
- **Promote Digital Education:** To make programmes in regional languages functional and useful, institutions will have to substantially improve and improvise.
- **Field-specific targets:** For example; in the field of law — before the subject is taught in the Indian languages — the Central government should try to impress upon the judiciary to allow the use of Indian languages in court proceedings.

Recent Developments

- **SWAYAM**, an open online courses platform of the Central government, has been offering some popular courses in **Indian languages too**.

- Ten States have accepted Indian languages such as **Hindi, Kannada, Tamil, Telugu, Marathi, and Bengali** as the medium of instruction for engineering courses.
- **National Education policy, 2020:**
 - ▶ **To Increase GER to 50 % by 2035:** NEP 2020 aims to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035. 3.5 Crore new seats will be added to Higher education institutions.

- ▶ **Promoting Regional languages in higher education:** NEP provides a framework for the education sector but is not binding on the States.

◎ CONCLUSION

A holistic approach is required for the implication of native-language instruction in an increasingly globalized world. A shift from “mother tongue versus English” towards the “mother tongue plus English” is required.

HOW BHARUCH COVERED 100% OF BENEFICIARIES UNDER FOUR WELFARE SCHEMES

CONTEXT:

The Prime Minister has recently praised the Bharuch district administration and the Gujarat Government for covering 100 percent of beneficiaries in the district under four national schemes.

◎ BACKGROUND

- Welfare schemes are programmes that are meant to improve lives and provide support to vulnerable people in society.
- Indian Government, at all levels, announces welfare schemes from time to time like Antyodaya Anna Yojana, Bharat Nirman, etc.
- Although these programs have helped to alleviate poverty and benefit many, most of the programs are mired with leakages and corruption.
- Implementation is the major stage that impacts the grass root level of society and hence this stage should never be neglected by the agencies.
- The result of good governance is seen in the event in Bharuch. So let us examine the situation.

◎ ABOUT

- Between January and May, Surat enrolled 13,431 beneficiaries under four schemes — **Indira**

Gandhi Rashtriya Vrudhhavasta Pension Yojana (IGRVPY), Niradhar Vrudh Sahay Yojana (NVSY), Ganga Swaroop Arthik Sahay Yojana (GSASY) and Rashtriya Kutumb Sahay Yojana (RKSy).

- The schemes are for **widows and senior citizens** and the district's drive to enroll all beneficiaries were named "**Utkarsh Pahel**".


How did Bharuch achieve this milestone?

Bharuch is a good example of public, administration, and private sector cooperation.

Step 1: Dissemination of Information

- A **campaign drive** was started by the name of "UTKARSH PAHEL" with WhatsApp helpline numbers to identify beneficiaries.
- District administration also **shared information** about the schemes at the Samaj Suraksha office at the taluka and district levels.

THE 'UTKARSH PAHEL' CAMPAIGN

BENEFICIARIES	Total: 13,431	BENEFIT
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">● 281 RKSy</div> <div style="text-align: center;">● 558 NVSy</div> <div style="text-align: center;">● 1,987 IGRVPY</div> <div style="text-align: center;">● 10,605 GSASy</div> </div>		<p>RKSy: Beneficiary family gets a lump sum amount of ₹20,000 if the main earning member (aged 18-60 years) has died in an accident</p> <p>NVSy: Beneficiary gets ₹750 per month (if aged between 60 and 75 years) and ₹1,000 per month (if aged above 75 years)</p> <p>IGRVPY: Beneficiary gets ₹750 per month (if aged between 60 and 79 years) and ₹1,000 (if aged above 80 years)</p> <p>GSASy: Beneficiary gets ₹1,250 per month</p>
<p>Ankleshwar Nagar Palika president Vinay Vasava informs local residents about the welfare schemes. <i>Express</i></p>		<p><i>Source: Bharuch District Administration</i></p>

- **Hoardings** were put up at different locations and advertisements were issued in the newspapers and local news channels.

Step 2: Registration of Beneficiaries

- The response started coming after the information campaign and the administration sent teams to different villages in the talukas, to get the forms of beneficiaries filled out.

Utkarsh Sahayaks: they are the youths who are 10 class pass hired by private industry to help the administration in filling up the forms of beneficiaries.

Remuneration: 305 Utkarsh Sahayaks were identified and paid an incentive of Rs 250 to Rs 500 per enrolment.

Good Governance

- 'Governance' is the process of decision-making and the process by which decisions are implemented (or not implemented).
- Governance can be used in several contexts such as corporate governance, international governance, national governance, and local governance.

What are the impacts of Good governance?

- **Participation of locals:** People should be able to voice their own opinions through legitimate immediate organizations or representatives.
- **Consensus Oriented:** Consensus-oriented decision-making ensures that even if everyone does not achieve what they want to the fullest, a common minimum can be achieved by everyone which will not be detrimental to anyone.
- **Accountability:** Good governance aims toward the betterment of people, and this cannot take place without the government being accountable to the people.
- **Responsiveness:** Institutions and processes should serve all stakeholders in a reasonable period of time.

◎ CONCLUSION

Corruption in welfare programmes leads to fiscal waste and hinders the development of society. Schemes like MGNREGA, PDS, mid-day meals, etc. had been mired with controversies of corruption. Proper scrutiny with stringent punishments is needed.

INDIA'S BULLION EXCHANGE

CONTEXT:

The foundation stone of the headquarters building of the International Financial Services Centers Authority (IFSCA) was recently laid by the prime minister in GIFT City in Gandhinagar.

ANALYSIS

What is Bullion?

- Bullion is the term for high purity physical forms of gold and silver that are frequently kept as bars, ingots, or coins.
- It is frequently kept by central banks as reserves or held by institutional investors, and it is occasionally regarded as legal tender, which is also held by the various central banks.

What is Bullion Exchange?

- A Bullion exchange is a market where buyers and sellers may trade gold, silver, and associated derivatives.
- The London Bullion Market is the primary international trading center for gold and silver. There are other bullion exchanges across the world as well.

What is IIBX?

- The **Indian International Bullion Exchange (IIBX)** was first announced in the 2020 Union budget to facilitate gold imports by Indian jewellers.
- It is a platform that not only **enrolls jewellers to trade on the exchange** but has also set up the necessary infrastructure to store physical forms of gold and silver.
- IIBX will facilitate **efficient price discovery** with the **assurance of responsible sourcing** and **quality**, apart from giving **impetus to the financialization of gold in India**.
- IFSCA is assigned with **notifying the eligible qualified jewellers** in India for directly importing gold through IIBX.

Significance of IIBX:

- This will allow **India to gain its rightful place in the global precious metals market** and **provide integrity and quality to the global value chain**.
- IIBX will give a boost to the commitment of the Government of India towards enabling India to be able to **influence global bullion prices as a principal consumer**.

Who can trade on the IIBX?

- Qualified jewellers will be permitted to import gold through the IIBX.
- To become qualified jewellers, entities require a minimum net worth of Rs 25 crore and 90 percent of the average annual turnover in the last three financial years through deals in goods categorized as precious metals.

How will it work?

- The idea behind setting this up is to make it possible for traders to swap commodities.
- Trading can occur in US dollars as well because this is an international exchange.
- One of the largest commercial centers in Asia is India, which has established itself as such.
- International players will be pleased to utilize our vaulting services since IIBX offers competitive rates.
- Due to the fact that this is a free trade zone, no duties will be paid.

What is GIFT City?

- Gujarat's Gandhinagar is home to GIFT (Gujarat International Finance Tec-City).
- It consists of a **multi-service Special Economic Zone (SEZ)**, which houses India's first **International Financial Services Centre (IFSC)** and an exclusive **Domestic Tariff Area (DTA)**.
- The goal of GIFT (Gujarat International Finance Tec-City) is to become a global Centre for integrated financial and technology services, serving both India and the rest of the globe.
 - ▶ In India's International Financial Services Centers (IFSCs), IFSCA is the only regulatory body responsible for overseeing the growth of financial products, financial services, and financial institutions.
- A school, medical Centre, projected hospital, and GIFT City business club with both indoor and outdoor sports facilities make up the city's social infrastructure. It also consists of cohesive, well-thought-out residential projects that genuinely make GIFT City a "Walk to Work" community.

- The envisaged social infrastructure in GIFT city includes a school, medical facilities, a hospital, GIFT City business club with indoor and outdoor sports facilities with integrated well-planned residential housing projects. It will make GIFT city truly a "Walk to Work" City.

What was the status till now?

- Currently, gold is imported into India on a consignment basis by designated banks and RBI-approved organizations, which subsequently provide it to dealers and jewellers in various locations.
- When dealing with domestic customers, banks and other organizations raise the price of the gold by adding a premium on top of the handling, storage, etc. fees they receive from the gold exporter.
- This cost is transferred by the buyer all the way to the final consumer.

What advantages will it bring?

- Bullion is made accessible in Special Economic Zones (SEZs) in vaults designated by the International Financial Services Centers Authority through **disintermediation** by allowing trades over an anonymously traded exchange platform (IFSCA).
 - ▶ This indicates that IIBX's expansion is occurring across the nation's jewellery production hubs rather than only in GIFT City.

- A competent jeweller who has obtained IIBX authorization to import gold or a jeweller who works with an IIBX member may examine the inventory and make an order. As a result, the jewellers will be forced to timely manage their inventory.
- Additionally, it will increase price and order sequencing transparency, removing any potential for an unfair supplier, importer, or logistics agency favouritism.

What are the new RBI guidelines for importing gold?

- Banks may now allow qualified Jewellers to remit advance payments for 11 days for the import of gold through IIBX in compliance with the extant Foreign Trade Policy and regulations issued under IFSC Act.
- All payments by qualified jewellers for imports of gold through IIBX shall be made through the exchange mechanism as approved by IFSCA.

© CONCLUSION

India needs more such initiatives for increasing its forex reserves and thus investing in its growth and development.

ODISHA BECAME THE FIRST STATE TO FULLY IMPLEMENT THE FOREST RIGHTS ACT, 2006

CONTEXT:

Considering Tribal Rights and their land ownership, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has been targeted to fully implement by Odisha.

◎ BACKGROUND

- Odisha is going to become the first State in the country to make budgetary provision for the implementation of the Central Act – ₹8 crores for 168 FRA cells in 2021-22.
- Till 2021, the **forest rights committees** were functioning in **Tribal Sub Plan areas** but now, they have been extended to the entire State.
- As per the provisions of the Act and the rules framed thereunder, the forest rights related to the conversion of forest villages into revenue villages are to be adjudicated by the Gram Sabha, Sub-Divisional Level Committee, and the District Level Committee.

◎ ANALYSIS

Features of the Act

- The Act recognizes and vests the forest rights and occupation in Forest land in **forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD)** who have been residing in such forests, for generations.
- The Act also establishes the responsibilities and authority for sustainable use, conservation of biodiversity, and maintenance of an ecological balance of FDST and OTFD.
- It strengthens the conservation regime of the forests while ensuring the livelihood and food security of the FDST and OTFD.

Rights for the dwellers

What the Forest Rights Act, 2006, entails

- Tenurial security over the forestland under occupation prior to December 13, 2005
- Recognition of community right over forest and forest products
- Protection and conservation of community forest resources
- Conversion of all forest villages and habitation located inside the forestland into revenue villages
- In situ rehabilitation of displaced persons evicted without compensation prior to December 13, 2005
- Recognition of ancestral domain (habitat) right to



Residents of Gunduribadi village in Odisha's Nayagarh district get ready for mapping their land boundaries for the Forest Rights Act implementation. ■ SPECIAL ARRANGEMENT

Particularly Vulnerable Tribal Groups

- Seasonal access to nomadic, pastoral and semi-nomadic communities over forestland

- Conversion of all leases granted by erstwhile governments, zamindars and king into permanent land records

- It seeks to rectify colonial injustice to the FDST and OTFD who are integral to the very survival and sustainability of the forest ecosystem.

The Act identifies four types of rights:

- **Title rights:** It gives FDST and OTFD the right to ownership of land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.
- **Use rights:** The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas, to pastoralist routes, etc.
- **Relief and development rights:** To rehabilitation in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
- **Forest management rights:** It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been conserved.

What is the need to fully implement this act in Tribal dominated areas?

- **For providing Tribal Rights:** The acts replace the wrong points of government policies in both colonial and independent India toward forest-dwelling communities, whose claims over their resources were taken away during the 1850s.
- **Preserving Culture:** The act also has the potential of sustainably protecting forests through traditional ways along with providing tribes with means of livelihood.
- **Fully Coverage of Rural areas:** It expands the mandate of the Fifth and the Sixth Schedules of the Constitution that protect the claims of indigenous communities over tracts of land or forests they inhabit.
- **To reduce Naxal insurgencies:** The alienation of tribes was one of the factors behind the Naxal movement, which affects states like Chhattisgarh, Odisha, and Jharkhand. The act through identifying IFR and CFR tries to provide inclusion to tribes.
- **Democratize the Forest governance:** It has the potential to democratize forest governance by recognizing community forest resource rights over an estimated 85.6 million acres, thereby empowering over 200 million forest dwellers in over 1,70,000 villages.
- **Empowering Tribals:** The act will ensure that people get to manage their forest on their own which will regulate the exploitation of forest

resources by officials, forest governance and management as well as tribal rights, etc.

Who can avail of the Rights mentioned under Forest Rights act, 2006?

- **Members or communities of the Scheduled Tribes** who primarily reside in and who depend on the forests or forest lands for bona fide livelihood needs.
- It can also be claimed by any member or community who has for **at least three generations** (75 years) before the **13th day of December 2005** primarily resided in forest land for bona fide livelihood needs.
- The **Gram Sabha** is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD.

Gram Sabha

Article- 243G: The Constitution mentions that the Gram Sabha exercises such powers and performs such functions at the village level as the Legislature of a State may, by law, provide.

What is the procedure to implement the rights under the Act?

- **Recommendation by Gram Sabha:**
 - ▶ First, the gram sabha (full village assembly, NOT the gram panchayat) makes a recommendation – i.e who has been cultivating land for how long, which minor forest produce is collected, etc.
 - ▶ The gram sabha plays this role because it is a public body where all people participate, and hence is fully democratic and transparent.
- **Screening committee:** The gram sabha's recommendation goes through two stages of screening committees at the taluka and district levels.
 - ▶ The district-level committee makes the final decision. The Committees have six members – three government officers and three elected persons.
- At both the taluka and the district levels, any person who believes a claim is false can appeal to the Committees, and if they prove their case the right is denied (sections 6(2) and 6(4)).
- **Recognition:** Finally, land recognized under this Act cannot be sold or transferred.

Challenges in implementing the Act

- Implementation issues
- Lack of Awareness
- The reluctance of the forest bureaucracy to give up control
- Institutional Roadblock

◎ CONCLUSION

Forest Rights Act, 2006 was one of the major steps in the path of empowering Tribals who are vulnerable. Tribal rights are important for their survival and conserve their culture. At the same time, local community participation in forest conservation is also being targeted at the same time.

BSNL GOT ADMINISTRATIVE ALLOTMENT OF 4G SPECTRUM

CONTEXT:

The Union Cabinet has allotted Rs.1.64-lakh crore package for the revival of state-owned BSNL to implement the Bharat Net Project.

◎ BACKGROUND

- BSNL was incorporated on October 1, 2000, by vesting with it the mandate of providing telecom services and network management hitherto done by the **Department of Telecom (DOT)**, Government of India.
- The government had announced a package in 2019 which reduced BSNL's losses from Rs 15,500 crore in FY20 to Rs 7,441 crore in FY21.
- The plan included measures to reduce the Staff cost through a Voluntary Retirement Scheme (VRS), administrative allotment of spectrum for providing 4G services, and debt restructuring by raising of Sovereign Guarantee Bonds.
- The government had proposed a merger between **BSNL and Mahanagar Telephone Nigam Limited (MTNL)** to revive both the state-owned loss-making companies. However, the government deferred the merger.

What does the new package include?

- The package includes cash support of Rs.3, 964 crore and non-cash support of Rs.1.20 lakh crore.
- The cash proponent will be used for **spectrum allocation, capital expenditure, and viability gap funding**.
- To improve existing services and provide 4G services, BSNL will be allotted Spectrum in the 900/1800 MHz band administratively at the cost of Rs.44, 993 crores through equity infusion.
- With this spectrum, BSNL will be able to compete in the market and provide high-speed data using their vast network including in rural areas.

About Bharat Sanchar Nigam Limited (BSNL)

- BSNL is a technology-oriented integrated telecom service providing company. It is a **100% Government owned Public Sector Undertaking**.

- BSNL's share of wireline connections fell sharply to 28.7% at the end of May 2022, from 46.6% in October 2019.
- The only consolation was that the number of its rural wireless subscribers shrank by just 11.4 lakh.
- The intervening period has also seen BSNL shrink its workforce.
- BSNL's net loss narrowed appreciably to Rs. 7,453 crores during the FY2021.

Why is the government reviving BSNL?

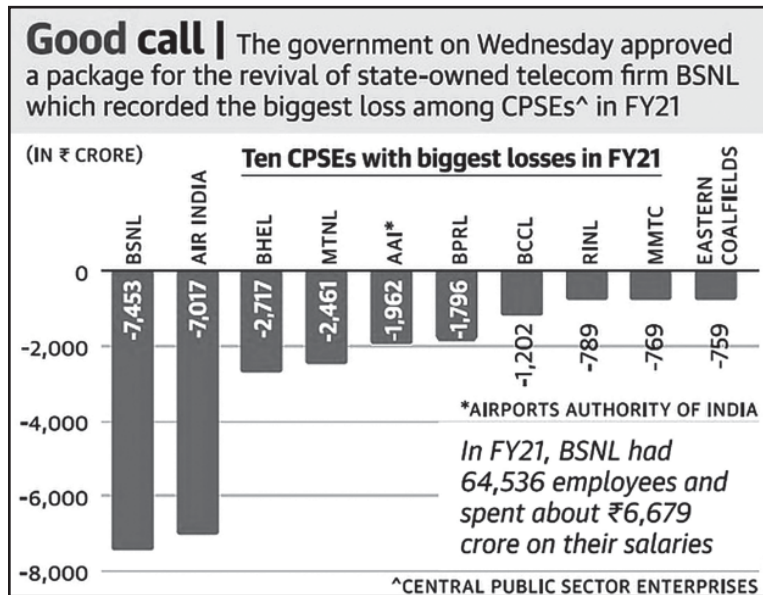
- While BSNL may not be able to compete with the private telecom majors in the country, it does have a good reach in rural and remote areas where the popular private telcos are yet to establish themselves.
- Airtel and Jio have intensified efforts in the last few years but BSNL remains a strong player there.

What the Government Is Doing to De-Stress BSNL's Balance Sheet?

- The government is approving a sovereign guarantee bond issuance for the telecom service provider to repay the bank loans. BSNL has around Rs 33,000 crore as bank debt.
- AGR dues of BSNL amounting to Rs 33,404 crore will be settled by conversion into equity. The government will provide funds to BSNL for settling the AGR/GST dues, adding "BSNL will re-issue preference share of Rs 7,500 crore to the government.
- The government has also approved BSNL's merger with Bharat Broadband Nigam Ltd (BBNL). This will give BSNL an additional 5.67 lakh kilometers of optical fibre in addition to its 6.83 lakh kilometers.

Benefits of 4G spectrum allocations

- Savings in the contribution From revenue (which will be lost eventually in the absence of 4G)
- Continued market presence of BSNL; and
- Possibly improved morale of the BSNL employees.



How will it help the government to Manage and Save the Ailing Telecom Company?

- The revival package would initiate measures on three fronts:
 - ▶ Infusing fresh capital for upgrading the state-owned operator's services
 - ▶ Strengthening its stressed balance sheet
 - ▶ Augmenting its fiber network by merging Bharat Broadband Nigam Limited (BBNL) and BSNL
- It is expected that the package could help with a turnaround in such a manner that BSNL starts earning profits in FY2026-27.
- **Spectrum** - The allocation would help BSNL increase as well as consolidate its serviceable bandwidth.
- Thus, it would be able to provide high-speed data utilizing a vaster network presence, more importantly, in rural areas.
- **Social objectives**- The allocation will help the company to fund its operational viability gap in the commercially unviable rural wireline operations that were undertaken between 2014-15 and 2019-20.
- **Authorized capital**- The Government would also be increasing the authorized capital to Rs.1.50 lakh crore in lieu of its adjusted gross revenue (AGR) dues, provision of capital expenditure, and allotment of spectrum.

◎ CHALLENGES

- **Technological/Market**: These include the rapid evolution of technology (5G, IoT), fast-evolving

consumer needs for data consumption, changing demographic patterns, and the increasing role of content in driving businesses. Such a combination of technology/market characteristics requires organizations to have agility, build partnerships, reduce costs, and be innovative.

- On all these dimensions BSNL has significant challenges. The mechanism for responding to the challenges is not elaborated as it is included in the part on organizational challenges.
- **Policy Environment**: Since BSNL is 100% government owned it is often subject to delays and decisions made by the government. For example, while the government has transferred its liabilities (i.e. Workforce) to BSNL, the transfer of land and building assets are yet to be completed. There seems to be a lot of confusion surrounding the ownership of the Land and building assets of BSNL.
- **Organizational**: These are specific to the systems and processes adopted by BSNL. These relate to delays in procurement due to its inefficiencies and the need to follow guidelines for public procurement; centralization of deployment of tariff plans, leading to inflexibility in service offerings; poor linkage of performance with incentives, frequent transfers, etc. The larger challenges relate to developing organizational responses to rapid developments in the sector, building partnerships, and enhanced marketing orientation.

◎ CONCLUSION

Effective and credible leadership, leveraging on its DNA, and focusing on strategic services with quality are three main necessary steps for the revival of BSNL.

GOVERNMENT'S OWN GIG WORKERS

CONTEXT

As outsourcing/contractual has become the dominant mode of working in the government, from highly specialized tasks to the most routine ones.

◎ BACKGROUND

- The government has been worried about unequal remuneration and treatment of contract workers, but it continues to hire them in bigger numbers.
- As many as **12.3 million people** working in the **government sector** — or **43% of the total** government workforce — are engaged in temporary jobs, according to a study by the **Indian Staffing Federation (ISF)**, an apex body of staffing companies in the country.
- At least **6.9 million** of these people are engaged in key flagship government programs and are deprived of **minimum wages** with limited to nil social security cover.

Nature of Jobs in the Government Sector

They may be classified into three categories;

- **Permanent;**
- **Contractual and**
- **Daily wagers**

◎ ANALYSIS

Who are Gig Workers of the Government?

- The term "gig" is a slang word for **a job that lasts a specified period of time**. Traditionally, the term was used by musicians to define a performance engagement.
- Examples of gig workers include **freelancers, independent contractors, project-based workers, and temporary or part-time hires**.

How they are supporting the economy?

- The gig economy is based on flexible, temporary, or freelance jobs, often involving connecting with clients or customers through an online platform.
- The gig economy can benefit workers, businesses, and consumers by making work more adaptable to the needs of the moment and the demand for flexible lifestyles.
- At the same time, the gig economy can have downsides due to the erosion of traditional economic relationships between workers, businesses, and clients.

CONTRACT EMPLOYEES	V E R S U S	FULL-TIME EMPLOYEES
If the candidate operates independently, works on their own time, or is paid pursuant to non traditional bonus metrics, then they are most likely an independent contractor.		A candidate is considered an 'employee' if they fall into any of these categories 1) they must have the employer's assent before taking action, 2) their actions benefit the employer, 3) they are under the control of the employer
Contractors typically work on an hourly or project basis, and once their tenure is over, can be let go or re-hired with ease.		Full-time employees have the luxury of job security.
Contractors do not receive any benefits, and need to purchase it on their own.		Full-time employees typically get a matching 401K, health insurance, vision, dental, paid time-off, life insurance, and unemployment in the case of layoffs.
Only employed for a specified amount of time before moving on to another company.		Typically at the mercy of the company in terms of stricter work hours, and workload as determined by their superiors.

Hard Work Behind It

The govt is working towards providing adequate legal protection to contract workers

PROPOSAL:
Drop word 'abolition' from Contract Labour (Regulation & Abolition) Act

WHY:
It contradicts the regulation of the sector

PROPOSAL: Give staffing firms a national licence, which will be based on set criteria & renewed every 3 yrs

WHY: It will provide better social security for contract workers & help create more jobs in organised sector

55%: percentage of contract labour in public sector jobs

45%: percentage of contract labour in private sector

2 m: No. of contract labourers currently in organised sector

480 m: Total no. of workers in the country

- In a gig economy, large numbers of people work in part-time or temporary positions or as independent contractors.
- The gig economy has many benefits for both the employee and employer. An employer has access to a wide range of talent that they can hire. If the talent proves to be less than acceptable, there is no contract to keep the employee on or issues of letting them go.

Why it is not recommended to employ contractual employees?

Despite it is not recommended to employ more gig workers, the government is expanding its scope. So, what are the reasons behind it?

- Lack of job security, irregular wages, and uncertain employment status
- Rising stress due to uncertainty associated with regularity in available work and income

- Limited access to the internet and digital technology
- The contractual relationship between the platform owner and gig worker denies the latter access to many workplace entitlements.
- Stress is due to pressure from algorithmic management practices and performance evaluation based on ratings.

Constitutional Provisions

(See table below)

What can be done to safeguard their interest?

- Increase access to institutional credit for platform workers and those interested in setting up their own platforms.
- Unsecured loans extended to first-time borrowers in the platform economy may be classified as Priority Sector Lending.

Article	Title	Description
21A	Right to Education	The State shall provide free and compulsory education to all children of the age of 6 to 14 years in such manner as the State, by law, may determine.
24	Prohibition of Employment of Children in Factories	No child below the age of fourteen years shall be employed in work in any factory or mine or engaged in any other hazardous employment.
39	The state shall in Particular direct its policy toward securing	That the health and strength of workers, men, and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength

- Skill development of youth and workforce to make them employable.
- Government can ensure **universal coverage of platform workers** through the Code on Social Security.
- Paid Sick Leave, Health Access, and Insurance for gig workers.
- Occupational Disease and Work Accident Insurance to all delivery and driver partners.
- Retirement/Pension Plans and Other Contingency Benefits.

◎ CONCLUSION

Fixed-term contractual stints with the government with safeguards against sheer exploitation can be a major source of employment. However, such modes of recruitment will have to assimilate the principles of affirmative action, in line with the vision of social justice enshrined in our Constitution.

UN DECLARES ACCESS TO A CLEAN, HEALTHY ENVIRONMENT AS A UNIVERSAL HUMAN RIGHT

CONTEXT:

The United Nations declares that every person on the planet has the right to live in a clean, healthy environment in a historic resolution.

◎ ABOUT RESOLUTION:

- This resolution is about the **right to a clean and healthy environment**.
- It has been passed by over 160 UN member nations including India.
- **It is not a legally binding resolution**. But it will **encourage countries to incorporate the right to a healthy environment in national constitutions and regional treaties**.
- The resolution recognizes the right to a clean, healthy, and sustainable environment as a human right essential for the full enjoyment of all human rights and among others.
- It calls upon states and international organizations to **adopt policies and scale up efforts to ensure a clean, healthy, and sustainable environment for all**.
- It demonstrates that the member states can unite in the collective fight against the triple planetary crisis of climate change, biodiversity loss, and pollution.
- Russia and Iran remain abstained from voting.

About Human rights and Environment:

- **Human rights and the environment are intertwined**, without a healthy environment, we are unable to fulfill our aspirations.
- Human rights cannot be enjoyed without a safe, clean and healthy environment; and
- Sustainable environmental governance cannot exist without the establishment of and respect for human rights.
- We may not have access to even the minimum standards of human dignity.

Origins of Environmental Rights:

- The modern era of environmental law began in the late 1960s, when population growth, industrial expansion, and innovations in chemistry resulted in dramatic impacts on ecosystems, wildlife, and public health. Many industrialized nations adopted environmental national laws in the 1970s and 1980s.

- By the 1990s, many nations adopted constitutional provisions protecting the environment, which ushered in what is known as a **rights-based approach to environmental protection**. It is normatively based on rights and directed toward protecting those rights.

What is the significance of this resolution?

- About 50 years after the United Nations Conference on the Environment in Stockholm in 1972; a resolution is placing environmental issues at the global forefront.

Stockholm Declaration:

- This was the **first global convergence on the planetary environment**. The theme was 'Only One Earth'. 122 countries participated in the conference.
- It was the first declaration of international protection of the environment. It was held from 5th –16th June 1972.
- The Stockholm Declaration, contained 26 principles, placed environmental issues at the forefront of international concerns, and marked the start of a dialogue between industrialized and developing countries.
- **It was attended by Indira Gandhi.**

- As the right to a clean and healthy environment is not included in the **Universal Declaration of Human Rights, 1948**, this historic resolution will change the very nature of **international human rights law**.
- The resolution will also empower people, especially those in vulnerable situations including environmental human rights defenders, children, youth, women, and indigenous people.
- It will help to **reduce environmental injustices** and plug the protection gaps.
- It can **empower people, especially those in vulnerable situations**, including environmental human rights defenders, children, youth, women, and indigenous people.
- This landmark development demonstrates that the **member states can unite** in the **collective fight**

against the triple planetary crisis of climate change, biodiversity loss, and pollution.

Human Rights:

- Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status.
- It includes the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, etc. Everyone is entitled to these rights, without discrimination.

International Human Right Law:

- International human rights law lays down obligations that States are bound to respect. By becoming parties to international treaties, governments assume obligations and duties under international law to respect, protect, and fulfill human rights.
- The **United Nations has defined a broad range of internationally accepted rights**, including civil, cultural, economic, political, and social rights.
- It has also **established mechanisms to promote and protect these rights** and to assist states in carrying out their responsibilities.

- The **foundations of this body of law** are the **Charter of the United Nations** and the **Universal Declaration of Human Rights**, adopted by the General Assembly in 1945 and 1948

Issues with the resolution:

- The words 'clean', 'healthy', and 'sustainable' lack an internationally agreed definition.
- The resolution text also fails to refer to the foundational principle of equity in international environmental law.
- The General Assembly resolutions do not create binding obligations. Only through conventions and treaties do state parties undertake obligations for such rights.

◎ CONCLUSION

The resolution will help to reduce environmental injustices and plug the loopholes. It is going to give more power in the hands of environmental activists to question environmentally destructive actions and policies.

THE ENERGY CONSERVATION (AMENDMENT) BILL 2022 AND INDIA'S CLIMATE TARGETS

CONTEXT:

In a bid to meet India's commitment to exceeding its Paris agreement climate targets, the Energy Conservation (Amendment) Bill 2022 has been tabled in Parliament.

ABOUT

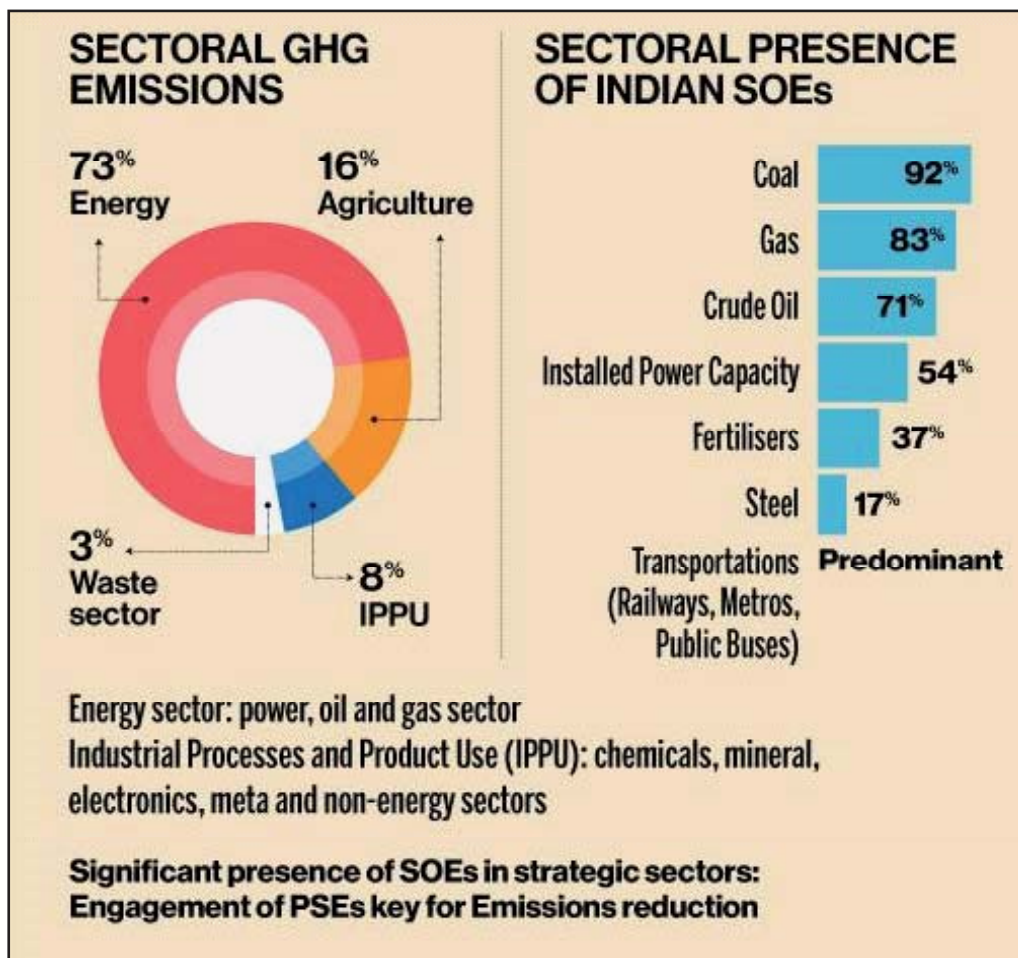
- The main objective of these proposed amendments is to reduce India's power consumption via fossil fuels and thereby minimize the nation's carbon footprint.
- The Centre aims to develop India's Carbon market and boost the adoption of clean technology.
- India aims to meet its **Nationally Determined Contributions (NDCs)**, as mentioned in the Paris Climate Agreement, before its **2030 target date**.

Key points of the Bill

- The **Energy Conservation (Amendment) Bill** seeks to increase India's demand for renewable

energy, thereby reducing the nation's carbon emissions.

- The Bill proposes to amend the **Electricity Conservation Act 2001**, last amended in 2010, to introduce changes such as incentivizing the use of clean energy by issuing carbon saving certificates. Some of the major changes proposed were;
 - Defining the minimum share of renewable energy to be consumed by industrial units or any establishment. This consumption may be done directly from a renewable energy source or indirectly via the power grid.
 - Incentivizing efforts to use clean energy by issuing carbon-saving certificates



- Strengthening institutions set up originally under the Act, such as the Bureau of Energy Efficiency
- Facilitating the promotion of green Hydrogen as an alternative to the fossil fuels used by industries
- Considering additional incentives like carbon credits for the use of clean energy to lure the private sector to climate action.
- Including larger residential buildings under energy conservation standards to promote sustainable habitats. Currently, only large industries and their buildings come under the ambit of the Act.

What does the current Energy Conservation Act say?

- Currently, the Energy Conservation Act, 2001 (amended in 2010) governs the domain in India.
- The Act empowers the Centre to specify norms and **standards of energy efficiency for appliances, industrial equipment, and buildings** with a connected load over 100 kilo Watts (kW) or a contractual demand of more than **15 kilovolt-amperes (kVA)**.
- The Act established the **Bureau of Energy Efficiency**.
- The 2010 amendment extended the tenure of the Director General of the Bureau of Energy Efficiency from three to five years.

Framework for energy trading: According to the Act, the Centre can issue energy **savings certificates** to those industries which **consume less than** their maximum allotted energy.

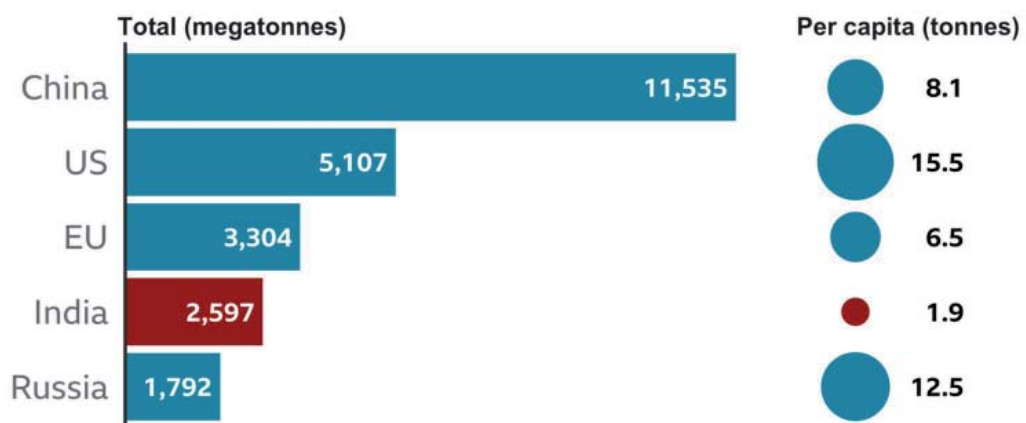
- However, this certificate can be sold to customers who consume higher than their maximum allowed energy threshold.
- **Penalty:** In case of any violations under this Act, each offense shall attract a penalty of **Rs ten lakh** with an additional penalty of **Rs 10,000** for each day the offense continues.
- **Appeal:** Any appeals against any such order passed by the Central or state government will be heard by the appellate tribunal already established under the **Electricity Act, 2003**.

India's Commitment against Climate change

- India has committed to reducing the carbon intensity of its economy by **33-35 percent by 2030** from its 2005 levels as part of its NDCs under the Paris Climate Agreement.
- The nation has also promised to achieve over 40 per cent of its power generation from **non-fossil-fuel energy** resources by 2030.
- In a bid to reduce its CO2 emissions to 550 metric tonnes (Mt) by 2030, India has committed to

India is the world's fourth biggest emitter of carbon dioxide

Total and per capita emissions of CO2 per year



2019 data, EU includes UK
One megatonne = 1,000,000 tonnes

Source: EC, Emissions Database for Global Atmospheric Research

BBC

creating an additional carbon sink for 2.5 -3 billion tonnes of CO₂ by increasing its tree and forest cover.

Prime Minister expressed confidence that India will meet its climate targets before 2030, he revised India's NDCs at the COP26 Summit with five new targets;

- To increase its non-fossil energy capacity to 500 GW by 2030
- To meet 50 per cent of India's power demand via renewable energy sources
- To reduce the carbon intensity of the Indian economy by 45 percent
- To reduce India's total projected carbon emissions by one billion tonnes from 2021 to 2030
- To achieve a target net zero (for carbon emissions) by 2070

Some Government Initiatives against Climate Change

Union Finance Minister **announced a slew of measures** to reduce India's carbon footprint as part of **Budget 2022-23:**

- Allocation of **Rs 19,500 crores** to facilitate **domestic solar manufacturing.**
- Use of **5-7 percent biomass pellets** for co-firing in thermal power plants.
- Avoid **stubble burning** in agricultural fields.
- To promote the **blending of fuel**, an additional differential excise duty of **Rs 2/litre** is to be levied on unblended fuel.

- To achieve clean transport, a new battery swapping policy is to be formulated for electric vehicles
- Issue '**Green Bonds**' — fixed-income financial methods to fund projects with positive environmental effects — to raise capital for green infrastructure.
- Such **sovereign green bonds** can be used in climate adaptation projects which lack private funding.

What can be done further to achieve India's Targets?

- **Sector-wise targets:** India needs to focus on sectorial targets for the **next ten years** and more to manage climate change impact.
- India should develop an explicit **carbon tax regime** that will help limit carbon emissions.
- **Other measures can be;**
 - ▶ Focus on increasing energy efficiency,
 - ▶ A greater thrust on electrification,
 - ▶ Shifting power generation from fossil fuels,
 - ▶ Expanding afforestation and developing carbon capture utilization and storage (CCUS) technologies.
 - ▶ Need for greater public-private partnerships to achieve the climate targets.

◎ CONCLUSION

It is now clear that initiatives to prevent climate change are started but, most importantly, these initiatives must be continuous and sustainable and every individual in every country will need to contribute to preventing climate change.

COASTAL SECURITY IN INDIA

CONTEXT:

Coastal security is one of the major concerns for India with a coastline of 7,516.6 km. The coastline also accounts for 90% of the country's trade.

◎ BACKGROUND:

- India's coasts have always been vulnerable to anti-national activities. Numerous cases of the smuggling of goods, gold, narcotics, explosives, arms, and ammunition as well as the infiltration of terrorists into the country through these coasts have been reported over the years.
- External challenges emanating from across the border such as infiltration, illegal migration, smuggling, terrorism, etc. aggravate the internal security problems.
- Serial blasts of March 1993 and terrorist attacks of November 2008** in Mumbai happened because of a poorly guarded maritime border. On both occasions, criminals and terrorists entered India through the sea.
- Although the Indian security forces had responded swiftly to 'the 26/11 Mumbai attack', it exposed three significant cracks in India's maritime security calculus,

- The porous nature of India's coastline;**
- The inadequate surveillance of the maritime domain; and**
- The lack of inter-agency coordination.**
- It is important to ensure that we draw maximum advantage from the maritime sector – to benefit our economy and also to reinforce maritime security.
- It is a daunting task to balance economic, environmental, and security interests at the national level.

Maritime and Coastal Security:

- Maritime security has been defined in the Indian Maritime Doctrine (IMD) as relating to freedom from threats at or from the sea.
- Although the **IMD does not define coastal security**, the **Indian Maritime Security Strategy (IMSS), an official publication** of the IN defines

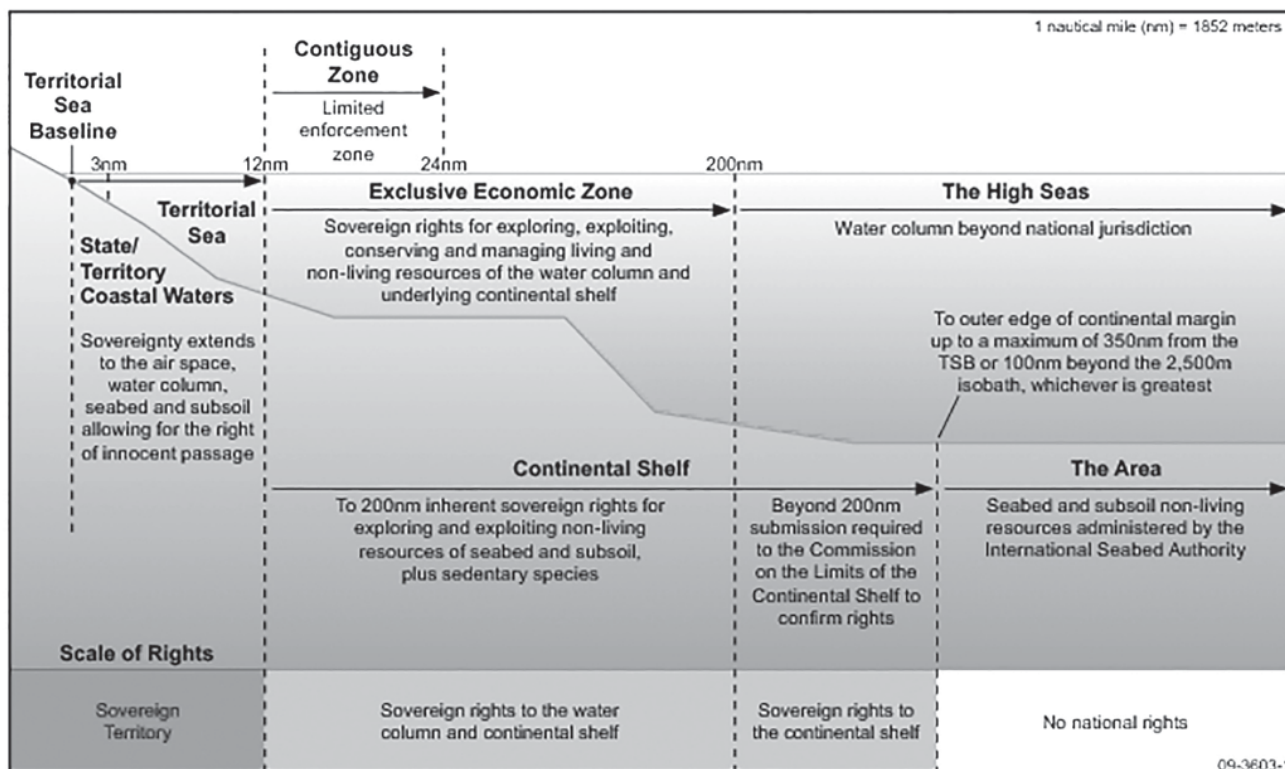


Figure 1: Offshore extent of the maritime zones recognized under international law

it as a subset of maritime security, focused on the coastal waters.

- The coastal waters are considered, for the purpose of IMSS, as the water area seawards of the Indian coast up to the limit of India's Contiguous Zone (CZ) which is at 24 nautical miles from the baseline, or the International Maritime Boundary Line (IMBL), in case the latter is nearer.

Present Coastal Security Mechanism:

- Currently, the coastal security of India is governed by a three-tiered structure.
- The **Indian Navy** patrols the International Maritime Boundary Line (IMBL), while the **Indian Coast Guard** is mandated to do patrolling and surveillance up to 200 nautical miles (i.e., EEZ).
- Simultaneously, the **State Coastal/Marine Police (SC/MP)** performs boat patrolling in shallow coastal areas.

Jurisdiction: The State Coastal/Marine Police (SC/MP) have jurisdiction up to **12 nautical miles** from the coast; and the Indian Coast Guard and the Indian Navy have jurisdiction over the **entire maritime zone** (up to 200 nautical miles), including the territorial waters (with the SMP).

- The **Border Security Force (BSF)** is deployed in the creek areas of Gujarat and Sundarbans in West Bengal.

◎ ANALYSIS:

Why Coastal security is significant for India?

- **Safeguarding India's diverse Topography:** India's coasts are characterized by a diverse range of topography such as creeks, small bays, backwaters, rivulets, lagoons, estuaries, swamps, mudflats, as well as hills, rocky outcrops, sandbars, beaches, and small islands.
- **Security for Disputed maritime Boundaries:** India's maritime boundaries with **Pakistan and Bangladesh** are not delineated because of **overlapping claims**.
- **Saving Fisheries and other marine resources:** India is the **7th largest fishing nation** in the world and Indian coasts account for approximately 4 million fishermen settled along the coast in 3288 marine fishing villages.
- **Coastal Population and development:** Besides fishing, other major industrial activities such as shipbuilding, manufacturing, oil exploration and

refining, etc. are also concentrated in coastal areas. Indian coasts also house a number of urban centers which are hubs for industrial and economic activities.

Additional areas of vulnerabilities of the Indian coastline:

- **Smuggling and trafficking:** Indian coasts have been susceptible to the smuggling of items such as gold, electronic goods, narcotics, and arms.
- **Maritime terrorism:** hijacking, attacking, and sinking ships, taking hostages, sabotaging pipelines, and attacking cities and strategic installations like naval bases and petrochemical storage.
- **Infiltration, illegal migration, and refugee influx:** large-scale refugee influxes over the decades have resulted in widespread political turmoil in the border states.
- **Discontent in fishermen's communities** interferes with the effective functioning of the coastal security architecture as fishermen are considered the 'eyes and ears of the coastal security architecture and, therefore, an integral part of it.
- **Sensitive installations along the coast:** Due to the process of industrialization along the coastal region, the existence of strategic installations by oil companies, nuclear power plants, missile, and satellite testing centers have taken place, which are high-value targets for the terrorists.

Technologies used for Coastal security and Management:

- The surveillance sensor network serves as the eyes and ears of the system. A combination of sensors can track individuals and objects over varying distances, providing higher resolution as the target gets closer to the coastline.
- The sensor network can include a combination of the various types of technologies such as **radar, Automated Identification System (AIS), Electro-Optical/Infra-Red (EO/IR) System, Identification system, Command, and Control system, etc.**

Fundamental deficiencies in security:

- **Conflates Policing with Maritime Border Guarding:** This erroneously conflates the responsibility of law and order (State List) with maritime border guarding (Union List).
 - ▶ This also leads to the problem of overlapping jurisdiction between the IN, ICG, and the SCP and a lack of unity of command at the ministry and force level.

- **Indian Navy and Indian Coast Guard under Different Departments in MoD:** The Army, Navy, and Air Force were placed under the **Department of Military Affairs (a department created within MoD)**, and the ICG was placed under the MoD. The Group of Minister report highlighted this anomaly and noted the requirement for coordination between the IN and the ICG in both peace and war.
- **Diffused Responsibilities:** Lack of clarity in jurisdiction between the IN, ICG, and SCP.

Indian Coast Guard Initiatives:

- Promulgation of Standard Operating Procedures (SOPs) for effective coordination amongst all stakeholders.
- Coastal security exercises in coordination with the Indian Navy, SCP, and other central and state agencies.
- Special '**Operation Sajag**' training for SCP
- Community interaction programmes (CIPs)

Government Initiatives in Coastal Security Infrastructure

- Appointment of National Maritime Security Coordinator:
 - ▶ The appointment of the country's **first National Maritime Security Coordinator (NMSC)** reflects the serious intent of the Government of India (GoI) to address maritime security challenges.
 - ▶ It aims to create an interface between the civilian and military maritime domains to enhance India's security architecture and energy security.
- **National Committee for Strengthening Maritime and Coastal Security** headed by Cabinet Secretary coordinates all matters related to Maritime and Coastal Security.
- **Coastal Security Measures Post Kargil war:** Kargil Review Committee (KRC) constituted to study the circumstances that had led to the war has recommended several coastal security measures.

Limitations of Coastal Security Measures:

Some challenges need to be taken care of, such as:

- Detection of small boats which are being increasingly used by non-state actors for their operations remains a daunting task especially so in dark and bad weather conditions.
- Identification at sea continues to remain a challenge as coastal waters are highly crowded.

- Unregulated fishing complicates the identification of friendly or foe. Further, identification of personnel manning boats is equally difficult in the absence of suitable identity cards.
- The identification problem is not only for small boats like the one used by Kasab for the 26/11 attacks, but it also includes the identification of thousands of containers and cargo vessels that call at our Ports or pass close to our coasts to prevent the smuggling of arms, ammunition, explosives, and human trafficking.
- Availability of information with the help of surveillance technologies in itself is of no great advantage unless the available information is analyzed, and actionable information is generated and used appropriately.
- Major ports are generally secured and it is the other dense traffic areas that have still not gotten the required attention from the coastal security planners and are most likely to be exploited by the terrorists/non-state actors.
- **Integration of Maritime Stakeholders:** There is a requirement of sharing information among all the agencies for coordinated action against the common threat.
- Regular communication and flow of information between the stakeholders can only be facilitated with help of modern technology.

Recent Government Interventions

- The Indian government has also drawn plans to reinforce the **NMDA via multilateral cooperation**. It is in talks with at least **24 countries** for exchanging information on shipping to ensure that the seas are safe and secure for global commerce.
- India has placed maritime security high on the agenda through active participation in the **Indian Ocean Rim Association (IORA), the Indian Ocean Naval Symposium (IONS), the East Asia Summit (EAS), and the ASEAN Defense Ministers Meeting (ADMM) Plus**.
- Additionally, it is in talks with other countries to institutionalize intelligence exchange among the respective security agencies.

Recommendations

- **Self-dependency:** To develop our own AIS type which can be easily fitted on the smaller craft that operates in our coastal waters to aid detection and identification. Presently, fitment of AIS is mandated only for vessels greater than 300 Tonnage.
- **Distress Alert Transmitter (DAT)** is provided by Coast Guard to transmit emergency conditions

ALPHA FOLD: AI-BASED TOOL FOR PREDICTING PROTEIN STRUCTURES

CONTEXT:

Deep Mind, a company owned by Google, announced that it had predicted the three-dimensional structures of more than 200 million proteins using Alpha Fold.

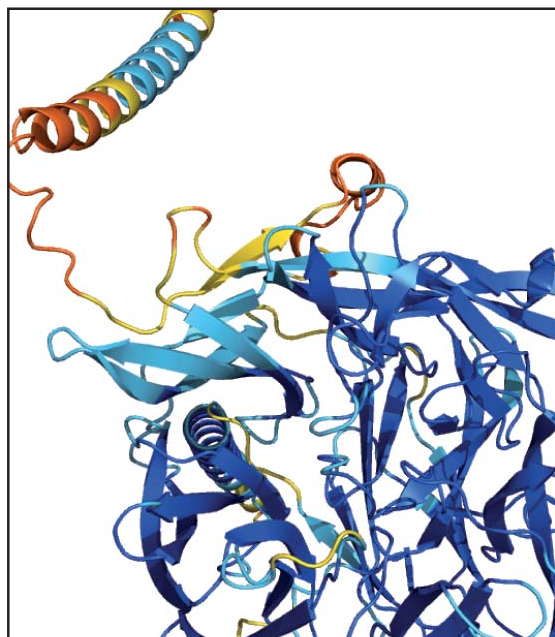
◎ BACKGROUND

- AlphaFold 1 (2018) was built on work developed by various teams in the 2010s, that looked at the large databanks of related DNA sequences now available from many different organisms (most without known 3D structures), to try to find changes at different residues that appeared to be correlated, even though the residues were not consecutive in the main chain.
- Such correlations suggest that the residues may be close to each other physically, even though not close in the sequence, allowing a contact map to be estimated.
- It also used more advanced learning methods than previously to develop the inference.
- Combining a **statistical potential based on this probability distribution** with the calculated local free-energy of the configuration, the team was then able to use gradient descent to a solution that best fitted both.

◎ ANALYSIS

What is AlphaFold?

- AlphaFold is an **AI-based protein** structure prediction tool.
- It is based on a computer system called a **deep neural network**.
- Inspired by the human brain, neural networks use a large amount of input data and provide the desired output exactly like how a human brain would.
- The real work is done by the black box between the input and the output layers, called the hidden networks. AlphaFold is fed with protein sequences as input.
- When protein sequences enter through one end, the predicted three-dimensional structures come out through the other.



How does the AlphaFold work?

- It uses processes based on **training, learning, retraining, and relearning**.
- The first step uses the available structures of 1, 70,000 proteins in the Protein Data Bank (PDB) to train the computer model.
- Then, it uses the results of that training to learn the structural predictions of proteins not in the PDB.
- Once that is done, it uses the high-accuracy predictions from the first step to retrain and relearn to gain higher accuracy of the earlier predictions.
- By using this method, alphaFold has now predicted the structures of the entire 214 million unique protein sequences deposited in the Universal Protein Resource (UniProt) database.

Global Distance Test

- The **global distance test (GDT)** represents the "total score", which is a measure of similarity between two protein structures with known amino acid correspondences (e.g. identical amino acid sequences) but different tertiary structures.

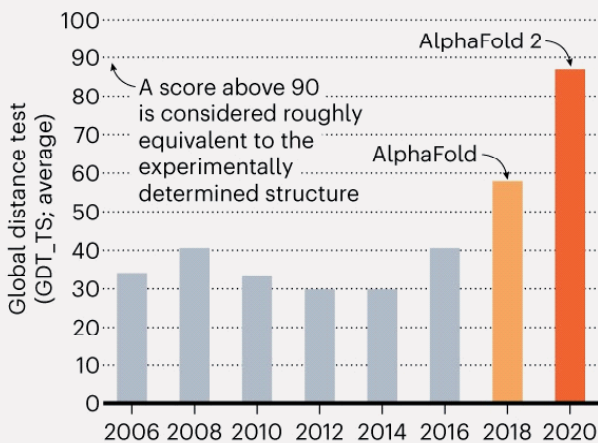
- It is most commonly used to compare the results of protein structure prediction to the experimentally determined structure as measured by X-ray crystallography, protein NMR, or, increasingly, cryo-electron microscopy.
- The conventional score is computed over the alpha carbon atoms and is reported as a percentage, ranging from 0 to 100.
- In general, the higher the GDT_TS score, the more closely a model approximates structures.

What is CASP14?

- DeepMind's AlphaFold placed first in the overall rankings of the **13th Critical Assessment of Techniques for Protein Structure Prediction (CASP)**.
- In November 2020, DeepMind's new version, AlphaFold 2, won CASP14.
- It gives ranking to the Alphafold models for predicting the structures of proteins.

STRUCTURE SOLVER

DeepMind's AlphaFold 2 algorithm significantly outperformed other teams at the CASP14 protein-folding contest — and its previous version's performance at the last CASP.



What are their contributions to the Health sector?

- **SARS-CoV-2:** AlphaFold has been used to predict structures of proteins of SARS-CoV-2, the causative agent of COVID-19. The structures of these proteins were pending experimental detection in early 2020.
- Results were examined by the scientists at the Francis Crick Institute in the United Kingdom before being released into the larger research community.

- The team also confirmed accurate prediction against the experimentally determined SARS-CoV-2 spike protein that was shared in **the Protein Data Bank**, an international open-access database, before releasing the computationally determined structures of the under-studied protein molecules.
- The team acknowledged that although these protein structures might not be the subject of ongoing therapeutic research efforts, they will add to the community's understanding of the SARS-CoV-2 virus.
- Specifically, AlphaFold 2's prediction of the structure of the **ORF3a protein** was very similar to the structure determined by researchers at the University of California, Berkeley using cryo-electron microscopy.
- This specific protein is believed to assist the virus in breaking out of the host cell once it replicates.
- This protein is also believed to play a role in triggering the inflammatory response to the infection.

What do these developments mean to India?

- **Historical advancements:** The Indian community of structural biology is strong and skilled. It needs to quickly take advantage of the AlphaFold database and learn how to use the structures to design better vaccines and drugs.
- **Help in COVID and virus mutation understanding:** This is especially important in the present context. Understanding the accurate structures of COVID-19 virus proteins in days rather than years will accelerate vaccine and drug development against the virus.
- **Encourage the PPP model:** India will also need to speed up its implementation of public-private partnerships in the sciences.
- **Participation of academic institutions:** Learning from this, India could facilitate joint collaborations with the prevalent hardware muscle and data science talent in the private sector and specialists in academic institutions to pave the way for data science innovations.
- **Helps to develop drugs and vaccines:** The Indian community of structural biology needs to take advantage of the AlphaFold database and learn how to use the structures to design better vaccines and drugs.

What are some limitations of the Alpha-fold?

AlphaFold DB currently focuses on the use case validated in CASP14: predicting the structure of

a single protein chain with a naturally occurring sequence. Though has some limitations;

- The version of AlphaFold used to construct in this database does not output multi-chain predictions/ (complexes).
 - ▶ In some cases, the single-chain prediction may correspond to the structure adopted in the complex.
 - ▶ In other cases (especially where the chain is structured only on binding to partner molecules) the missing context from surrounding molecules may lead to an uninformative prediction.
- For regions that are intrinsically **disordered or unstructured in isolation**, AlphaFold is expected to produce a low-confidence prediction (pLDDT < 50), and the predicted structure will have a **ribbon-like appearance**.
- AlphaFold **has not** been validated for predicting the **effect of mutations**. In particular, AlphaFold is not

expected to produce an unfolded protein structure given a sequence containing a destabilizing point mutation.

- Where a protein is known to have multiple conformations, AlphaFold usually only produces one of them. The output conformation cannot be reliably controlled.
- AlphaFold does not predict the positions of any non-protein components found in experimental structures (such as cofactors, metals, ligands, ions, DNA/RNA, or post-translational modifications).

◎ CONCLUSION

AlphaFold 1 proved that neural networks possess the complexity required in order to be capable of modeling the protein folding mechanism. AlphaFold 2 further improves accuracy by using a more representative internal representation and embedding equivariance knowledge in the model. However, the technologies in the field of Health sector-based lab research need to focus on seeing the current

Section: B
(SPECIALS)

CURRENT AFFAIRS

SUPREME COURT OVERRIDES ITS OWN 2017 RULING TO JUSTIFY 'DRASTIC' PMLA PROVISION FOR BAIL

CONTEXT:

Supreme Court upheld the Prevention of Money Laundering Act, including its stringent 'twin-test of bail' conditions that impose a reverse burden of proof on the accused.

Key Points:

- In Nimesh Tarachand Shah vs Union of India (2017), the two-judge bench of Justices Rohinton Nariman and Sanjay Kishan Kaul had declared the 'twin test' of bail under PMLA as unconstitutional since it was manifestly arbitrary.
- These twin conditions are that the Court should be satisfied that:
 - ▶ there are reasonable grounds for believing that the accused is not guilty of such an offense; and
 - ▶ he is not likely to commit any offense while on bail
- In this judgment, the Court relied on **Article 39 of the Constitution**, part of the Directive Principles of State Policy that mandates the State to prevent the concentration of wealth and to uphold the stringent bail conditions under PMLA.

There are several legislations that have similar 'twin conditions'. E.g.: The terrorist and Disruptive Activities (Prevention) Act, 1987, the Maharashtra Control of Organized Crime Act, 1999, and the Narcotic Drugs and Psychotropic Substances Act, 1985.

Court Observation:

- The court stressed upon **doubly satisfying itself before application of section 45 of PMLA**, which makes drastic inroads into the fundamental right of personal liberty guaranteed by **Article 21** of the Constitution of India.

About Section 45 of PMLA:

- **Section 45 of PMLA:** is a drastic provision that turns on its head the presumption of innocence which is fundamental to a person accused of any offense.

- **Section 45 of the Prevention of Money Laundering Act (PMLA)** made offenses to be cognizable and non-bailable and no person accused of an offense shall be released on bail or his own bond unless the Public Prosecutor is allowed to oppose the application for such release.

- **Presence of Compelling interests:** The Supreme court has said that provisions of section 45 have only been upheld on the ground that there is a compelling State interest in tackling crimes of extremely heinous nature and **stringent bail conditions** can be imposed **in exceptional circumstances such as anti-terrorism laws, but cannot be manifestly arbitrary.**

Prevention of Money Laundering Act (PMLA), 2002:

- Money Laundering refers to the **conversion or misrepresentation of money** which has been **illegally obtained by unlawful sources and methods.**
- It is a criminal offense in India and charges in this instance refer to statutory provisions of the Prevention of Money Laundering Act, 2002.
- The **PMLA is one of the responses to India's global commitment (Vienna Convention 1988)** to combat the menace of money laundering.

Vienna Convention on Money Laundering:

- The Vienna Convention required signatory states to recognize money laundering as a criminal offense, preventing traffickers from reaping the profits of the narcotics trade.
- This convention laid down the groundwork for efforts to combat money laundering by obliging the member states to criminalize the laundering of money from drug trafficking.
- The convention also establishes the principle that domestic bank secrecy provisions should not interfere with international criminal investigations.

HOW DIRTY MONEY IS LAUNDERED

Typical Money Laundering Scenario



Recent Amendments in PMLA:

- **Money Laundering Redefined:** Money Laundering was not an independent crime but rather depended on another crime, known as the predicate offense or scheduled offense.
- **Clarification about the Position of Proceeds of Crime:** Proceeds of the Crime not only include the property derived from the scheduled offense but would also include any other property derived or obtained indulging in any criminal activity related or similar to the scheduled offense.
- **Continuing Nature of Offence:** This amendment further mentioned that the person will be considered to be involved in the offense of money laundering till the time that person is getting the fruits of activities related to money laundering as this offense is of a continuing nature.

'Presumption of Innocence' and 'Reverse Burden of Proof':

- "Presumption of Innocence" is one of the fundamental principles of criminal jurisprudence which axiomatically enunciates that an accused is presumed to be innocent until proven guilty. The principle, by default, applies to general and special statutes unless a provision stating otherwise exists in the statute.
- Jurists have created a **rebuttal to the presumption of innocence** wherein, an accused may be presumed guilty at the first instance, and the burden of proof is on the defense to prove his innocence or to create doubt about his guilt.

- This essentially means that a person charged with an offense under an Act would have to rebut the presumption against him and the **burden of proof would lie on him** to show that he has not committed the act constituting an offense.

Position in India: Presence of Both Principles

- Although not clearly laid down in any legislation, the Presumption of Innocence is a recognized principle of criminal law in India. The **Indian Judiciary has recognized the presumption of Innocence under Articles 20 and 21 of the Constitution**. In the landmark **Maneka Gandhi case**, the presumption of innocence was held to the fundamental right of the accused.
- **Section 101 and 106 of the Indian Evidence Act of 1872** talk about the burden of proof, but not whether such burden is upon the Prosecution or Defense.

Reasons for Incorporating Reverse Onus:

- **Helpful in curbing grave offenses:** The 47th law commission report of India suggested that certain crimes gravely affect and harm society and so for such crimes it is necessary to dispense with the burden of the prosecution.
- **Deterrent effect:** The burden of proof is generally shifted to gain convictions in such offenses where deterrence considerations are greater. In that light, an example is dowry death.

- **Judicial Convenience:** It is argued that it becomes more convenient and easier for the Prosecution to prove the basic fact that shifts the burden. For the sake of expediency and judicial economy, the lawmakers take this argument to reverse the burden.
- **Judicially Valid:** The position is settled in ***P. N. Krishnalal v. Government of Kerala***, where the court held that the presumption of innocence is not a constitutional guarantee and can be dispensed with by legislative imperatives and action.

◎ CONCLUSION

The offense of money laundering has been regarded as an aggravated form of crime “world over”. It is, therefore, a separate class of offense requiring effective and stringent measures to combat the menace of money laundering,” but it is also important that it should not intrude into the fundamental right of personal liberty guaranteed by Article 21 of the Constitution of India.

Section: C

(Prelims)

CURRENT AFFAIRS

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HAGIA SOPHIA: THE STORY OF A WORLD HERITAGE SITE

- ◎ **CONTEXT:** Hagia Sophia has survived through various transformations, it has been a cathedral, a mosque, a museum, and now back to being a mosque. After being opened as a mosque, the site has hosted over 6.5 million viewers in the last two years.



About the Site

- The Hagia Sophia is a historic place of worship in Istanbul, Turkey, in Eastern Europe.
- It is the national landmark of Turkey, located at the center of the capital Istanbul.
- It was built by the Roman empire as the basilica in 537 AD.

Church

- The original church on the site is said to have been built by **Constantine I** in 325 on the foundations of a pagan temple.
 - It was damaged in 404 by a fire that erupted during a riot following the second banishment of St. John Chrysostom, then patriarch of **Constantinople**.
 - It was rebuilt and enlarged by the **Roman emperor Constans I**.
 - The restored building was rededicated in 415 by Theodosius II.
 - The church was burned again in the Nika insurrection of January 532.
- Hagia Sophia was originally built as the Greek Orthodox Christian patriarchal Basilica in 537 AD by the Byzantine Roman empire during the reign of Justinian I.
 - **Converted into mosque:** It was converted into a mosque by the **Mehmed the Conquerer of Ottoman empire** in 1453.
 - **Converted into museum:** It remained a mosque until 1931, and was opened as a museum in 1935 by the Republic of Turkey.

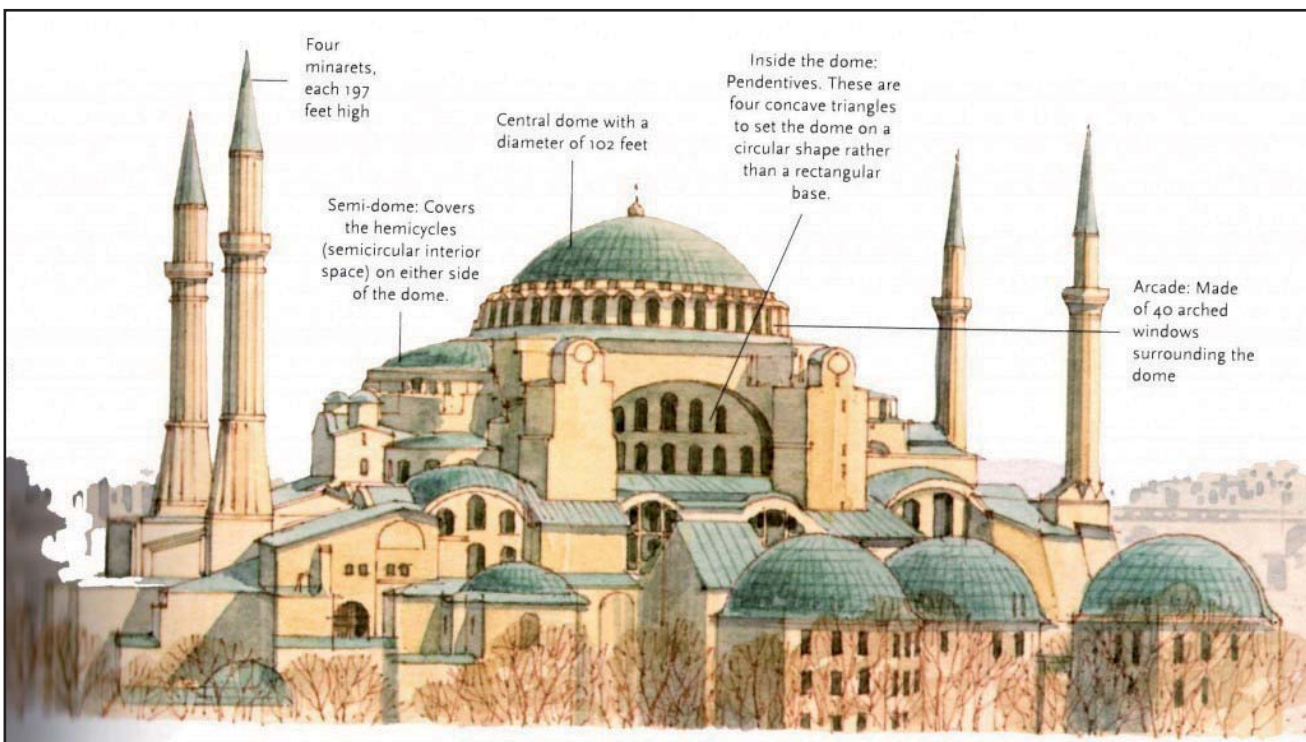
Structure of the Heritage Site

- The Hagia Sophia measures 269 feet in length and 240 feet in width, with the domed roof stretching 180 feet above the ground.

- **Architectural Style:** It was built in a grand Christian basilica style and is the most significant surviving example of **Byzantine architecture**.
- **Columns:** The Hagia Sophia has 104 columns, many made of marble, imported from the Temple of Artemis in Ephesus—an ancient city near modern-day Selçuk, Turkey—and from Egypt.

It was enlisted in the **world heritage site** by UNESCO in 1985.

- **Dome:** The main nave is covered by a central dome that is 107 feet in diameter and rises 180 feet above the ground
- **Minarets:** The four minarets surrounding the main dome were later added by the Ottoman empire.
 - One minaret was built out of red bricks while the other three were built of white limestone and sandstone.



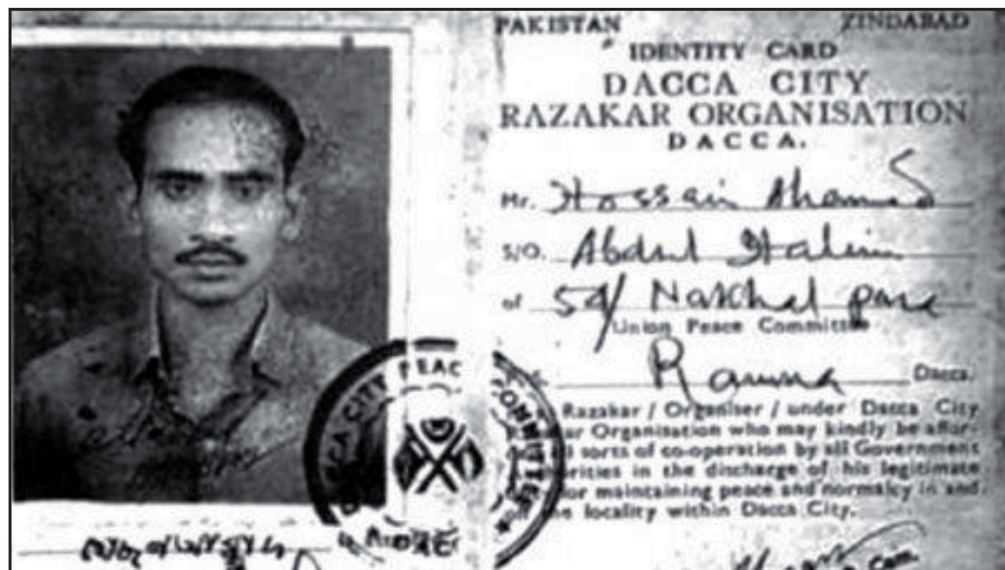
MEMBERS OF RZAKAR BAHINI SENTENCED TO DEATH

© CONTEXT:

Six members of 'Razakar Bahini', a locally recruited paramilitary force that collaborated with the Pakistan army during the 1971 Bangladesh Liberation War, were sentenced to death for 'crimes against humanity' by Bangladesh's International Crimes Tribunal.

Who were Razakars?

- The Razakars were an **auxiliary force of the Pakistan army** during the 1971 Bangladesh War.



- Razakar literally means '**volunteer**' or '**helper**' in Persian and Urdu, but has come to mean '**collaborator**' and is associated with betrayal in Bangladesh.
- It composed of mostly **pro-Pakistani Bengalis and Biharis from Bangladesh** (formerly East Pakistan).
- There were approximate 50,000 Razakars who assisted the army in raids against the local population and were accused of committing horrific atrocities.

Bangladesh's International Crimes Tribunal:

- The Bangladesh **Collaborators (Special Tribunals) Order** was passed in 1972.
- In 1973, **the International Crimes (Tribunal) Act in 1973** was introduced to investigate and prosecute those that committed atrocities during the war.
- After Mujibur Rahman was **assassinated** in a coup by sections of the Bangladesh army in August 1975 and the ruling Awami League was ousted from power.
- During the period of military rule between 1975 and 1990, **General Ziaur Rehman (1975–81) became the de facto head of the state.**
- Shah Azizur Rahman, Ghulam Azam and others joined the Bangladesh Nationalist Party (BNP) (formed by General Ziaur Rehman).
 - They were associated with banned organisations (then) that collaborated with Pakistani state forces, such as the Jamaat-e-Islami.
- In **March 2010**, the government headed by **Prime Minister Sheikh Hasina established Bangladesh's three-member International Crimes Tribunal** to investigate and administer justice to those suspected of being involved in torture and killings during the country's struggle for independence.
 - The ruling Awami League had pledged to prosecute war criminals of 1971 and had won a landslide victory in the 2008 general election.
- **Abul Kalam Azad (also known as Bachchu Razakar), a former leader of the Jamaat-e-Islami was the first person to be convicted by the tribunal in 2013.**
- In **2019, government published a list** of 10,789 **Razakars** who had collaborated with the Pakistani army in committing atrocities against Bengalis during the war.
 - It included names of 127 politicians and influential people.

NATIONAL FLAG DESIGNER PINGALI VENKAYYA BIRTH CENTENARY

© **CONTEXT:** August 2 is the birth centenary of the designer of the national flag, Pingali Venkaiah.

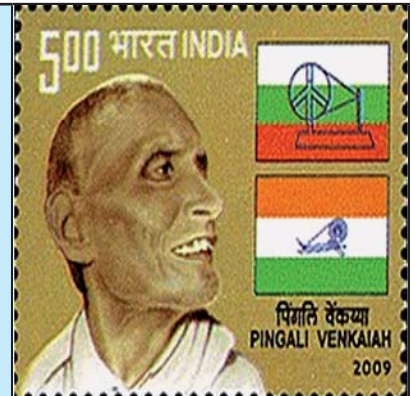
Pingali Venkayya

- Pingali Venkayya was a freedom fighter and the designer of the **Indian National Tricolour** who went on to become synonymous with the **spirit of free and independent India**.
- **Born on:** August 2, 1876 in Krishna district of Andhra Pradesh,
- Venkayya served as a soldier in the British Army in South Africa during the Anglo Boer war in Africa.
- A firm believer in **Gandhian principles** and an ardent nationalist, Venkayya met the Mahatma during the war.
- He was 19 when the meeting took place and formed an association which would last for more than 50 years.



- He met the Mahatma once again in Vijayawada and showed him his publication with the various designs of the flag.
- Acknowledging the need for a national flag, Gandhi then asked Venkayya to design a fresh one at the national congress meeting in 1921.
- Initially, Venkayya came up with saffron and green colours, but it later evolved with a spinning wheel at the centre and a third colour-white.
- The flag was officially adopted by the Indian National Congress in 1931.

- In 2009, a stamp was also issued to commemorate him, and the Andhra Pradesh government recommended his name for the Bharat Ratna in 2014.
- In 2015, the then Urban Development Minister M. Venkaiah Naidu renamed the AIR Vijaywada after Venkayya and unveiled his statue on its premises.



KERALA'S OWN INTERNET NETWORK AND SERVICE (KFON)

◎ **CONTEXT:** Kerala becomes the only State in the country with its own internet service.

About Kerala Fibre Optic Network (KFON):

- Kerala Fibre Optic Network (KFON) is a radical **public-funded project** conceived to ensure high-speed Internet access to an entire state.
- KFON has received both the **Infrastructure Provider and Internet Service Provider (ISP) licenses** from the Central government.
- The ambitious flagship project was launched in February, 2021.
- It is aimed to provide Internet connections to 20 lakh **below-poverty-line (BPL)** households in the State, and ensure universal Internet access and address the problem of digital divide.
- **KFON Ltd** is primarily an infrastructure provider for other ISPs operating in the State.
- Under the project, a venture of equal partnership between Kerala State Information Technology Infrastructure Ltd (KSITIL) and Kerala State Electricity Board (KSEB), 30,000 km of fibre optic cable will be laid connecting all parts of the State.
- The cable is being laid using the existing network of KSEB that has a network capacity of 2 lakh km in the State.



30000+

GOVERNMENT OFFICES

- Connecting Govt offices, Educational Institutions, Hospitals Police Stations, LSGs, Data centre, collectorates, secretariat

FREE ACCESS TO
20 LAKH+

UNDER PRIVILEGED PUBLIC

- Delivery of services like education, e-governance, healthcare etc

100+ LCOS, MSOS

- Free, open network
- Bridges digital divide

10+

TELECOM INFRA & SERVICE PROVIDERS

- Auxiliary infrastructure
- Extended reach with no Opex cost
- Increased market base
- Extending to telecom towers

KFON
INTERNET - A BASIC RIGHT

35000 KILOMETERS
OPTICAL FIBRE NETWORK

40G
PER DISTRICT

**ROBUST, RELIABLE
SECURE INTRANET**

- One time laying
- Scalable and reliable infrastructure

**NEUTRAL
NETWORK
INFRASTRUCTURE**

- Non discriminating Access
- Avoids monopolistic tendencies

**ENABLING
KNOWLEDGE
SOCIETIES**

- KFON democratizes the access to cutting edge technologies
- Bridging digital dividers



PROJECT
PROPOSERS

KSEB
കെ.എസ്.ഇ.ബി

KSITI
Kerala State IT Infrastructure Ltd

Major objectives of KFON:

- Create a core network infrastructure (information highway) with non-discriminatory access to all service providers so as they can augment their connectivity gap.
- Provide a reliable, secure and scalable intranet connecting all government offices, educational institutions, hospitals, etc.
- Partner with MSOs, TSPs, ISPs for providing free internet to economically backward households.

Benefits of KFON

KFON will complement the existing telecom ecosystem in the state and will act as the perfect catalyst positioning Kerala as a Gigabit Economy.

The following are some of the multiple benefits to be realized across the board.

- Bridge the digital divide by making internet access a basic right to citizens and enable the state government's vision to provide free internet access to economically backward households.
- Deliver e-Governance to citizens through TSPs/ISPs/Cable operators by leveraging this network.
- Provide affordable and better broadband connectivity to households by the TSPs/ISPs/ Cable operators due to a competitive market by leveraging this network.
- Boost economic growth by providing digital infrastructure support for local enterprises and SMEs and promoting Electronics and IT industry.

■ Human capital development

- Deliver remote education
- Create job opportunities
- Enhance skills
- Provide remote healthcare access

■ Infrastructure development

- Smart cities/ smart grids
- Transportation management
- Community Connect – Smart Village

■ Infotainment

- Sharing information and best practices (financial services, e-governance, agricultural techniques)
- Entertainment (IPTV, OTT, etc.)
- Innovation
- Creating connected communities (researchers, product development, anytime anywhere/ anytime collaboration)

BILL FOR GATI SHAKTI UNIVERSITY INTRODUCED IN LOK SABHA

◎ **CONTEXT:** A bill was introduced in the Lok Sabha seeking to convert the National Rail and Transportation University, a deemed-to-be-university, into Gati Shakti Vishwavidyalaya, an autonomous central university.

About PM Gati Shakti:

- The **Prime Minister Gati Shakti – National Master Plan** was announced in 2021.
- It is essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects.
- The **multi-modal connectivity** will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another.
- It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

Need for such framework:

- Infrastructure creation in India had suffered for decades from multiple issues.
- There was lack of coordination between different Departments, for example, once a road was constructed, other agencies dug up the constructed road again for activities like laying of underground cables, gas pipelines etc.
- This not only caused great inconvenience but was also a wasteful expenditure.
- PM Gati Shakti will address the past issues through institutionalizing holistic planning for stakeholders for major infrastructure projects.

6 Pillars of PM Gati Shakti:

■ **Comprehensiveness –**

- It will include all the existing and planned initiatives of various Ministries and Departments with one centralized portal.
- Each and every Department will now have visibility of each other's activities providing critical data while planning & execution of projects in a comprehensive manner.

■ **Prioritization –**

- Through this, different Departments will be able to prioritize their projects through cross-sectoral interactions.

■ **Optimization –**

- The National Master Plan will assist different ministries in planning for projects after identification of critical gaps.
- For the transportation of the goods from one place to another, the plan will help in selecting the most optimum route in terms of time and cost.

■ **Synchronization –**

- Individual Ministries and Departments often work in silos.
- There is lack of coordination in planning and implementation of the project resulting in delays.

- PM Gati Shakti will help in synchronizing the activities of each department, as well as of different layers of governance, in a holistic manner by ensuring coordination of work between them.

■ **Analytical –**

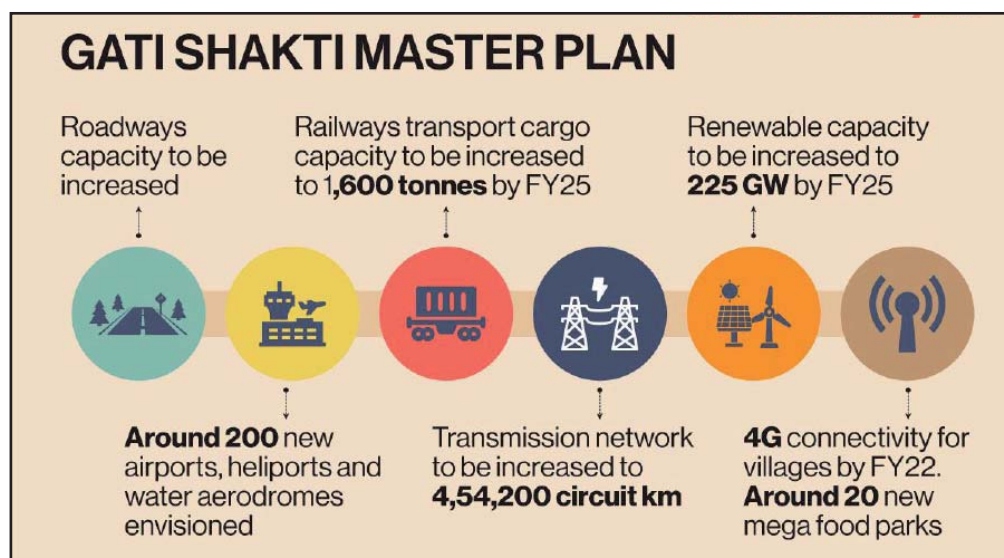
- The plan will provide the entire data at one place with GIS based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.

■ **Dynamic –**

- All Ministries and Departments will now be able to visualize, review and monitor the progress of cross-sectoral projects, through the GIS platform.
- Satellite imagery will give on-ground progress periodically and progress of the projects will be updated on a regular basis on the portal.
- It will help in identifying the vital interventions for enhancing and updating the master plan.

Targets under PM Gati Shakti:

- The **Rs 100 lakh crore national master plan** includes 11 industrial corridors, achieving Rs 1.7 lakh crore turnover in defence production and having 38 electronics manufacturing clusters and 109 pharma clusters by 2024-25.
- It fixes targets up to 2024-25 for all infrastructure ministries.
- **Implementing Agency: National Networking Group**
 - National Networking Group will consist of experts or officials from all the stakeholder departments.



INDIA'S ROLE IN UN PEACEKEEPING MISSIONS OVER THE YEARS

© **CONTEXT:**

Two BSF personnel, who were part of the UN Peacekeeping Mission in the Democratic Republic of the Congo (DRC), were among five people killed during a protest in an eastern town near the border with Uganda.

© ABOUT:

Key-highlights

- They were part of **United Nations Organization Stabilization Mission in the Democratic Republic of the Congo or MONUSCO**.
- A total 175 Indian peacekeepers have so far died while serving with the United Nations.
- India has lost more peacekeepers than any other UN Member State.

MONUSCO:

- MONUSCO took over from an earlier UN peacekeeping operation – **the United Nations Organization Mission in Democratic Republic of the Congo (MONUC)** – on 1 July 2010.
- The new mission has been authorized to use all necessary means to carry out its mandate relating, among other things, to the protection of civilians, humanitarian personnel and human rights defenders under imminent threat of physical violence and to support the Government of the DRC in its stabilization and peace consolidation efforts.

What is the U.N. Peacekeeping mission?**Basic Guiding Principles guiding UN's Peacekeeping missions**

- Consent of the parties
- Impartiality
- Non-use of force except in self-defence and defence of the mandate

- The U.N. Peacekeeping mission is a joint effort between the **Department of Peace Operations** and the **Department of Operational Support**.
- **Aim:** To assist host countries to transition from situations of conflict to peace.
- The U.N. began its Peacekeeping efforts in 1948 when it deployed military observers to West Asia.
- The Peacekeeping mission's role was to monitor the **Armistice Agreement** between Israel and its Arab neighbours.
- UN Peacekeepers provide security as well as political and peacebuilding support to conflict-ridden countries.

India's contribution to UN Peacekeeping Missions

- Over 200,000 Indians have served in 49 U.N. Peacekeeping missions since 1948.
- Currently, 5,581 Indians are part of various U.N. Peacekeeping missions.
- India has been among the largest troop-contributing countries to the U.N. peacekeeping missions.
- As of November 2021, India is the second-highest military (1,888) and fifth-highest (139) police-contributing country to the MONUSCO.

Role of women in Indian Peacekeeping

- India has been sending women personnel on UN Peacekeeping Missions.
- In 2007, **India became the first country** to deploy an all-women contingent to a UN Peacekeeping Mission.

‘CHABAHAR DAY’ OBSERVED TO PROMOTE CHABAHAR – LINK TO INSTC

◎ CONTEXT:

The Ministry of Port, Shipping and Waterways (MoPSW) on July 31st observed ‘Chabahar Day’ in Mumbai to mark the Chabahar – Link to International North-South Transport Corridor (INSTC) – Connecting Central Asian Markets.

◎ ABOUT:

- **India’s vision:** To make **Shahid Beheshti Port** at Chabahar a transit hub and linking it to INSTC to reach out to Central Asian Countries.
- **INSTC (International North-South Transport Corridor)** is India’s vision and initiative to reduce the time taken for EXIM shipments to reach Russia, Europe, and enter the central Asian markets.

Chabahar Port:

- The Chabahar Port is a **key pillar of India’s India-Pacific vision** to connect Eurasia with the Indian Ocean Region.
- The Chabahar Port located in Iran is the commercial transit center for the region and especially Central Asia.
- **The port** will also be **part International North-South Transport Corridor network** connecting India.
- Notably, the **first rail transit cargo from Russia to India** entered Iran recently through the Sarakhs border crossing, marking the official launch of the eastern section of the North-South railway corridor.



International North-South Transport Corridor:

- International North-South Transport Corridor is a corridor to **increase trade between India and Russia**.
- This trade route is **7200 Km long** and the transport of freight is through a multi-mode network of **roads, ships, and railways**.

- This route connects **India and Russia through Iran and Azerbaijan.**
- The corridor is aimed at reducing the carriage cost between India and Russia by about 30 per cent and bringing down the transit time from 40 days by more than half.
- **Russia, India, and Iran are the founding member states of INSTC.**
 - The agreement was signed in 2002.
- There are **13 member states** of the INSTC project – India, Iran, Russia, Azerbaijan, Armenia, Kazakhstan, Belarus, Tajikistan, Kyrgyzstan, Oman, Turkey, Syria and Ukraine.
- **Bulgaria is the Observer State.** The Baltic countries like Latvia and Estonia have also expressed willingness to join the INSTC.
- India shows interest in extending INSTC membership to countries like Afghanistan and Uzbekistan.
- Establishing a land route via Kabul and Tashkent to form the INSTC’s “Eastern corridor” would maximise the potential of this collaboration.
- Also, India wants to include Chabahar port to be included in the International North-South Transport Corridor (INSTC).



Central Asia:

- Central Asia is a landlocked region, which is located in the heart of Asia. It forms a part of India's extended neighbourhood.
- The region is composed of the 5 post-soviet countries:
 - ▶ Kazakhstan
 - ▶ Uzbekistan
 - ▶ Turkmenistan
 - ▶ Kyrgyzstan
 - ▶ Tajikistan



- The countries are also known as 5 “Stans” due to the same ending in their names.
- It is bounded on the north by Russia and on the south by Iran, Afghanistan, and China.

Why Central Asia assumes significance for India?

- **Geo-strategic location:** Its geographical proximity, strategic location, and historical linkages make it an important partner for New Delhi.
- **Energy hub:** Central Asia has an abundance of oil and gas deposits. The region contains vast hydrocarbon fields both on-shore and off-shore in the **Caspian Sea** which homes around 4 percent of the world’s natural gas reserves and approximately 3 percent of oil reserves.
 - **Gas** (Turkmenistan)
 - **Oil, gas and uranium** (Kazakhstan)
 - **Uranium and gas** (Uzbekistan)
 - **Hydropower** (Tajikistan and Kyrgyzstan)
- **Global power hub:** Strategically, Central Asia is emerging as the next high-stakes competition ground for global powers, hence, it would behoove India to pay closer attention.
- **Leading role:** Central Asia provides India with the right platform to leverage its political, economic, and cultural connections to play a leading role in Eurasia.
- **Significant transportation hub:** The region is a major transportation hub for gas and oil pipelines and multi-modal corridors connecting China, Russia, Europe, and the IOR.

WORLD OVERSHOOT DAY: WORLD HAS ALREADY OVERSHOT NATURE'S BUDGET FOR REST OF THE YEAR

◎ **CONTEXT:** This year's Earth Overshoot Day was observed (28th July) a day before it was celebrated in year 2021 on July 29. It indicates that humanity's demand for natural resources exceeds what the Earth can provide.

◎ **ABOUT:**

- The concept of Earth Overshoot Day was first **conceived by Andrew Simms** of the UK think tank New Economics Foundation, which partnered with Global Footprint Network in **2006** to launch the **first global Earth Overshoot Day campaign**.
- At that time, Earth Overshoot Day fell **in October**.
- **World-Wide Fund for Nature (WWF)**, the world's largest conservation organization, has participated in Earth Overshoot Day since

How it is computed the earth's overshoot capacity?

- It is computed by Global Footprint Network by **dividing the planet's bio-capacity** (the amount of ecological resources Earth is able to generate that year) **by humanity's Ecological Footprint** (humanity's demand for that year) **and multiplying by 365**, the number of days in a year.

$$\text{Earth Overshoot Day} = (\text{Planet's Bio-capacity} / \text{Humanity's Ecological Footprint}) \times 365$$

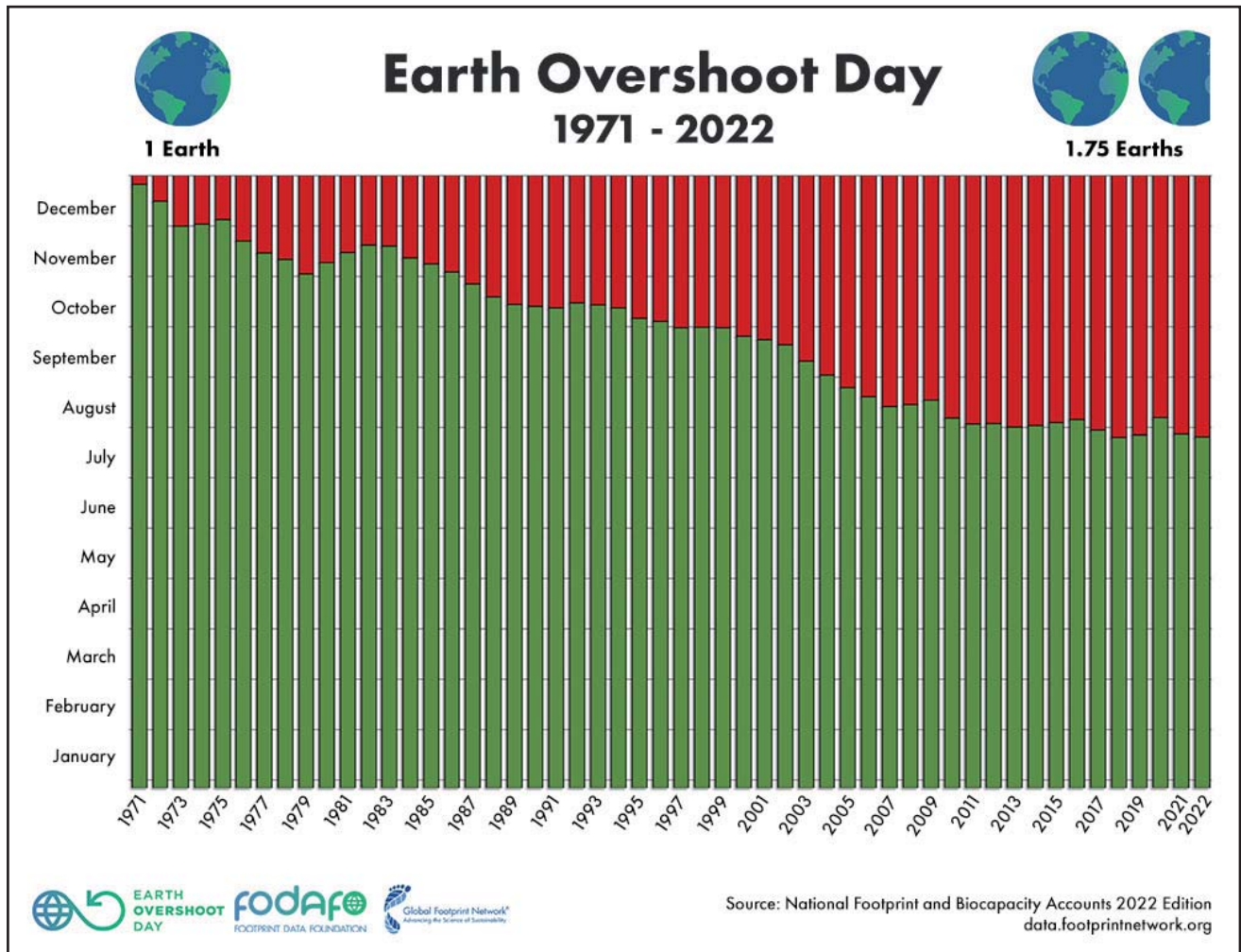
- **The Ecological Footprint** is a metric used that comprehensively compares human demand on nature against nature's capacity to regenerate.

Global Footprints Network (GFN)

- Global Footprint Network is an **international non-profit organization** founded in the year 2003.
- Its key strategy has been to make available robust Ecological Footprint data.
- It was established as a charitable not-for-profit organization in each of three countries namely, United States, Belgium and Switzerland.

India's stand

- India finds itself in a much better position compared to the other countries.
- India, with the second-largest population count in the world, still has a per capita consumption rate that is not at all in the danger area of getting unsustainable.
- According to the GFN, in a hypothetical situation where every citizen of the world lives like a citizen of the United States, sustainability would call for **a total of 5 Earth**.
- It is defined that people of the world living like Indians would actually call for **only 0.7** of the planet Earth to reach sustainability.



NATIONAL GLOBAL TIGER DAY CELEBRATIONS 2022

◎ **CONTEXT:**

As the world observes International Tiger Day on July 29, there is need to look at the declining trend of tiger population (1,059 tigers have been lost since 2012)

◎ **ABOUT:**

The Species

- **Tiger**, (*Panthera tigris*) is the largest member of the cat family (Felidae).
- In the wild, tigers are found in India, Nepal, China, Russia, Bhutan, Myanmar, Cambodia, Laos, Vietnam, Thailand, Sumatra (Indonesia) and Malaysia.

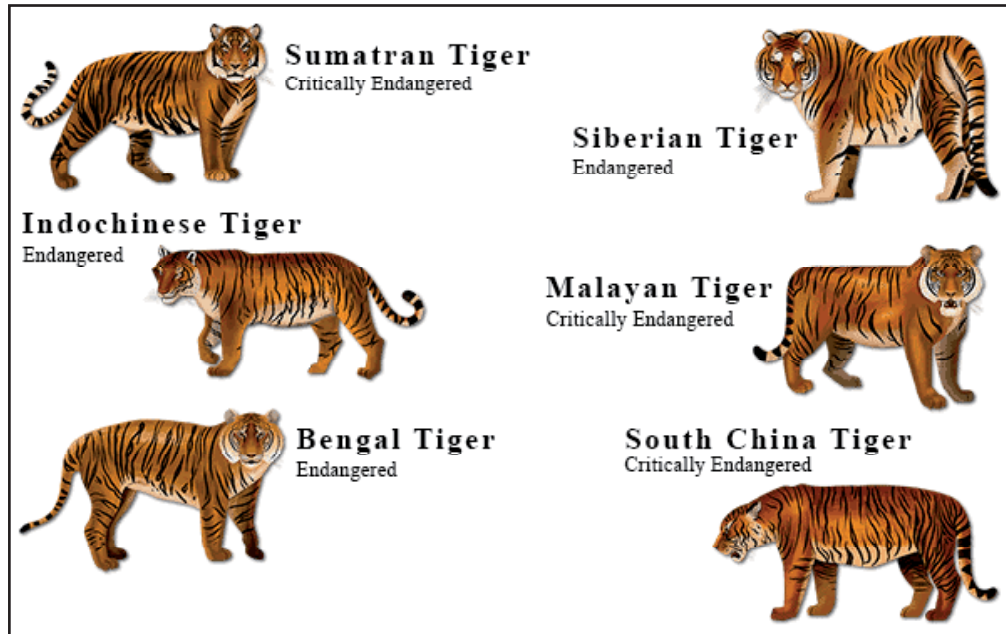
The five surviving sub species of tiger are:

- **Indian Tiger or Royal Bengal Tiger** (*Panthera tigris tigris*) found in India, Nepal, Bhutan and Bangladesh;
- **Indo-Chinese tiger** (*Panthera tigris corbetti*) mainly found in Thailand and Peninsular Malaysia but are also found in Myanmar, Southern China, Cambodia, Laos and Vietnam;
- **Siberian or Amur Tiger** (*Panthera tigris altaica*) found in far east Russia;
- **Sumatran Tiger** (*Panthera tigris sumatrae*) found in the Indonesian island of Sumatra;
- **South China Tiger** (*Panthera tigris amoyensis*) found in China. The population found in Peninsular Malaysia has been given a status of separate sub species *Panthera tigris*

jacksoni.

- The three sub species of tigers that became extinct in the past century are:
 - the Bali Tiger (*Panthera tigris balica*)
 - the Javan Tiger (*Panthera tigris sondaica*)
 - the Caspian Tiger (*Panthera tigris virgata*)

Recent reports indicate that the South China tiger is also extinct in the wild.



Why Tigers were important to be conserved?

- Important role in the health and diversity of an ecosystem.
- An indicator of the **well-being of the ecosystem**.
- It is a **top predator** which is at the apex of the food chain and keeps the population of wild ungulates in check, thereby maintaining the balance between herbivores and the vegetation upon which they feed.
- The extinction of this top predator is an indication that its ecosystem is not sufficiently protected, and neither would it exist for long thereafter.

Protection given to Tigers

- **WPA:** Indian Tiger is an endangered animal and is listed in the Schedule I of the Wildlife (Protection) Act, 1972.
 - ▶ This act gives it protection against hunting/poaching and trade for skins, bones and body parts.
- **CITES:** The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) makes international trade in tiger parts illegal.
 - ▶ India has been a signatory of this convention since the year 1975.

What are the Methods used to estimate their population?

Data collection is required to know where conservation efforts and resources need to be applied. To collect such data, techniques such as **radio collars and capture-recapture population estimation models** have been used to collect population numbers.

- **The pugmark census technique:** is also used during travels along the tiger dominated places. This involves observing paw prints in the ground and taking measurements of **width, length and indentation** to determine the individual that was in the location.
- **Using Traditional Methods:** Dogs are also used to assist tracking the tiger by smell. Once the tigers are found, photographs, drawings and notes regarding sex, location, and other details of the individual are taken and sent back to the study camp.
- **Using Camera Traps:** It involves setting up **surveying cameras** that activate when there is movement detected and will spontaneously take multiple photographs of the area.
- **Capture-recapture models;** are now commonly used in conjunction with tiger tracking.
- They not only measure population numbers, but also measure demographic parameters.
- This combination technique consists of camera traps and basic tiger search to collect sufficient data.
- Once researchers and conservation biologists are able to gain knowledge of the population and its numbers, conservation efforts are put to work.

Factors Determining Tiger Conservation

Factors determining success of Tiger conservation generally includes;

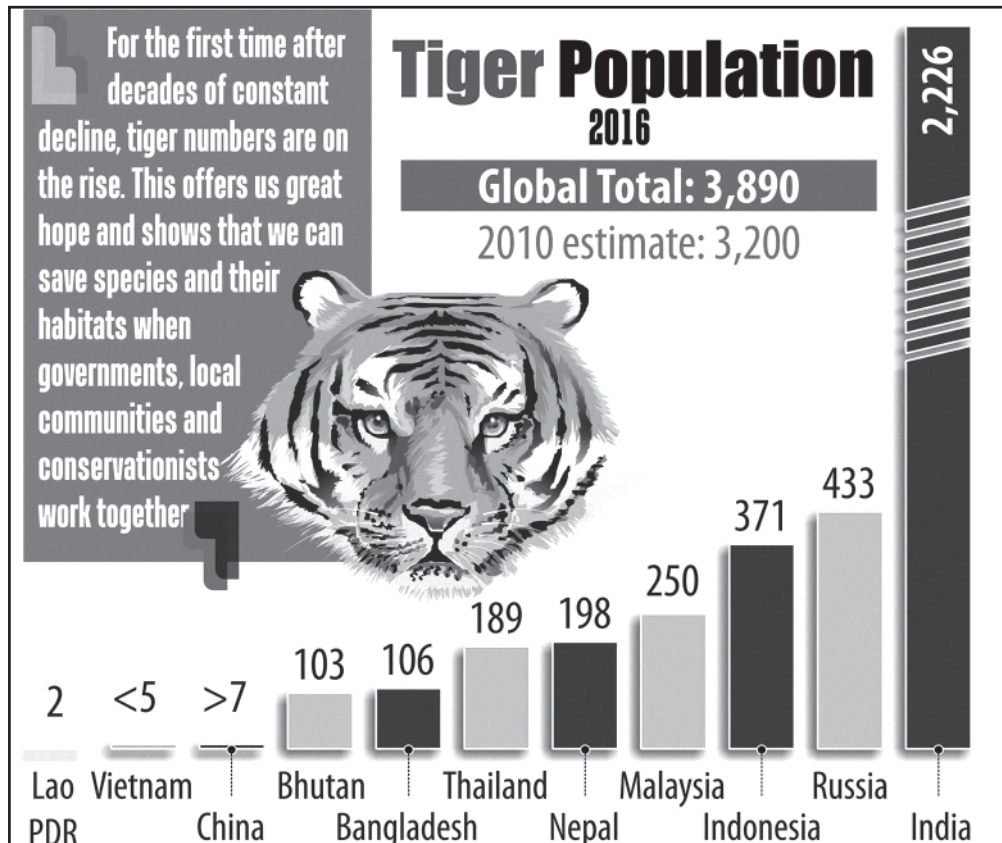
- Size of protected area
- Biodiversity in the environment
- Number of tigers in the area
- Connectivity of the area to buffer zones
- Funding and Community Support

What are the loopholes in conservation practices?

- Lack of availability of sufficient exclusive space to maintain viable populations
- Human- Wildlife conflict
- Illegal Trade of Tigers
- Lack of Policy implementation
- **Technological drawbacks:** Use of technology such as the E-eye, a sensor-based system of thermal and visual cameras deployed along some sensitive borders of high-profile tiger reserves relayed real-time surveillance to tiger reserve managers and acted as major deterrent for poachers.

Important Government Initiatives

- **Project Tiger:** Project Tiger aims at tiger conservation in specially-constituted tiger reserves, which are representative of various bio-geographical regions in the country.
 - It strives to maintain viable tiger populations in their natural environment. As of 2019, there are 50 tiger reserves in India, covering an area of 37,761 km²(14,580 sq mi).
- **The Wildlife (Protection) Act 1972** is a very powerful legislation.
 - It provides for penalties of **3–7 years** of imprisonment and/or fine of **INR 5,000 to 200,000** for the poaching of tigers.
- **National Tiger Conservation Authority:** National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of Environment, Forests and Climate Change.
 - It was established in 2005 following the recommendations of the Tiger Task Force.
 - It was constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it.



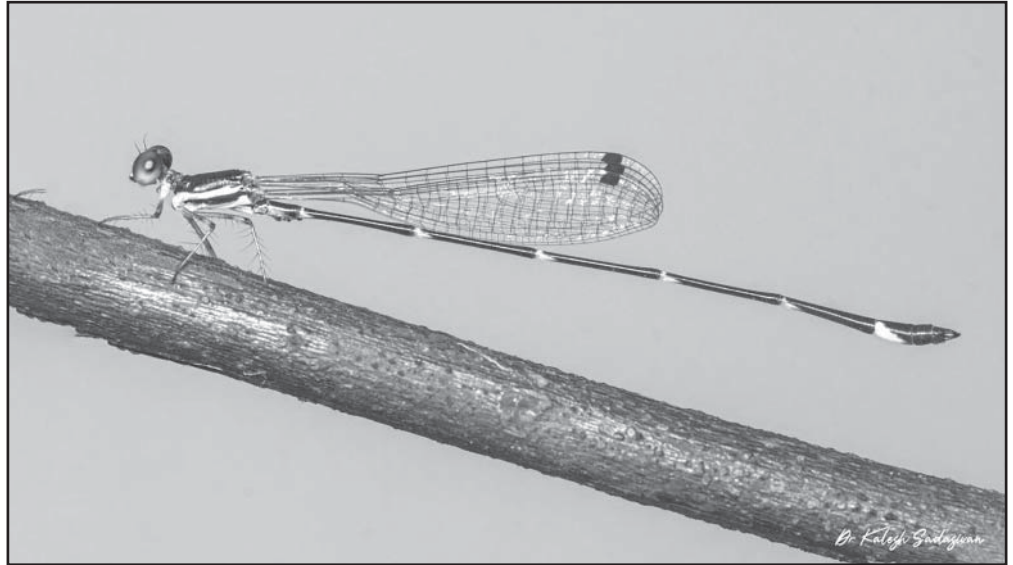
KERALA'S DAMSELFLY CHECKLIST GETS A NEW MEMBER

© CONTEXT:

A new damselfly species from the Western Ghats has been added to odonates' checklist of Kerala.

About the new species:

- **Name: Anamalai Reed-tail** (scientific name: *Protosticta anamalaica* Sadasivan, Nair and Samuel, 2022).
- Anamalai Reed-tail **first spotted at Peechi Wildlife Sanctuary**.
- The tiny insect was first spotted at Ponmudi hills in the Peechi Wildlife Sanctuary that forms part of the Nelliampathies–Anamalais sub-unit of the Munnar landscape.
- The genus **Protosticta Sels**, 1885, consists of slender-built **damselflies commonly known as Reed-tails or Shadow-damsels**.
- They inhabit **hill streams in tropical, subtropical and temperate jungles** of the Indian subcontinent and south-eastern Asia.
- In India, they are **distributed in the Western Ghats** and north-eastern region towards Myanmar.
- The genus was described **from Sulawesi in Indonesia**.
- There are **15 species of Protosticta in India**, among which **12 inhabit the Western Ghats**.
- Kerala has **182 odonates' species with 69 endemics**.



LUMPY SKIN DISEASE SPREADS TO 25,000 BOVINES IN RAJASTHAN

◎ **CONTEXT:** With the lumpy skin disease spreading fast among bovine animals in western and northern Rajasthan, cattle-rearers in the State are suffering heavy losses.

- ◎ **BACKGROUND**
- LSD is endemic to Africa and parts of West Asia, where it was first discovered in 1929.
 - In Southeast Asia the first case of LSD was reported in Bangladesh in July 2019.
 - In India, which has the world's highest 303 million heads of cattle, the disease has spread to **15 states within just 16 months.**
 - In India it was first reported from **Mayurbhanj, Odisha in August 2019.**

Key Points

- Lumpy skin disease (LSD) is a viral disease of cattle and water buffalo.
- **Virus:** Poxvirus Lumpy skin disease virus (LSDV).
 - The virus is one of three closely related species within the genus capripoxvirus, the other two species being **Sheep pox virus** and **Goat pox virus.**



- **Symptoms:**
 - It appears as nodules of two to five centimetre diameter all over the body, particularly around the head, neck, limbs, udder (mammary gland of female cattle) and genitals.
 - The lumps gradually open up like large and deep wounds.
 - Other clinical signs include general malaise, ocular and nasal discharge, fever, and sudden decrease in milk production.
- **Effect:** According to the Food and Agriculture Organization (FAO) the mortality rate is less than 10%.
- **Vectors:** It spreads through mosquitoes, flies and ticks and also through saliva and contaminated water and food.
- **Prevention:** Control and prevention of lumpy skin disease relies on four tactics - movement control (quarantine), vaccination, slaughter campaigns and management strategies.
- **Treatment:** There is no treatment for the virus, so prevention by vaccination is the most effective means of control.
 - Secondary infections in the skin may be treated with Non-Steroidal Anti-Inflammatories (NSAIDs) and also antibiotics when appropriate.
- **Implications:** This will have a devastating impact on the country, where most dairy farmers are either landless or marginal landholders and milk is among the cheapest protein sources.

Measures to be taken

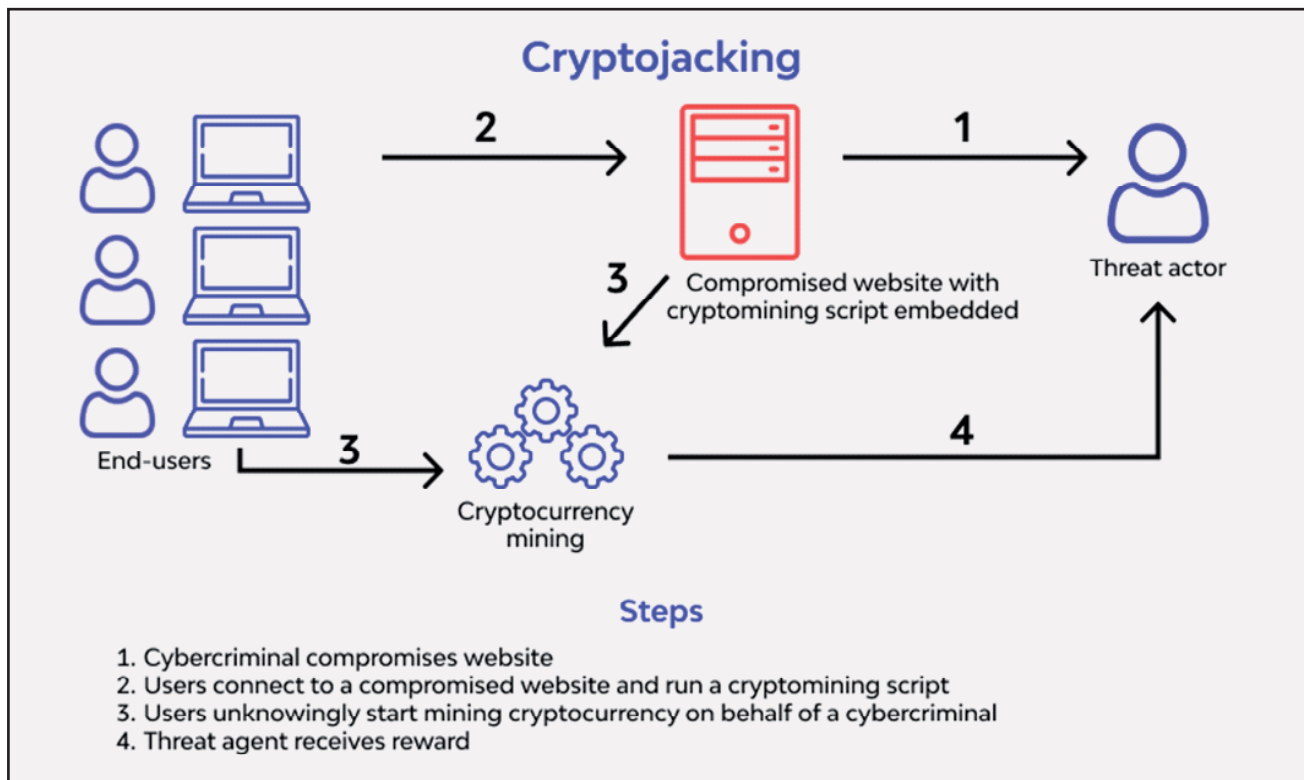
- Community awareness
- Educating cattle holders
- Incentives for disease treatment
- Insurance of Cows

CRYPTOJACKING, THE CYBER-ATTACK CARRIED OUT BY CRYPTO MINERS

- ◎ **CONTEXT:** According to a new report, **Cryptojacking' attacks on computer systems have gone up by 30% to 66.7 million in the first half of 2022 compared to the first half of last year.**

What is Cryptojacking?

- Cryptojacking is a **cyber-attack** wherein a computing device is hijacked and controlled by the attacker, and its resources are used to **illicitly mine cryptocurrency**.
- Hackers seek to hijack any kind of systems they can take over—desktops, servers, cloud infrastructure and more—to illicitly mine for crypto coins.
- In most cases, the malicious programme is installed when the user clicks on an unsafe link, or visits an infected website — and unknowingly provides access to their Internet-connected device.



Understanding Coin mining

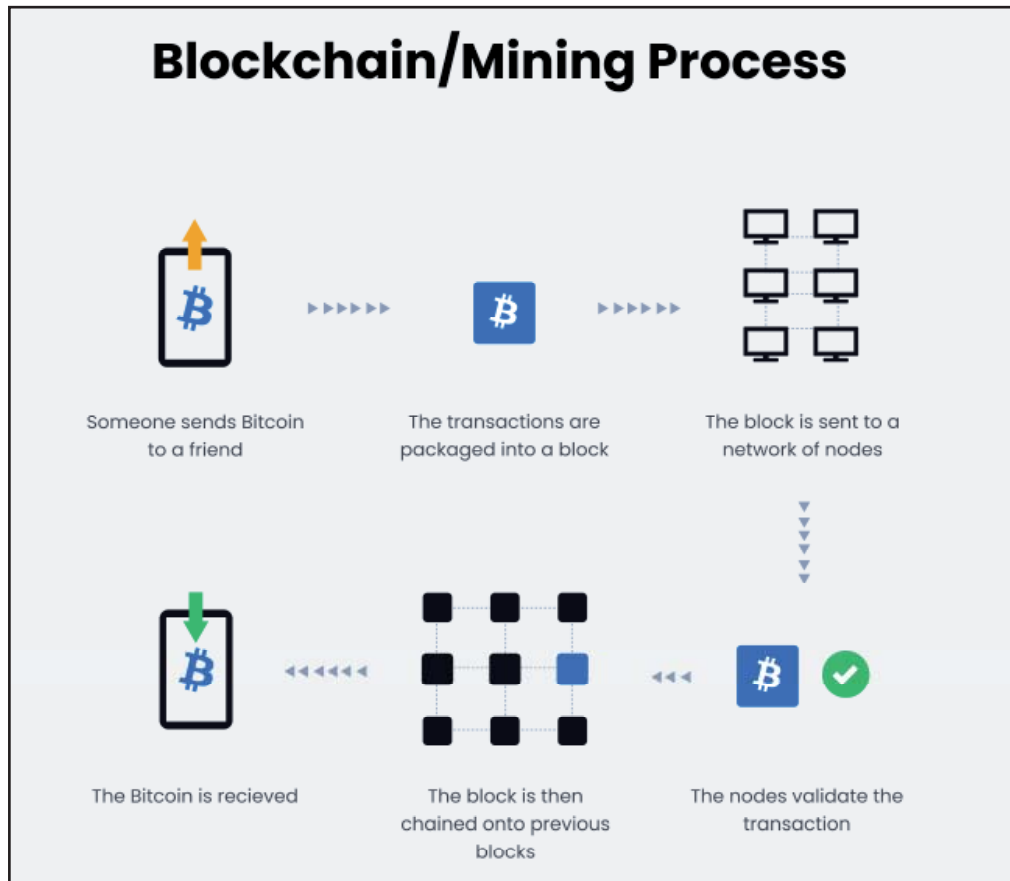
- **Coin mining** is a legitimate process in the cryptocurrency world that releases **new cryptocurrency** into circulation.
 - It involves **solving complex computational problems** to generate **blocks** of **verified transactions** that get added to the blockchain.
- The reward for the first miner who successfully manages to update the crypto ledger through this route is **crypto coins**.
- But the race to crack this **64-digit hexadecimal number code** needs considerable computing power involving state-of-the-art hardware, and electrical power to keep the systems involved up and running.

How does Cryptojacking work?

- Cryptojackers co-opt devices, servers, and cloud infrastructure, and use their resources for mining.
- The use of 'stolen' or cryptojacked resources slashes the cost involved in mining.

Concerns:

- Cryptojacking is hard to detect and the victims of these attacks mostly remain unaware that their systems have been compromised.
 - Some telltale signs are the device slowing down, heating up, or the battery getting drained faster than usual.
- Apart from individuals, businesses too are on the target list of cryptojackers.
- The primary impact of cryptojacking is performance-related, though it can also increase costs for the individuals and businesses affected because coin mining uses high levels of electricity and computing power.



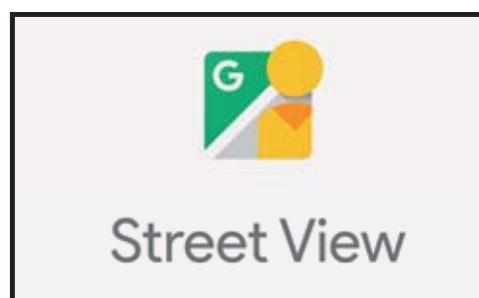
THE STREET, IN 360-DEGREE PANORAMIC VIEW

© CONTEXT:

Google Street View is finally available for ten cities in India and is expected to roll out in about 50 more cities by the end of the year 2022.

What is Google Street View?

- Google Street View is an **immersive 360-degree** view of a location captured using special cameras mounted on vehicles or on backpacks by data collectors moving around the city streets.
- The images are then patched together to create a 360-degree view which users can swipe through to get a detailed view of the location.
- It is available to view on **Android and iOS** using the app, or as a **web view**.
- In India, unlike in other markets, Google Street View is powered by images from third parties as per the **National Geospatial Policy, 2021**.

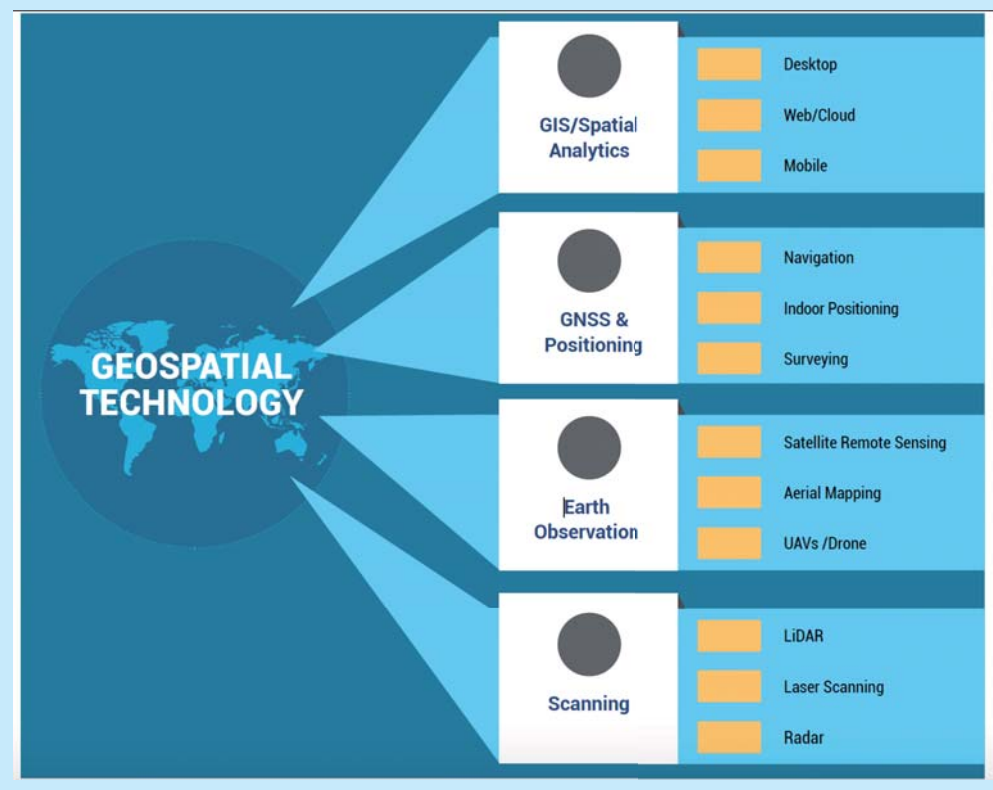


What is Geo-spatial Technology?

- Geospatial Technology is an emerging field of study that includes **Geographic Information System (GIS), Remote Sensing (RS), and Global Positioning System (GPS)**.
- Geospatial technology enables us to acquire data that is referenced to the earth and use it for **analysis, modelling, simulations, and visualization**.

Application of Geo-spatial Technologies

- **Geospatial data:** is data about **objects, events, or phenomena that have a location on the surface of the earth**.
 - ▶ GNSS & Positioning
 - ▶ Scanning
 - ▶ Earth Observation



How has Street View now been launched in India?

- The **National Geospatial Policy, 2021** lets Indian companies collect map data and license it to others.
- Google has tied up with **Tech Mahindra and Mumbai-based Genesys International** to enable Street View for 10 Indian cities initially.
- This is **the first time Google** is working with partner data to enable this feature.
- In India, the data will be collected and owned by **these partners**.

Benefits

- While the **Google Maps** gives users the ability to plot a route and see the satellite view of the same, often this does not give a clear idea of the road conditions.
- With Street View, users will be able to see exactly how a new destination looks like, and even **explore local businesses** before going there.

Limitations

- **Restricted to Specific areas:** Street View in India is not allowed for restricted areas like government properties, defence establishments and military areas. This means in a place like Delhi, the cantonment area will be out of bounds for Street View.
- **Privacy issues:** Over the years a lot of privacy and other issues have been raised regarding Street View.
- People faces and other identifiable aspects, like car number plates and house numbers, being captured by the camera and being misused in different ways.

National Geo-Spatial Policy 2021

The Policy is guided by the following underlying principles in its intent and scope:

- Recognizing the potential of Geospatial Sector in knowledge and wealth creation and providing for an enabling environment
- Augment Geospatial education in the country by 'catching them young' and igniting geospatial spark in young minds from school level onwards
- Standardization and certification of courses and skill sets
- Policies and guidelines to be aligned with emerging technologies and ground realities
- Level playing field for Government and non- Government sectors
- Ease of doing business
- Encourage creation and incubation of ideas and start-ups
- Availability of real and near real time data and information
- Reduce duplication and wastage of efforts in producing Geospatial data
- Promote collaboration, including Public Private Partnerships, between various agencies in production and use of Geospatial data
- Survey of India topographic data to be treated as common good and made easily available
- Geospatial data and information produced using public fund to be shared as per National Data Sharing and Accessibility Policy 2012.
- Standardization of formats so that Geospatial data is available in an interoperable machine-readable form
- Assessment of sensitivity of Geospatial data and information for sharing to be done weighing security/strategic considerations against potential contribution to socio-economic development

GLUTTONOUS COSMIC 'BLACK WIDOW' IS HEAVIEST-KNOWN NEUTRON STAR

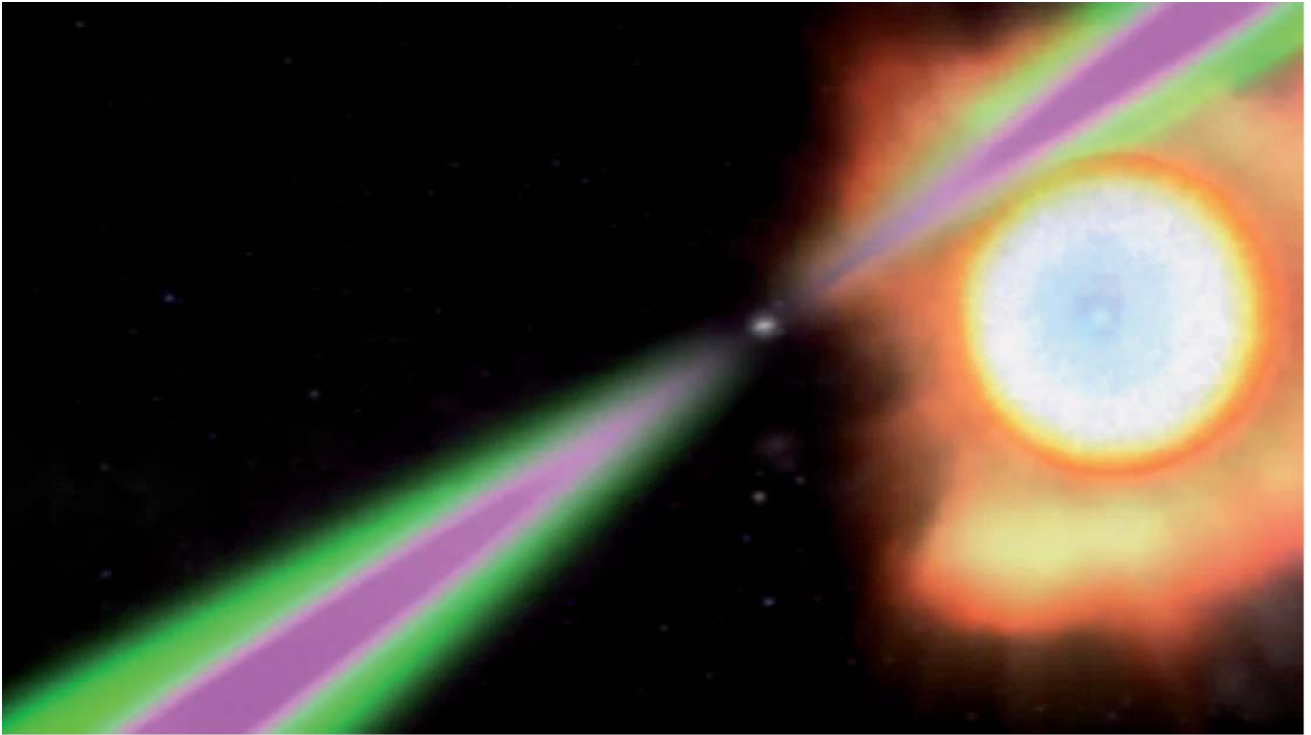
◎ CONTEXT:

For the first time, astronomers have discovered the heaviest known neutron star, an object that forms when the core of a massive star undergoes gravitational collapse at the end of its life.

- The neutron star classified as a "black widow" has a mass about 2.35 times greater than that of our sun.

About "Black Widow":

- The neutron star is wildly **spinning at 707 times per second**.
- It has been observed the most massive known example of an object called a **neutron star**.

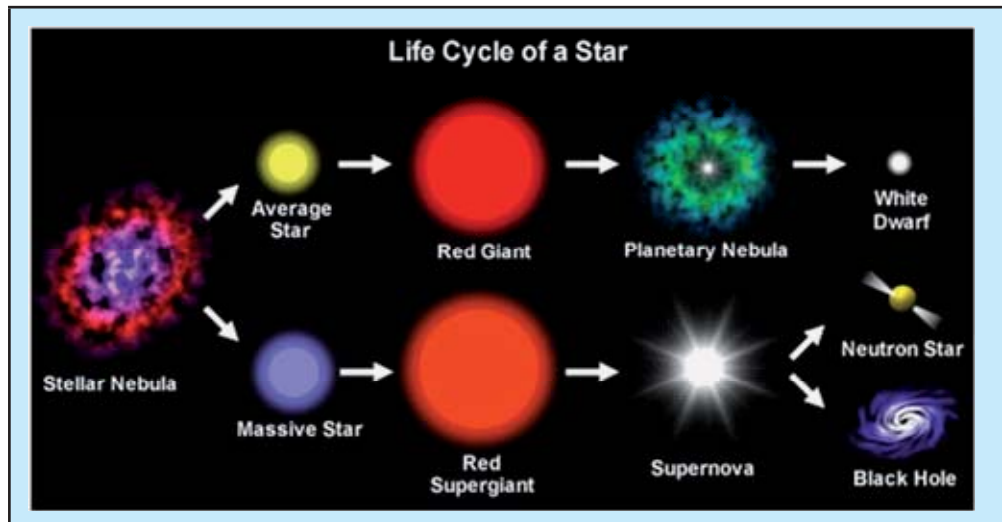


A spinning neutron star periodically swings its radio (green) and gamma-ray (magenta) beams past Earth in this artist's concept of a black widow pulsar. The neutron star/pulsar heats the facing side of its stellar partner (right) to temperatures twice as hot as the sun's surface and slowly evaporates it. (Image credit: NASA's Goddard Space Flight Center)

- This neutron star inhabits what is called a **binary system**, in **an orbit with another star**.
- The neutron star is a kind **dubbed a "black widow,"** named in **honor of female black widow spiders that eat their male partners after mating**.
- It apparently was **born with the usual mass of a neutron star**, about 1.4 times that of our sun, but its **gravitational pull poached material from its companion star**, enabling it to grow to a mass seemingly at the uppermost limit before physics would dictate a collapse into a black hole, the densest of all known objects.
- It has **swallowed nearly a full sun's worth of mass** without yet becoming a black hole. So it should be just on the edge of black hole collapse.

About Stars

- A star is an astronomical object consisting of a luminous spheroid of plasma held together by its own gravity.
- A star's life begins with the gravitational collapse of a gaseous nebula of material composed primarily of hydrogen, along with helium and trace amounts of heavier elements.
- The total mass of a star is the main factor that determines its evolution and eventual fate.
- For most of its active life, a star shines due to thermonuclear fusion of hydrogen into helium in its core, releasing energy that traverses the star's interior and then radiates into outer space.
- At the end of a star's lifetime, its core becomes a stellar remnant: a white dwarf, a neutron star, or, if it is sufficiently massive, a black hole.
- Stars can form orbital systems with other astronomical objects, as in the case of planetary systems and star systems with two or more stars.



Neutron Stars

- Neutron stars are formed when a massive star runs out of fuel and collapses.
- The very central region of the star, the core, collapses, crushing together every proton and electron into a neutron.
- If the core of the collapsing star is between about 1 and 3 solar masses, these newly-created neutrons can stop the collapse, leaving behind a neutron star.
- Stars with higher masses will continue to collapse into stellar-mass black holes.
- Many neutron stars are likely undetectable because they simply do not emit enough radiation.

Black Hole

- A black hole is a region of space-time, where gravity is extremely strong that no object can escape from it.
- **Types:** There are two types of black holes which become three with the discovery:
 - **Stellar-mass black holes:** These are the black holes with a mass of fewer than 100 times that of the Sun.
 - **Supermassive black holes (SMBH):** These are the ones with a mass greater than 100,000 times that of the Sun.
 - **Intermediate-mass black holes (IMBHs):** These are a class of black holes with a mass approximately 100 to 100,000 times that of the Sun.
- Both stellar black holes and SMBHs are commonly found.

MiG-21 FIGHTER JETS AND INDIA

- ◎ **CONTEXT:** The MiG-21 trainer, which had taken off from the Uttarlai airbase, crashed near Bhimda village in Rajasthan. MiG-21 Fighter was developed by the Soviet Union and India being its largest user should focus on its limited uses.
- ◎ **BACKGROUND:**
 - India is the largest operator of MiG-21s. In 1961, the Indian Air Force (IAF) opted to purchase the MiG-21 over several other Western competitors.
 - As part of the deal, the Soviet Union offered India full transfer of technology and rights for local assembly.

- In 1964, the MiG-21 became the first supersonic fighter jet to enter service with the IAF.
- Due to limited induction numbers and lack of pilot training, the IAF MiG-21 played a limited role in the **Indo-Pakistani War of 1965**.
- However, the IAF gained valuable experience while operating the MiG-21 for defensive sorties during the war.
- Since 1963, India has introduced more than **1,200 MiG fighters into its air force**.
- As of 2019, 113 MiG-21s are known to be in operation in the IAF.

What is Mikoyan-Gurevich (MiG-21)?

- The **Mikoyan-Gurevich (MiG-21)** is a **supersonic jet fighter** and **interceptor aircraft**, designed by the Mikoyan-Gurevich Design Bureau in the **Soviet Union**.
- Approximately **60 countries** across four continents have flown the MiG-21, and it still serves many nations six decades after its maiden flight.
- It became the most-produced supersonic jet aircraft in aviation history, the most-produced combat aircraft since the Korean War.

Design Specifications:

- Speed: Mach 2.05 at altitude;
Mach 1.05 at sea level.
- Initial Climb Rate: 58,000 ft/
min.
- Range: 585 nm.
- Service Ceiling: 57,400 ft.
- Wingspan: 23.46 ft.
- Length: 40.29 ft.
- Height: 13.46 ft.



What is the issue with MiG-21 jets?

However, the plane has been **plagued by safety problems**.

- **Lack of Maintenance:** Since 1970 more than 170 Indian pilots and 40 civilians have been killed in MiG-21 accidents. At least 14 MiG-21s have crashed between **2010 and 2013**.
- Poor maintenance and quality of replacement parts has been considered to be a factor in this phenomenon
- **Design issues:** When in afterburner, the engine operates very close to its surge line and the ingestion of even a small bird can lead to an engine surge/seizure and flame out.

Section: D
(QUICK BYTES)

CURRENT AFFAIRS

AZAADISAT, BUILT BY 750 GIRL STUDENTS

- ◎ **CONTEXT:** Built by 750 girl students of 75 schools across India, "AzaadiSAT" is all set for launch early next month onboard the maiden flight of ISRO's Small Satellite Launch Vehicle (SSLV).
- ◎ **ABOUT:**
- AZAADISAT is a satellite mission with the ambitious vision to encourage Government school children (from economically weak backgrounds) with the basic understanding and knowledge of space and tutor them to build a small experiment and launch it to the edge of space through a "Balloon Satellite" or through an "Orbital Satellite".
 - The satellite has **75 Femto experiments, selfie cameras** to click pictures of its own solar panels and long-range communication transponders.
 - **Weight:** 8 kg
 - **Mission life:** six months
 - This is the **first of its kind space mission** with an **all-women concept** to promote women in STEM (science, technology, engineering and mathematics) as this year's **UN theme is 'Women in Space'**.
 - The primary payload of the first demonstration flight of SSLV is an earth observation satellite MicroSat 2A.

STEM Education

STEM education is a modern day approach, designed to initiate revolution in the field of education.

It holds a lot of significance in today's world as it enables the students to learn in a systematic and logical manner, be future ready.

Significance

- The significance of this project is that it has been conceptualized **to pay tribute to mark the 75th anniversary of Independence - Azaadi Ka Amrit Mahotsav**.
- The project is part of the Azadi Ka Amrit Mahotsav celebrations, to mark the 75th anniversary of Independence.

Small Satellite Launch Vehicle (SSLV) is a **3 stage Launch Vehicle** configured with three Solid Propulsion Stages and liquid propulsion based **Velocity Trimming Module (VTM)** as a terminal stage.

JOINT EXERCISE "EX VINBAX 2022" & "MILITARY EXERCISE AL NAJAH -IV"

- ◎ **CONTEXT** In its bid to bolster military ties, Indian Army soldiers are scheduled to hold exercises with the Army personnel of Oman and Vietnam, the two countries which are strategically significant for India.
- The 3rd Edition of Vietnam India Bilateral Army Exercise "Ex VINBAX 2022" is scheduled to be conducted at Chandimandir.

- Indo-Oman joint military exercise (**Military Exercise AL NAJAH –IV**) commences in Rajasthan.

Ex VINBAX 2022:

- Ex VINBAX is Bilateral Army Exercise between **India and Vietnam**.
- The third edition will be conducted **Chandimandir, Haryana**.
- Vietnam is also an important partner in **Act East policy** of India as well as **Indo-Pacific vision**.
- Last edition was conducted **in 2019**
- **Theme:** Ex VINBAX 2022 will be held under the theme- “employment and deployment of an Engineer Company and a Medical Team under United Nations Contingent for Peacekeeping Operations”.
- The exercise will **strengthen mutual confidence**, inter-operability and enable sharing of best practices between the Indian Army and Vietnam People’s Army.
- The joint exercise will also provide an **opportunity to the troops of both the Contingents to learn about the social and cultural heritage of each other**.
- Indian Army is being represented by troops from the **105 Engineer Regiment**.

Military Exercise AL NAJAH –IV:

- The AL NAJAH-IV exercise is a joint military exercise between the Armies of **India and Oman**
- The Indian Army is represented by troops from **the 18 Mechanised Infantry Battalion**.
 - From the Oman side, **the Sultan of Oman Parachute Regiment** will participate in the AL NAJAH-IV exercise.
- The joint exercise would focus on **Counter Terrorism Operations**, **Regional Security Operations** and **Peace Keeping Operations** under United Nations charter apart from organising joint physical training schedules, tactical drills, techniques and procedures.
- Joint military exercise aims to enhance the level of **defence co-operation** between Indian Army and Royal Army of Oman and will further **manifest in enhancing the bilateral relations between the two nations**.

IAF TO TAKE PART IN ‘PITCH BLACK’ IN AUSTRALIA

◎ **CONTEXT:** India to be part of 17-nation ‘Pitch Black’ exercise in Australia.

Exercise Pitch Black

- Exercise Pitch Black is a **biennial** three-week multilateral air combat training exercise hosted by the **Royal Australian Air Force (RAAF)**.
- Its last edition was held in 2018.
- It was conducted for the first time in 1981 between different RAAF units.
- It ensures that the training and integration of forces that occur during this exercise directly supports the Air Force’s ability to conduct operations.
- This year’s participants include Australia, Canada, India, France, Germany, Indonesia, Japan, Malaysia, the Netherlands, New Zealand, the Philippines, the Republic of Korea, Singapore, Thailand, the UAE, the UK and the US.

- The Australian Navy was part of the **Malabar naval exercise** hosted by India in November 2020 as well as last year.

Important multilateral air combat exercise

- Red Flag exercise (United States)
- Blue Flag air combat drill (Israel)

Section: E
(MISCELLANEOUS)

CURRENT AFFAIRS

PM INAUGURATES 44TH CLASS CHESS OLYMPIAD

◎ **CONTEXT:** Marking the significance of 75 years of Independence, Prime minister inaugurated the most prestigious tournament in chess which had for the first time come to India.

About the event

Fact check

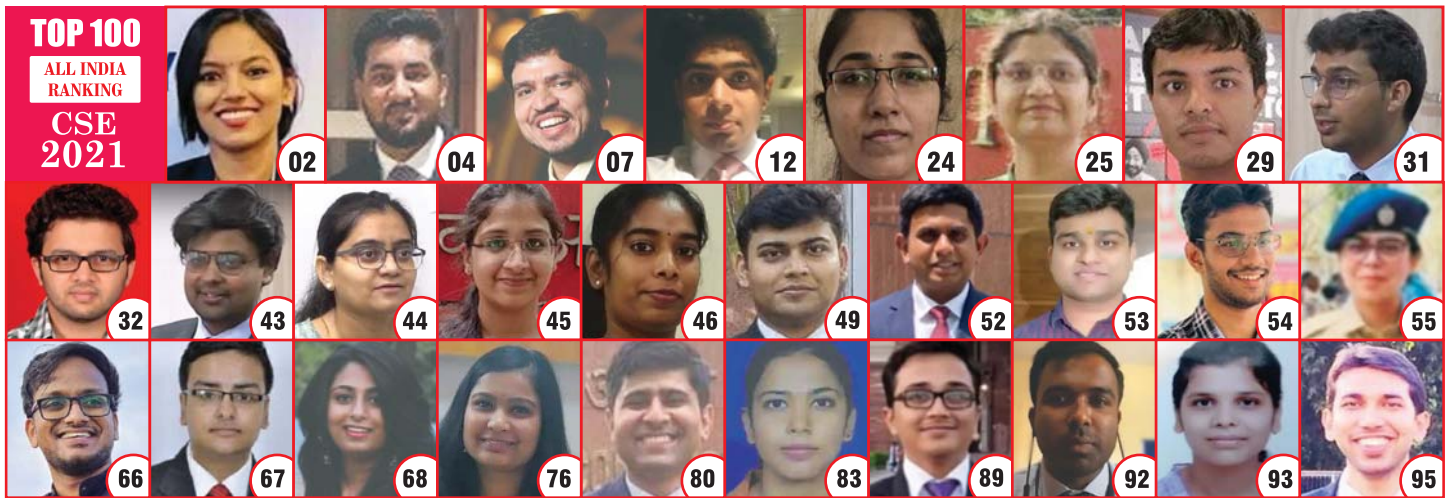
Chess first appeared in India about the **6th century AD** and by the 10th century had spread from **Asia to the Middle East and Europe**.

- The 44th Chess Olympiad (also known as the Chennai Chess Olympiad), organised by the Fédération Internationale des Échecs (FIDE).
- The world's biggest team chess championship, featuring players from **187 countries**.
- **Location: Mamallapuram.**
- **Duration:** July 29 to August 10.
- Over 20,000 players are participating in the Olympiad.
- It consists of open and women's tournaments, as well as several events designed to promote the game of chess.

Key Points

- **Teams** - 188 (Open) and 162 (Women)
- **Nations** - 186 (Open) and 160 (Women)
- **Venue-** Jawaharlal Nehru Stadium (opening and closing ceremonies)
- **Previous Event** - Batumi 2018
- **Next Event** - Budapest 2024





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