CURRENT AFFAIRS WEEKLY

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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.

CURRENT AFFAIRS WEEKLY

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SECTION: A
(MAINS)

CURRENT AFFAIRS

THE CRITERION FOR SC STATUS

CONTEXT:

Recently, the Supreme Court of India has sought the petitions challenging the Constitution (Scheduled Castes) Order of 1950, which allows only members of Hindu, Sikh and Buddhist religions to be recognised as SCs excluding Dalit Christians and Muslims form its ambit.

⊙ BACKGROUND

- **The Constitution (Scheduled Castes) Order of 1950** initially provided for recognising **only Hindus** as SCs, to address the social disability arising out of the '**practice of untouchability'.**

- On the recommendations of **Kaka Kalelkar Commission 1955**; the Order was amended in 1956 to include Dalits who had **converted to 'Sikhism'** and once more in 1990 to include Dalits who had **converted to 'Buddhism'.**

- The Union government in 2019 rejected the possibility of including Dalit Christians as members of SCs, rooting the exclusion on an **Imperial Order of 1936** of the then colonial government, which had first classified a list of the Depressed Classes and specifically excluded **"Indian Christians**" from it.

> **Scheduled Castes (SC)**
>
> - Scheduled castes are sub-communities within the framework of the Hindu caste system who have historically faced deprivation, oppression, and extreme social isolation in India on account of their perceived 'low status'.
>
> - Only marginalised Hindu communities can be deemed Scheduled Castes in India, according to **The Constitution (Scheduled Castes) Order, 1950.**

Why Dalit Christians were excluded under 'Scheduled Caste' status?

- **Opinion of RGI**: In 2001, when the Registrar General of India (RGI) opined against including Dalit Christians and Muslims as SCs, it referred to its **1978 note** and added that like Dalit Buddhists, Dalits who converted to **Islam or Christianity** belonged to different sets of caste groups and not just one, as a result of which they cannot be categorised as **a "single ethnic group**".

- **Constitutional Clauses**: For including Dalits of Christian and Muslims community, requires to amend by **Clause (2)** of **Article 341** of the constitution.

> **Article 341 of the constitution:**
>
> - The Scheduled Castes;
>   - ➤ **Clause (1)** The President may with respect to any State or Union territory, and where it is a State after consultation with the Governor thereof, by public notification, specify the castes, races or tribes or parts of or groups within castes, races or tribes which shall for the purposes of this Constitution be deemed to be Scheduled Castes in relation to that State or Union territory, as the case may be
>   - ➤ **Clause (2)** Parliament may by law include in or exclude from the list of Scheduled Castes specified in a notification issued under clause (1) any caste, race or tribe or part of or group within any caste, race or tribe, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

- **Less marginalised as compared to Hindu SCs**: It was noted that **Christians and Muslims of Dalit** origin had lost their caste identity by way of their conversion and that in their new religious community, the practice of untouchability is not prevalent.

Arguments in support of inclusion of Dalit Muslims and Christians

- First Backward Classes Commission's report in 1953, The HPP report on SCs, STs, and Minorities in 1983 and several other committees have mentioned the issue.

◉ The reports argued that caste-based discrimination continues even after conversion, hence entitling these communities to SC status.

Attempts made for their inclusion

◉ On March, 1996, based on a recommendation of the then **Ministry of Welfare**, the P. V. **Narsimha Rao government** first brought a Bill to amend the **Constitution (Scheduled Castes) Order.**

◉ The **Atal Bihar Vajpayee government had in 2000** repeatedly sought the opinion of the Office of the RGI and the then National Commission for Scheduled Castes and Scheduled Tribes on whether Dalit Christians could be included.

◉ However, the attempts have remained stagnant over years.

INTERNAL DEMOCRACY IN POLITICAL PARTIES

CONTEXT:

In Indian democracy, one of the big conundrums that agitate its citizens is the lack of internal democracy in all political parties. The same can be observed in the recent uproar over the leadership crisis in Congress.

Internal democracy in political parties:

◉ It is also known as **intra-party democracy**, which refers to the level and methods of including party members in the decision-making and deliberation within the party structure.

◉ Intra-party democracy is usually known to nurture citizens' political competencies and/or produce more capable representatives which in turn ensure that the party produces better policies and political programmes.

What are the factors that hinder inner-party democracy?

◉ **Nepotism in Politics**: The lack of intra-party democracy has also contributed to the growing nepotism in political parties. With senior party leaders fielding their kins in elections, the succession plans for "family" constituencies are being put in place.

◉ **Absence of a credible regulatory framework:** The only governing law is provided by **Section 29A** of the Representation of the Peoples' Act, 1951 which provides for the registration of political parties with the ECI.

  ➤ ECI does not have any statutory power to enforce internal democracy in parties or to mandate elections.

◉ **Personality cult**: There is a tendency for hero worship in people and many times a leader takes over the party and builds his own coterie, ending all forms of intra-party democracy.

◉ **Easy to Subvert Internal Elections**: The ability of existing repositories of power to subvert internal institutional processes to consolidate power and maintain the status quo is unquestionable.

◉ **Centralized Structure of Political Parties**: The centralized mode of functioning of the political parties and the stringent anti-defection law of 1985 deters party legislators from voting in the national and state legislatures according to their individual preferences.

◉ **Institutional weakness**

◉ **an asymmetric political landscape**

Need for Internal Party Democracy:

◉ **Representation:** The absence of intra-party democracy has contributed to political parties becoming closed autocratic structures. This adversely impacts the constitutional rights of all citizens to an equal political opportunity to participate in politics and contest elections.

◉ **Transparency**: A transparent party structure with transparent processes will allow proper ticket distribution and candidate selection. The selection would not be based on the whims of a few powerful leaders in the party but will represent the choice of the larger party.

◉ **Accountability**: A democratic party will be accountable to its party members, for they will lose elections in the next cycle for their shortcomings.

- **Decentralizing Power**: Every political party has State and local body units, an election at each level will allow the creation of power centers at different levels. This will allow decentralization of power and the decision-making will take place at the ground level.

- **Criminalization of Politics:** As there is no well-defined process for the distribution of tickets to candidates before elections, tickets are given to candidates on the vague concept of winnability. This has led to an additional problem of candidates with criminal backgrounds contesting elections.

Can Election Commission of India interrupt?

- In the landmark judgment in *Indian National Congress (I) vs Institute of Social Welfare*, the Supreme Court had reiterated that the ECI cannot take punitive action against registered parties for violating the principles of inner-party democracy.

The directives of the Election Commission on Internal Democracy

- **Representation of the People Act, 1951:**
  - The ECI has periodically used guidelines issued for the registration of parties under Section 29A of the Representation of the People Act, 1951 to remind parties to conduct elections and to ensure that their leadership is renewed, changed, or re-elected every five years.
  - The EC's guidelines for parties applying for registration under the Act state that the applicant should submit a copy of the party constitution.

- **Power of De-registration of Political Parties:**
  - The commission has asked the Law Ministry for the power to deregister political parties in the past, but the proposal has not been implemented so far.

- **No Permanent President for a Party:**
  - The Election Commission of India (ECI) has also recently rejected the idea of a 'permanent president' for a party.
  - The ECI says such a step is inherently anti-democratic.

Global scenario

Political parties in developed nations maintain high levels of internal democracy.

- **In the U.K.,** the Conservative Party has the National Conservative Convention as its top body. It has a Central Council and an Executive Committee. The Central Council elects its President, a chairman, and Vice Chairmen at its annual meeting. It also elects an Executive Committee which meets once a month.

- In the U.S., both the Democratic and the Republican Party have the National Committee as their top decision-making body. The National Committee plays an important role in the presidential election and agenda setting.

The German model of constitutionalizing political parties:
- The Basic Law of the Federal Republic of Germany (1949) gives constitutional status to political parties.
- **Article 21** of the Basic Law deals with their status, rights, duties, and functions. It provides:
  - Their internal organization must conform to democratic principles.
  - The Federal Constitutional Court shall rule on the question of unconstitutionality
- **The German model of constitutionalizing political parties is more desirable for India.**
- Section 29A (5) of the Representation of the People Act, 1951 is the only major statutory provision dealing with political parties in India.

BAN ON PFI

CONTEXT:

The Popular Front of India and its affiliates has been banned for five years under the Unlawful Activities (Prevention) Act 1967 for having terror links.

Popular Front of India:

- The PFI was created in 2007 through the merger of three Muslim organizations in southern India namely the National Democratic Front in Kerala, the Karnataka Forum for Dignity, and the Manitha Neethi Pasarai in Tamil Nadu.
- The formation of the PFI was formally announced at a rally in Bengaluru during what was called the **"Empower India Conference"**.

About the Ban:

- The Ministry of Home Affairs declared the PFI an "**unlawful association**" along with its associates which include:
- Rehab India Foundation (RIF), Campus Front of India (CFI), All India Imams Council (AIIC), National Confederation of Human Rights Organisation (NCHRO), National Women's Front, Junior Front, Empower India Foundation, and Rehab Foundation, Kerala".

> **"Unlawful Association"**
> - According to **section 2(1)(p) of the UAPA,** it is an association that has for its object any unlawful activity or offense defined under Sections 153A or 153B of the Indian Penal Code.
> - It may amount to, **promoting enmity** between different groups and **making imputations**, **assertions** that are prejudicial to national integration.

Reason for the Ban:

- It has been found that the PFI has linkages with **Jamaat-ul-Mujahideen Bangladesh (JMB),** both of which are proscribed organizations.
- There has also been a number of instances of international linkages of PFI with Global Terrorist Groups like the Islamic State of Iraq and Syria (ISIS).
- They have been pursuing a secret agenda to radicalize a particular section of society working towards undermining the concept of democracy.

About Unlawful Activities (Prevention) Act:

- Originally enacted in 1967, the UAPA was amended to be modelled as an anti-terror law in 2004 and 2008.
- In August 2019, Parliament cleared the Unlawful Activities (Prevention), Amendment Bill, 2019 to designate individuals as terrorists on certain grounds provided in the Act.
- In order to deal with terrorism crimes, it deviates from ordinary legal procedures and creates an exceptional regime where constitutional safeguards of the accused are curtailed.

Consequences of being declared unlawful

- The consequences of being declared unlawful include criminalization of its membership and the forfeiture of the properties of the organization.
- Under **Section 7 of the UAPA**, the government has the power to prohibit the use of funds of an unlawful association and,
- Under **Section 8**, all places that are used by unlawful association can be notified and seized.

- There is a provision of punishment up to 2 years fine and a fine if a person is and continues to be a member of such (unlawful) associations.

About UAPA Tribunal:

- The **tribunal consists of only one person**, who has to be a High Court judge.
- The UAPA provides for a tribunal under a High Court judge to be constituted by the government for its bans to have long-term legal sanctity.
- **Section 3 of the UAPA Act**: The government has powers to declare an association "unlawful".
- Such notification issued by the government shall have no effect until the tribunal has, by an order made under **Section 4,** confirmed the declaration made therein and the order is published in the Official Gazette".
- A government order would not come into effect until the tribunal has confirmed it.
- In exceptional circumstances, the notification can come into effect immediately once the reasons for it are recorded in writing. The tribunal can endorse or reject it.

Process to declare an Association unlawful:

- The government is mandated to send the notification to the Unlawful Activities Prevention Tribunal within 30 days of issuing the gazette notification to have the ban ratified.
- Later the Tribunal by issuing a written notice calls upon the association to show cause within 30 days.
- After arguments from both sides, the Tribunal can hold an inquiry to decide within six months whether there is sufficient evidence to declare PFI an "unlawful association".

Powers:

- The tribunal can regulate its own procedure, including the place at which it holds its sittings.
- It can hold hearings in different states for allegations pertaining to those states.
- To make inquiries, the tribunal has the same powers as vested in a civil court under the Code of Civil Procedure, 1908.

MGNREGS TO FUND WORK TO REVERSE DESERTIFICATION OF LAND ACROSS STATES

CONTEXT:

The government is planning to bring convergence between the MGNREGS and the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) to restore degraded land.

The plan

- The Union government wants the States to undertake activities focused on restoring degraded land and reversing desertification using MGNREGS funds.
- The funds will go towards both material and wage components.
- The employment scheme will work in tandem with the Pradhan Mantri Krishi Sinchayee Yojana to help take up treatment of about 30% more land than feasible with the current scheme size.

Activities that can be undertaken:

- Ridge area treatment
- Drainage line treatment
- Soil and moisture conservation
- Rainwater harvesting
- Nursery raising
- Afforestation
- Horticulture
- Pasture development

Need for Convergence of the two schemes:

- **Unaccomplished targets:** In line with its commitment to **UN Convention to Combat Desertification (COP14**), the government 2019 has raised its target of restoration of degraded land from 21 million hectares to 26 million hectares by 2030. After three years the government is nowhere near this target.

◉ **Pandemic:** The constraints posed to the economy by the pandemic restricted the target to 4.95 million hectares by 2025-26.

◉ **Limited funds** to deal with the gargantuan task of restoring degraded land and reversing desertification poses a challenge.

Therefore, there is a **compelling reason for the Ministry** to explore **alternative opportunities to fulfill the commitment and address other challenges.**

Benefits of convergence of schemes

◉ **Enhanced effectiveness:** Convergence of schemes help to complement each another, while enhancing growth and development outcomes.

◉ **Better planning:** Resource convergence establishes a synergy between government, NGOs, the private sector and beneficiaries. It leads to better planning and effective investments in rural areas.

◉ **Increase in Social Capital:** Collective planning and implementation among different stakeholders will enhance social capital. This will improve management and work output.

◉ **Increase in Physical Capital:** The process will help in creating durable assets and will also improve land productivity. With convergence, two plus two will equal six, not four.

◉ **Facilitation of Ecological Synergies:** Natural resource base regeneration through different Activities such as afforestation, drought proofing, flood proofing, and watershed will lead to effective use of Resources.

◉ **Enhancing Economic Opportunities**: Income opportunities, savings and investments may be generated through activities such as pisciculture.

◉ **Strengthening Democratic Processes**: Convergence awareness and planning at the grassroot level will lead to greater ownership of projects.

Understanding the terms

	Land Degradation	Desertification
Meaning	Deterioration or loss of the productive capacity of the soils for present and future.	Land degradation within dry land regions (arid, semi-arid, and dry sub-humid regions)
Caused by	Extreme weather conditions, particularly drought, human activities that pollute or degrade the quality of soils and land utility	Deforestation, wetland drainage, overgrazing, unsustainable land-use practices, and the expansion of agricultural, industrial, and urban areas

Scope of the problem in India

◉ According to Desertification and Land Degradation Atlas**, at least 30% of India's total geographical area is under the category of "degraded land".**

◉ Jharkhand, Rajasthan, Delhi, Gujarat, and Goa have more than 50% of the land area undergoing desertification or degradation.

◉ States with less than 10% land degradation are Kerala, Assam, Mizoram, Haryana, Bihar, Uttar Pradesh, Punjab, and Arunachal Pradesh.

Other steps taken by India to combat desertification

◉ **Integrated Watershed Management Programme:** It aims to restore ecological balance by harnessing, conserving, and developing degraded natural resources with the creation of Rural Employment. It is subsumed under Pradhan Mantri Krishi Sinchai Yojana.

◉ **UNCCD:** India became a signatory to the United Nations Convention to Combat Desertification (UNCCD) in 1994 and ratified in 1996.

◉ **National Afforestation Programme:** Implemented since 2000for the afforestation of degraded forest lands.

- ◉ **National Action Programme to Combat Desertification:** It was prepared in 2001 to address issues of increasing desertification and to take appropriate actions.
- ◉ **Fodder and Feed Development Scheme:** Launched in 2010 to improve degraded grassland and also the vegetation cover of problematic soils like saline, acidic and heavy soil.
- ◉ **National Mission on Green India:** It is a part of the National Action Plan on Climate Change (NAPCC). It was approved in 2014 to protect, restore and enhance India's diminishing forest cover with a deadline of 10 years.

THE DRAFT TELECOMMUNICATION BILL, 2022

CONTEXT:

The Ministry of Communications released a draft of the Indian Telecommunication Bill, 2022 for public comments. The draft has purposed various changes to the current telecom regulatory framework.

About the draft Indian Telecommunication Bill, 2022

- ◉ The Bill is an attempt by the government to **update the extant regulatory framework** in keeping with the advancements and challenges in the sector.
- ◉ The Indian Telecommunication Bill looks to repeal the old legislation and "restructure the legal and regulatory framework" for the telecommunications sector.

Need for the change:

- ◉ This was much needed given that the **three main legislations** that occupy this domain are **considerably outdated**, with the most recent of these having been enacted more than 70 years back. These legislations are:
  - ► The Indian Telegraph Act enacted in 1885
  - ► The Indian Wireless Telegraphy Act enacted in 1933
  - ► The Telegraph Wires (Unlawful) Possession Act in 1950

Unhappiness among Telecom Service Providers (TSPs):

- ◉ Telecom Service Providers (TSPs) allege that parallel features provided by OTT communication services have **resulted in a cut in their sources of revenue** (voice calls, SMS).
- ◉ At the same time, they **don't have to deal with infrastructure and licensing costs** that they have to undertake. Therefore, TSPs have been demanding a level playing field with OTT services.

Possible outcomes:

- ◉ **Expands the definition**: The current draft of the Bill expands the definition of "telecommunication services" to include OTT communication services.
- ◉ **License Requirements**: This might bring OTT telecommunication services under the same licensing conditions as TSPs.
  - ► TSPs have to be issued the Unified Access Service License (UASL) for them to be able to provide telecom services in India.
- ◉ **Fulfilling Requirements:** If OTT communication services are required to obtain the same license, they would also be subject to a number of conditions:
  - ► Maintaining 'know your customer details of their users
  - ► Adhering to certain encryption regulations
  - ► Allowing lawful access to the government of their equipment and networks

Consumer protection measures:

- ◉ **Spam calls and frauds:** The draft Bill proposes that the identity of the person communicating using any form of telecommunication services shall be available to the user receiving such communication.

- **User Identification:** The draft Bill obligates license holders to identify the users of its service through a verifiable mode of identification.

- **Penalties:** The draft Bill penalizes providing wrong identification details with a ₹50,000 fine and suspending the operation of the specific mobile number.

Impact on the position of the TRAI:

- **Dilutes the Position:** The current draft considerably dilutes TRAI's position in a number of ways **reducing it from a regulatory to a recommendatory body.**

  ➤ The government would no longer be required to seek recommendations from the TRAI before issuing licenses.

  ➤ It also removes the power of the TRAI to requisition from the government information or documents that are necessary to make such recommendations

  ➤ The **Department of Telecommunications (DoT)** will no longer be required to refer back to TRAI the recommendations for reconsideration. Removal of such powers would not be in keeping with international practice.

Provisions for Internet shutdowns:

- **Power to suspend Internet:** For the first time, a specific provision enabling the government to order a suspension of internet power has been introduced through the draft Bill.

  ➤ Presently, suspension of internet services is ordered under the Temporary Suspension of Telecom Services (Public Emergency and Public Safety) Rules, 2017 that have been made under the Indian Telegraph Act, 1885.

Boost to Telecom service providers:

- **Clarity over Allocation of the spectrum:** It has clearly laid down that, the primary route for allocation of the spectrum is the auction, and mentions the *administrative process that needs to be followed* in cases where the spectrum needs to be allocated for defense or transportation.

- **Utilization of the spectrum to the fullest:** The laid provisions allow the TSPs to exploit the spectrum by enabling sharing, trading, leasing, surrendering, or returning unutilized spectrum.

- Issue of the right of way: It is about the legal framework for setting up telecom towers. It mandates that land owned by a public entity should be available expeditiously unless there is an express ground of refusal.

- The Bill also simplifies the process for restructuring, merging, or demerging.

- **Broadening the scope of "Universal Service Obligation Fund":** The said fund is to be utilized for other purposes such as urban areas connectivity, research, etc., thereby expanding its *current mandate* from the limited aspect of enhancing rural connectivity.

◉ CONCLUSION:

The Draft Telecommunication Bill 2022 addresses challenges like maintaining a sufficient spectrum and adopting new technologies and techniques to serve customers with better and feature-rich service. The draft Bill appears to be open for discussion which is an indication that it will lead to a comprehensive policy framework.

GLOBAL INNOVATION INDEX, 2022

CONTEXT:

The World Intellectual Property Organization (WIPO) recently released the Global Innovation Index (GII) 2022 in which Switzerland has emerged as the world's most innovative economy for the 12th consecutive year.

⊙ ABOUT

Key highlights of Global Innovation Index (GII) 2022:

- Moving into **its 15th edition in 2022**, the Global Innovation Index has been a leading reference for measuring an economy's innovation performance.

- A large number of countries use the GII to assess and improve their innovation ecosystems and use the GII as a reference in economic plans and/or policies.

- **India secured the 40th position** in the Global Innovation Index. Last year, India was at the **46th** position.

- The index shows that emerging economies including, **India and Turkey**, are showing consistently strong performance.

- This edition's thematic focus on the future of innovation-driven growth provides a stance on whether stagnation and low productivity growth are here to stay, or whether we are about to enter a new era, where new innovation spurts - the Digital Age and the Deep Science Innovation waves - bring about an economic uplift.

- **Switzerland** is the most innovative economy in the world in 2022 - for the 12th year in a row - followed by the United States, Sweden, the United Kingdom and the Netherlands.

- **China** is nearing the top 10 while Turkey and India enter the **top 40** for the first time.

About Global Innovation Index (GII):

- The Global Innovation Index (GII) is an annual ranking of countries by their capacity for, and success in innovation.

- It is published by **Cornell University**, INSEAD, and the World Intellectual Property Organization, in partnership with other organisations and institutions, and is based on both subjective and objective data derived from several sources, including the International Telecommunication Union, the World Bank and the World Economic Forum.

- **The overall GII score** is the simple average of the **Input** and **Output** Sub-Index scores.

- **The Innovation Input Sub- Index** is comprised of five input pillars that capture elements of the national economy that enable innovative activities:

  ▶ Institutions, Human capital and research, Infrastructure, Market sophistication, and Business sophistication.

- The Innovation Output Sub- Index provides information about outputs that are the results of innovative activities within the economy. There are two output pillars:

  ▶ Knowledge and technology outputs and Creative outputs.

⊙ ANALYSIS

What is the realistic potential of India's Innovation ecosystem?

- The Indian innovation system is very multifaceted in terms of user segments and income gaps. However, central government is trying to boost innovation in the country through several schemes.

- Innovation in India is being planned around the triangle of collaboration, facilitation and responsible regulation. It is advanced by cross-disciplinary collaboration.

- India is the **fastest growing country** in terms of Internet usage, with over 700 million users and the number projected to rise to 974 million by 2025.
- The JAM (Jan Dhan, Aadhaar, and Mobile) trinity has 404 million Jan Dhan bank accounts with 1.2 billion Aadhaar and 1.2 billion mobile subscribers.

Recent Initiatives of Government of India to boost innovation

- **Vaishvik Bharatiya Vaigyanik (VAIBHAV) summit**: Numerous overseas Indian-origin academicians and Indians participated to form ideas on innovative solutions to several challenges.
- **Responsible AI for Social Empowerment (RAISE) 2020 summit**: It grants a course to efficiently use AI for social empowerment, inclusion, and transformation in key sectors such as health care, agriculture, finance, education and smart mobility.
- **Smart India Hackathons (SIH)**: To provide students a platform to solve some of pressing problems of society.
- **Atal Innovation Mission (AIM)**: To promote innovation and entrepreneurship across India.
- **Biotechnology Ignition Grant (BIG) scheme:** Largest early stage biotech funding programme in India. Aims to encourage researchers to take bio-technology closer to market through a start-up.

What are the steps to be taken further?

- **Increase R&D spending**: Government should frame a policy with the aim of increasing total GERD (Gross domestic expenditure on R&D) to 2% of India's GDP.
- **Global partnerships in innovation**: Global innovation partnerships need to be strengthened by enhancing public-private partnership mechanisms and increased public funds should be earmarked for joint industrial R&D projects.
- **Idea-to-market challenge**: Government needs to create a special fund to help Indian innovations to advance their start-ups during difficult times.

MUSHROOMING COMMUNITY RESERVES IN NORTH-EAST AND THE 'CONCERN'

CONTEXT:

The increasing growth of 'community reserves' in the north-east poses various challenges to the local residents (lack of livelihood options), as the land goes from being governed by local village councils to coming under the forest department.

⊙ BACKGROUND

- India's North East has seen a mushrooming of '**community reserves**' in the last 11 years.
- A community reserve is usually formed by the local village council and the forest department signing a memorandum of understanding (MoU).
- Provisions of the Wild Life (Protection) Act apply to an area once it becomes a community reserve.

What are Community Reserves?

- The **Ministry of Environment, Forests and Climate Change (MoEFCC)** defines conservation reserves and community reserves as "protected areas of India which typically act as buffer zones to or connectors and migration corridors between established national parks, wildlife sanctuaries and reserved and protected forests of India."
- The State Government may designate any community land or private land as a Community Reserve if the members of that community or individuals involved agree to offer such areas for the protection of **fauna and flora**, as well as their **traditions, cultures, and practices**.

◉ The designation of such an area aims to improve the socio-economic conditions of the people who live in such areas while also conserving wildlife.

Why declaring community reserve is a matter of concern in Northeast?

◉ The village council members who agree to sign the MoU are **mostly illiterate** and do not understand the finer details.

◉ Most of the **community members are not aware** of this policy in its entirety.

◉ Communities were **unaware that provisions of the Indian Wildlife Protection Act become functional in an area** once it became a community reserve.

◉ **After a forest has been made into a community reserve, people cannot hunt there, nor can they use it for agricultural practices, or engage in jhum cultivation.**

◉ It is also unclear whether traditional owners of community forests qualify for compensation in such a case as they do not necessarily have the claim papers.

Provisions related to Conservation:

◉ **Community reserves fall under protected areas**, along with marine protected areas, national parks, wildlife sanctuaries, and conservation reserves, according to the **Wild Life (Protection) Act (WLPA), 1972.**

◉ Conservation reserves and community reserves are protected areas of India that typically act as **buffer zones** between established national parks, wildlife sanctuaries, and reserved and protected forests of India, according to the Union Ministry of Environment, Forests and Climate change (MoEFCC).

◉ A **Community Reserve Management Committee** oversees the Reserve.

◉ Where a community or an individual has volunteered to conserve wildlife and its habitat, the State Government may declare the area as **community land by notification.**

◉ There shall be **no change in land use pattern** within the Community Reserve unless authorized by a resolution passed by the Management Committee and approved by the State Government.

Dilemma with Legal provisions for 'Forest lands':

Due to the lack of clarity with declaration of area as a community reserves, the following dilemmas can be seen:

◉ **CFR under FRA**: The Act allows for a greater role and empowerment of Gram sabhas3 in determining claims, managing forests that they have conserving traditionally, checking processes destructive of forest dwellers' habitats and protecting traditional knowledge.

◉ It also allows for greater livelihood security for traditional forest dwellers that have been unjustly denied tenure, and mandates that the consent of the community is necessary for any displacement and relocation.

◉ However, this Act has an unclear relationship with existing forest and wildlife laws. The institutional arrangements for enforcement of the forest management and conservation provisions of the Act are also not very clear especially in relation to the areas where the forest department has existing jurisdiction.

Benefits of Community reserves

◉ It conserves the species and its habitat

◉ Useful in conserving large populations of a species

◉ It is a less disruptive method of conservation

◉ It is a cost-efficient conservation method

Challenges associated

◉ Occurrence in marginal habitats

◉ General distribution pattern (widespread, dis junct populations, narrow localised species, meta populations) –which will affect the genetic architecture and the amount of variation

◉ Lack of regular survey in in-situ conservation

◉ Only Priority species are focused

◉ WAY FORWARD

- **Promoting Eco Restoration**: Afforestation and reforestation of degraded forest, regeneration of lost habitats, reducing climate change impacts by promoting carbon footprints and through education, is needed.

- **Need of Awareness:** Conservation techniques, awareness about overexploitation of resources and its adverse impacts should be propagated among masses.

- **Collaboration on Different Levels**: Government, civil societies and stakeholders are largely required to collaborate with each other to balance sustainable development with development.

5G TECHNOLOGY LAUNCHED IN ITS FULL PACE IN INDIA

CONTEXT:

The Fifth Generation or 5G telecom services are set to be rolled out in selected cities in India in 2022.

◉ BACKGROUND

- In 2018, India had planned to start 5G services, on par with the global players, as soon as possible, with an aim to capitalize on the better network speeds and strength that the technology promised.

- However, the lack of flow of cash and adequate capital remained hurdles in the way.

◉ ABOUT

What is fifth-generation network?

- The fifth-generation is the latest upgrade in the **long-term evolution (LTE)** mobile broadband networks.

- **The revolutionary features of 5G are:**
  - ➤ Ultra-low latency
  - ➤ Super bandwidth per unit area
  - ➤ Reliable connectivity
  - ➤ Up to 100 per cent coverage
  - ➤ Capacity to connect more devices per unit

- While 4G was a great leap forward, allowing people to stream music and video on the go, 5G is designed to connect many more types of devices than smartphones and offers far higher speed and capacity.

- 5G mainly works in **3 bands**, namely **low, mid and high** frequency spectrum — all of which have their own uses as well as limitations.

The evolution of 5G:

The previous generations of mobile networks are 1G, 2G, 3G, and 4G.

- **First generation** - 1G
  - ➤ 1980s: 1G delivered analog voice.
- **Second generation** - 2G
  - ➤ Early 1990s: 2G introduced digital voice (e.g. CDMA- Code Division Multiple Access).
- **Third generation** - 3G
  - ➤ Early 2000s: 3G brought mobile data (e.g. CDMA2000)
- **Fourth generation** - 4G LTE
  - ➤ **2010s:** 4G LTE ushered in the era of mobile broadband.

Significance of the Initiative:

◉ **Enhanced Mobile Broadband**: In addition to making our smartphones better, 5G mobile technology can usher in new immersive experiences such as Virtual reality (VR) and Augmented Reality (AR) with faster, more uniform data rates, lower latency, and lower cost-per-bit.

◉ **Mission-Critical Communications**: 5G can enable new services that can transform industries with ultra-reliable, available, low-latency links like remote control of critical infrastructure, vehicles, and medical procedures.

◉ **Massive Internet of Things**: 5G is meant to seamlessly connect a massive number of embedded sensors in virtually everything through the ability to scale down in data rates, power, and mobility—providing extremely lean and low-cost connectivity solutions.

◉ ANALYSIS

What are the benefits of 5G?

◉ **Faster connectivity:** 5G is poised to transform human life by giving faster download speeds and connectivity for billions of devices.

◉ **Socio-economic multiplier:** 5G will serve as a socio-economic multiplier for the Indian economy.

◉ **Improving tech system of industries:** In the future, the technology will significantly impact industries such as the focus on safer transportation, banking systems, traffic control, remote healthcare, agriculture, digitized logistics and more.

◉ **Strengthened healthcare system:** Beyond ultra-fast internet connectivity, 5G will support the Internet of Medical Things, enhanced mobile broadband and mission-critical services to significantly strengthen healthcare experiences.

◉ **Support to new-age technologies:** This ecosystem will support new-age technologies like Artificial Intelligence (AI), Augmented Reality (AR), Virtual Reality (VR), and the Internet of Things (IoT).

What are disadvantage of immediate adoption of 5G technology?

◉ **Immediate Obsolescence:** The transition to the 5G network will require devices that can support it; current 4G devices do not have this capability and will become immediately obsolete.

◉ **Insufficient Infrastructure**: For the 5G network to function properly will require a whole ambitious investment in infrastructure to increase bandwidth and expand coverage, and this is not cheap.

◉ **Risks in security and proper data handling**: All of this requires optimal data management, and this is where the most conflictive part of the advantages versus disadvantages lies.

What are the bottlenecks?

◉ **Obsolete technology:** The fact that unlike in the US and China, where most towers are backhauled using fibre, more than 75% of the towers in India still employ legacy microwave transmission systems.

◉ **Low fibre footprint:** Its rollout will be slower in rural areas due to massive fibre requirements, rendering it uneconomical for relatively low data demand in those areas.

◉ **Restricted range:** Since 5G works in high-frequency bands (also called millimetre waves), its range is restricted. That necessitates the deployment of dense networks—i.e. more than twice the number of towers needed today.

◉ **Lack of finance:** There are stressed finances of Telecom sector to contend with.

◉ CONCLUSION

5G is a reality that in a short time will touch our lives like previous technologies, and it would be better to look at it now to take advantage of its benefits and avoid its risks.

INDIA'S GEOSPATIAL TECHNOLOGY INDUSTRY SET TO GROW AT 12.8%

CONTEXT

The Union Science Minister has reiterated the projection of the Geospatial "Artha" Report 2021. It projects India's geospatial technology industry to cross Rs 63,100 crores by 2025 at a growth rate of 12.8%.

◉ ABOUT

What is Geospatial technology?

- Geospatial technologies is a term used to describe the range of modern tools contributing to the geographic mapping and analysis of the Earth and human societies.
- It enables to acquire data that is referenced to the earth and use it for analysis, modeling, simulations and visualization.
  - ➤ Geospatial technologies include
  - ➤ Geographic Information System (GIS)/Spatial Analytics
  - ➤ Global Navigation Satellite System (GNSS) & Positioning
  - ➤ Earth Observation
  - ➤ Scanning
- These tools capture spatial information about objects, events, and phenomena (indexed to their geographical location on earth, geotag). The location data may be Static or Dynamic.

India's Geospatial Sector:

- India has a robust ecosystem in geospatial, with the Survey of India (SoI), the Indian Space Research Organisation (ISRO), Remote Sensing Application Centres (RSACs), and the National Informatics Centre (NIC) in particular, and all ministries and departments, in general, using geospatial technology.
- In 2021, the geospatial market was dominated by defense and intelligence (14.05 %), urban development (12.93 %), and utilities (11 %) segments, cumulatively accounting for 37.98% of the total geospatial market.
- In 2021, the Ministry of Science and Technology released new guidelines for the Geo-Spatial Sector in India, which deregulates existing protocols and liberalizes the sector into a more competitive field.
- Last year, in the **Geospatial "Artha" Report,** it was highlighted that India's geospatial economy is currently valued at Rs 38,972 crore and has the potential to grow to Rs 63,100 crore at 12.8 per cent by 2025.

Liberalization of the Geospatial Sector:

- The Ministry of Science and Technology, in February 2021, released new guidelines for the Geo-Spatial Sector in India, which **deregulated the previous protocol** and **liberalized the sector** to a more competitive field.
- The **policy granted open access to the geospatial data and services**, including maps, for all Indian entities, with the exception of sensitive defense or security-related data.
- **Indian corporations and innovators are no longer subject to restrictions** nor do they require prior approvals before generating or updating digital geospatial data and maps within the territory of India.
- There is also no **requirement for security clearance**, license, or any other restrictions.

Progress so far:

- Rural Development Ministry had **mapped over 45 lakh kilometers of rural road**s by using 21 data layers of a digital map of India.
- This will be helpful to **create digitized information** regarding water bodies, green areas, plots, and other structures essential for administrative purposes.

- **Nearly 2.6 lakh gram panchayat had been covered** by the Ministry under the mapping and digitization scheme.

- **India announced plans to prepare digital maps of all its 6,00,000 villages, and pan-India 3D maps will be prepared for 100 cities. This is in line with the SVAMITVA (**Survey of Villages and Mapping with Improvised Technology in Village Areas) scheme.

Significance of Geospatial Technology

- **Potential Sector:** The sector has the potential to grow to Rs 63,100 crore at 12.8% by the end of 2025 as per the India Geospatial Artha Report 2021.

- **Employment:** Private Companies like Amazon, Zomato, etc. use this technology to smoothly conduct their delivery operations which supports livelihood generation.

- **Implementation of Schemes:** The schemes like the Gati Shakti program can be smoothly implemented using geospatial technology.

- **Make in India**: Focusing on the sector allows Indian companies to develop indigenous apps like an Indian version of google maps.

- **Management of Land records:** Using the technology, the data related to a large number of landholdings can be appropriately tagged and digitized.

- It will not only help better targeting but also reduce the quantum of land disputes in courts.

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Section: B
(SPECIALS)

CURRENT AFFAIRS

SUPREME COURT'S LANDMARK JUDGEMENT ADDRESSING WOMEN BODILY RIGHTS FOR ABORTION

CONTEXT:

In a Judgment, the Supreme Court recently put decision on abortion rights for all adult women in India to have the right to seek a safe abortion through a medical expert till up to 24 weeks of pregnancy.

◉ BACKGROUND

- The **Medical Termination of Pregnancy (MTP) Act, 1971** came into force on 1st of April 1972 and applied to all of India except the state of Jammu and Kashmir.

- Also, **Section 312** of the Indian Penal Code, 1860, criminalises voluntarily "**causing miscarriage**" even when the miscarriage is with the pregnant woman's consent, except when the miscarriage is caused to save the woman's life.

- This means that the woman herself, or anyone else including a medical practitioner, could be prosecuted for an abortion.

> **Medical Termination of Pregnancy (MTP) Act, 1971** act allowed pregnancy termination by a medical practitioner in **two** stages:
>
> - A **single doctor's opinion** was necessary for abortions up to **12 weeks after** conception.
>
> - For pregnancies between **12 to 20 weeks old,** the opinion of **two doctors** was required to determine:
>
>   ➤ If the continuance of the pregnancy would involve a risk to the life of the pregnant woman or of grave injury to her physical or mental health or;
>
>   ➤ If there is a substantial risk that if the child were born, it would suffer from such physical or mental abnormalities as to be seriously "handicapped" before agreeing to terminate the woman's pregnancy.

◉ ABOUT

Key highlights of the Judgement:

There are **five key aspects** of this judgment that need to be shared:

- **Acknowledging the context of criminality**: IPC criminalises accessing and providing an abortion except where there is an **immediate necessity** to save the life of the pregnant woman, and that the MTP Act is an exception to this criminal offence.

- **Removal of 'compulsory' marital status**: The

judgment basically holds that what is accessible and available for a married pregnant woman should be accessible and available to any pregnant woman, and that a classification based on marital status **is fallacious and illegal.**

- **Inclusive of the concept of Marital Rape**: An acknowledgement has put that a pregnancy can be sought to be terminated on the ground of it being as a result of rape by the **husband** of the pregnant woman must be recognised.

- **Confidentiality**: This judgment clarifies that while the need to report mandatorily remains, the identity of the **pregnant person** need not be disclosed in the cases of consensual sexual activity and where the minor and/or her guardian request the medical service provider to maintain confidentiality.

- **Relief to Medical Practitioners:** It recognises the extra-legal requirements that medical practitioners insist upon before providing MTP services, only to safeguard themselves due to the context of criminality and the present law is **non-inclusive** and the terminology used is **exclusionary.**

MTP Amendment Act

- In 2021, Parliament amended the law to allow for abortions based on the advice of one doctor for pregnancies up to **20 weeks**.

- The modified law needs the opinion of **two doctors** for pregnancies between 20 and 24 weeks.

- Further, for pregnancies **between 20 and 24 weeks**, rules specified seven categories of women who would be eligible for seeking termination under **Section 3B** of rules prescribed under the MTP Act;

  ➤ Survivors of sexual assault or rape or incest,

  ➤ Minors,

  ➤ Change of marital status during the on-going pregnancy (widowhood and divorce),

  ➤ Women with physical disabilities (major disability as per criteria laid down under the Rights of Persons with Disabilities Act, 2016)

  ➤ Mentally ill women including mental retardation,

  ➤ The foetal malformation that has a substantial risk of being incompatible with life or if the

child is born it may suffer from such physical or mental abnormalities to be seriously handicapped, and

➤ Women with pregnancy in humanitarian settings or disasters or emergencies may be declared by the Government.

◉ **ANALYSIS**

What was the need of amendment in the existing law?

◎ Access to health services and the right to make a decision about managing the pregnancy or obtaining an abortion has a lot to do with individual rights. This conservative approach of the state has the potential of causing irreversible damage to female health and it can also be seen as an infringement of women's rights.

◎ For Rape survivors and issues like Marital Rape is to be addressed which is many a times resulted in a situation of survivors getting pregnant unwantedly.

What are women's reproductive rights?

Based on the multiple definitions of reproductive rights, it can be said that they include some or all of the following rights:

◎ Right to safe and legal abortion.

◎ Right to control one's reproductive functions.

◎ Right to access in order to make reproductive choices free of coercion, discrimination and violence.

◎ Right to access education about contraception and sexually transmitted diseases and freedom from coerced sterilization and contraception.

◎ Right to protection from gender-based practices such as female genital cutting and male genital mutilation.

Significance:

◎ **Addressing the 'actual' concerns:** This was a judgment keeping the pregnant person at the centre of it despite the law being **provider-centric**, and to read a judgment that beautifully encapsulates all the concerns that exist about the legal regime on **abortion in India.**

◎ **Breaking the stereotype:** The judgment basically reiterates that one cannot make a distinction between women who is pregnant because of rape only on the grounds of her **marital status.**

Arguments in favour of Abortion	Arguments Against abortion
● A female is considered a moral person that is entitled to rights, including the right to life. So, abortion is deemed acceptable as the foetus is not a person. A list of criteria of personhood is identified, which includes consciousness, reasoning, activity, communication and self-awareness. A foetus undeniably is incapable of fulfilling these criteria. ● The mother, who is a person, has a right to life and it supersedes the rights of the foetus to choose whether or not it remains connected to her body. ● Also, pregnancy is assumed to be a foreseeable consequence of heterosexual intercourse, that too when there is no intention to '**have a baby'**. So, denying her the right to abort the child when she was not planning for it is unwarranted. ● **Abortion in self-defence**: It may be ethical for a mother to have an abortion to defend herself from the danger to her mental or physical health than continuing with the pregnancy would cause. Abortion is considered in relation to the '**Doctrine of double effect'**.	● '**Future like ours' argument:** Abortion is wrong because it deprives the foetus of a potential 'future like ours'. ● It suggests that death is a bad thing because it deprives people of all the experiences, enjoyments, opportunities that would make up their future personal life. ● **Moral conduct**: Killing an innocent human being is a moral wrong. Those who are against abortions believe that human life begins at conception, and by drawing the same analogy, the foetus is an innocent human being. ● So, killing the foetus is wrong and abortion is always wrong.

◉ **CONCLUSION**

The decision of whether or not to bear a child is central to a woman's life, to her well-being and dignity. She ought to be the one deciding it for herself. When Government superintends that decision for her, she is being treated as less than a fully adult human accountable for her own choices. We need to bestow much greater support to women who may want to conceive and raise their children, but opting out of it for financial, psychological, health, or relationship reasons Criminalising abortion does not stop abortions, it just makes abortion more unsafe.

Section: C
(PRELIMS)

CURRENT AFFAIRS

TELANGANA SCOOPS SWACHH SURVEKSHAN GRAMIN, 2022 AWARD

⊙ **CONTEXT:** 'Telangana' won the first prize under the Large States category under Swachh Survekshan Gramin (SSG) 2022.

⊙ **BACKGROUND:** **Highlights of the awards:**

- Telangana secured the **second position** while Tamil Nadu was third.
- The top three districts of India are Bhiwani (Haryana), Jagtial (Telangana), and Nizamabad (Telangana) respectively.
- In this award, special focus is being given to accelerating development in rural areas along with uplifting their lifestyle.
- Among the smaller States and Union territories, Andaman and Nicobar secured the first position followed by Dadra and Nagar Haveli, Daman and Diu, and Sikkim.

> **Indore** bagged the title of India's cleanest city for the sixth time in a row as the results of the Central government's annual cleanliness survey '**Swachh Survekshan Awards 2022**' were announced on Saturday. **Madhya Pradesh** secured the first position in the category of best performing states, followed by **Chhattisgarh** and **Maharashtra.**

Swachh Survekshan Gramin-2022 award:

- The Swachh Survekshan Gramin award by the **Jal shakti ministry** ranks states and districts based on their performance attained on key quantitative and qualitative Swachh Bharat Mission Gramin (SBM-G) parameters.
- It also factors in the engagement of the rural community in the improvement of their sanitation status.
- Swachh Bharat Diwas is not a single event but a culmination of several activities/ campaigns for the components of SBM-G phase II. The following activities were conducted as a run-up to the event:
  - ⊚ **Swachhta Hi Sewa (SHS)** – is a fortnightly campaign undertaken by the public offering "shramdaan" for sustaining cleanliness in the country.
  - ⊚ **United India for Swachhata** – is a dedicated week-long intensified campaign for complete cleanliness – 'sampoorna swachhta' in 9 states across the country.

What is Swachh Bharat Mission Grameen (SBM-G)?

- It was launched in 2014 by the **Ministry of Jal Shakti** to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation.
- The mission was implemented as a **nationwide campaign/Jan andolan** which aimed at eliminating open defecation in rural areas.

Swachh Bharat Mission (G) Phase-I:

- The rural sanitation coverage in the country at the time of the launch of SBM (G) on 2nd October 2014 was reported as 38.7%.
- More than 10 crore individual toilets have been constructed since the launch of the mission; as a result, rural areas in all the States have declared themselves ODF as of 2nd October 2019.

SBM (G) Phase-II:

- It emphasizes the sustainability of achievements under phase I and provides adequate facilities for **Solid/Liquid & Plastic Waste Management (SLWM)** in rural India.

- It will be implemented from 2020-21 to 2024-25 in a mission mode with a total outlay of Rs.1, 40,881 crores.

- The SLWM component of ODF Plus will be monitored on the basis of output-outcome indicators for **4 key areas**:

  - Plastic waste management,

  - Biodegradable solid waste management (including animal waste management),

  - Greywater (Household Wastewater) management

  - Faecal sludge management.

What is Open Defecation Free Status?

- **ODF:** An area can be notified or declared as ODF if at any point of the day, not even a single person is found defecating in the open.

- **ODF+**: This status is given if at any point of the day, not a single person is found defecating and/or urinating in the open, and all community and public toilets are functional and well maintained.

- **ODF++:** This status is given if the area is already ODF+ and the fecal sludge/septage and sewage are safely managed and treated, with no discharging or dumping of untreated fecal sludge and sewage into the open drains, water bodies, or areas.

CHANDIGARH TOPPED IN INDIAN SWACHHTA LEAGUE

⊙ **CONTEXT:**   **Chandigarh was adjudged winner along with Navi Mumbai in the 10 lakhs plus population category of the Indian Swachhta League (ISL).**

⊙ **ABOUT:**   **About the 'Indian Swachhta League':**

- The Union Ministry of Housing and Urban Affairs initiated the Swachh Amrit Mahotsav, which started with the **Indian Swachhata League.**

- The Indian Swachhata League is India's first **inter-city** competition led by youth toward building **Garbage Free Cities.**

- Citizens across India were invited to search for their cities on **MyGov** and register to join their city teams in the Swachhata activities that have been planned.
- More than **1,850 teams** have participated in the league.
- **SBM-Urban 2.0** is a maiden edition of the 'Indian Swachhata League' which has mobilized more than **5,00,000 youth**, citizen volunteers, and celebrity icons across the country to join the first ever Indian Swachhata League and to work together towards the mission's goal of making cities clean, green, and garbage-free.

The competition:

- Once the event is completed, every city team will submit an official entry regarding their activities, along with **photos and videos**.
- City teams will be evaluated based on the following criteria:
- Scale of participation
- Innovativeness of the activities
- Impact of the activities

Significance:

- The contests underlined the magnitude of the effort made by the Municipal Corporation and its sanitation workers in ensuring cleanliness, taking the help of youth to increase public awareness on avoiding dumping of garbage, and sending the message of clean water sources.

Related Initiatives

- **Swachh Bharat Abhiyan:** It was announced by Prime Minister of India Narendra Modi on Indian Independence Day & launched on 2 Oct 2014, Gandhi Jayanti.
- **Waste to Wealth Model:** The government has adopted new rules that provide for ways and means to minimize plastic waste generation, adoption of extended producer responsibility for collection of waste and sustainable plastic waste management, recycling and utilization of plastic waste in road construction, energy, and oil generation.

CENTRE EXTENDS FREE RATION SCHEME

⊙ **CONTEXT:**   The Central government recently announced an extension of the Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY) for another three months until December 2022.

⊙ **ABOUT:**   **About PMGK Anna Yojana**

- The Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) is a free food grain scheme introduced in March 2020.
- **Objective:** To alleviate COVID distress.
- The scheme is part of **Atmanirbhar Bharat** to supply free food grains to **migrants and the poor**.
- **Different Phases**:
  - **Phase-I and Phase-II** of this scheme were operational from April to June 2020 and July to November 2020 respectively.
  - **Phase III** of the scheme was operational from May to June 2021.
  - **Phase-IV** of the scheme during July-November, 2021 and

⊙ **Phase V** from December 2021 till March 2022.

⊙ **Phase VI** from April-September, 2022.

● The financial implication for the Central government has been about Rs. 3.45 Lakh Crore up to Phase-VI of PMGKAY.

⊙ The PMGKAY scheme for **Phase VII** from September to December 2022 would entail an estimated additional food subsidy of 44,762 Crore.

● The total outgo in terms of food grains for PMGKAY Phase VII is likely to be about 122 LMT.

■ **Benefits allocated:**

⊙ PMGKAY beneficiaries get a **5kg** free ration per person per month in addition to their normal quota of food grains under the **National Food Security Act.**

⊙ Under NFSA, highly subsidized food grains are provided to about 75% rural and 50% urban population of the country.

■ **Eligibility:**

⊙ Families belonging to the **Below Poverty Line** - Antyodaya Anna Yojana (AAY) and Priority Households (PHH) categories will be eligible for the scheme.

⊙ AAY families are to be identified by States/UTs as per the criteria prescribed by the **Central Government.**

⊙ Households headed by widows or terminally ill persons or disabled persons or persons aged 60 years or more with no assured means of subsistence or societal support.

⊙ All **primitive tribal**

⊙ Landless agriculture labourers, marginal farmers, rural artisans/craftsmen such as potters, tanners, weavers, blacksmiths, carpenters, slum dwellers, and persons earning their livelihood on daily basis in the informal sector are included under the scheme.

Regulatory Bodies involved

● Public Food Distribution System in States

● Ministry of Health and Family Welfare

● Ministry of Finance

DIGITAL PLATFORM FOR TRACKING PLI CLAIMS

⊙ **CONTEXT:** **In a move to tighten the incentive disbursal system under the government's flagship incentive schemes for electric vehicles, the Heavy Industries Ministry is moving from a paper-based subsidy claims mechanism to a new digital platform.**

⊙ **ABOUT:** **About the Initiative**

● The Heavy Industries Ministry has decided to move from a paper-based subsidy claims mechanism to a new digital platform.

● The digital platform will track the **value addition** achieved by a vehicle manufacturer using domestically produced inputs from equipment manufacturers.

● Under this new platform, **an IT-enabled system** based on Application Programming Interface or API, would be leveraged to ensure that data pertaining to the net value

addition is achieved during the manufacturing process.

- The data will automatically feed into the Ministry's portal from the vehicle manufacturers' **enterprise resource planning (ERP)**
- This enables traceability of equipment and inputs with their complete digital footprint.

> ERP is **application software** that organizations use to manage business activities.

What is the current process for availing of Subsidies?

- Currently, companies file their application in the physical format to claim incentives under the **Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India (FAME)** scheme and other flagship schemes such as the **Productivity-Linked Incentive (PLI).**
- This (digital system) will not just bring in transparency but also is the next level in ease of doing business and will save a lot of hassle for companies that have to file it in physical form as on date.

> **FAME India Scheme:**
> - Fame India scheme is an **incentive scheme** that encourages the adoption of electric and hybrid vehicles. The full form of the Fame India scheme is "**Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India".**
> - **FAME India** is a part of the **National Electric Mobility Mission Plan**.
> - The **FAME India Scheme** is aimed at incentivizing all vehicle segments.
> - **Phases of the scheme:**
> - **Phase I:** started in 2015 and was completed on 31st March 2019
> - **Phase II:** started in **April 2019**, and will be completed by 31st March **2022**
> - The scheme covers **Hybrid & Electric** technologies like **Mild Hybrid, Strong Hybrid, Plug-in Hybrid & Battery Electric Vehicles**.
> - **Monitoring Authority:** Department of Heavy Industries, **the Ministry of Heavy Industries and Public Enterprises**.
> - **Fame India Scheme has four focus Areas:**
>   - Technology development
>   - Demand Creation
>   - Pilot Projects
>   - Charging Infrastructure

OVER 69% OF HOUSES CONSTRUCTED UNDER PMAY ARE OWNED BY WOMEN: CENTRE

⊙ **CONTEXT:** The data shared by the government reveals that over 69% of houses constructed under the **Pradhan Mantri Awas Yojana- Gramin** are either wholly or jointly owned by women in rural areas.

The progress so far (Statistics):

- Two crore houses had been constructed out of the 2.46 crore houses that were sanctioned.
- Over 69% of the houses are owned partly or completely by women.

- Among the top 20 districts with the highest share of female borrowers in fresh home loan disbursal in FY22, six districts are from Chhattisgarh, three each from Gujarat and Haryana.

◉ **ABOUT:**

How 'women-led development is a good sign?

Its government's endeavour to ensure women get a fair share of government schemes under the Nari Shakti.

The idea behind the initiative is to have "women-led" development instead of "development of women".

■ **Impact:**

- Fulfilling the aspirations of women of owning a pucca house.

- Strengthened their participation in the financial decision.

- Basic amenities give security, dignity, and basic amenities economic power

- Uplifting their social inclusion

What is Pradhan Mantri Awas Yojana- Gramin?

- The Pradhan Mantri Awas Yojana (Gramin) was launched in 2015 with the aim of constructing 2.95 crore houses.

- The Pradhan Mantri Awas Yojana- Gramin (PMAY-G) has been devised in line with Government's commitment to providing **'Housing for All' by 2022** in rural areas.

- The scheme aims at providing a pucca house with basic amenities to all houseless householders living in kutcha and dilapidated houses by 2022.

Features:

- The **minimum size of the house has been increased to 25 sq.mt (from 20sq.mt)** with a hygienic cooking space.

- **The unit assistance has been increased from Rs. 70,000 to Rs. 1.20 lakh** in plain and from Rs. 75,000 to Rs. 1.30 lakh in hilly states.

- The **assistance for the construction of toilets shall be leveraged through convergence with Swachh Bharat Mission-Gramin (SBM-G),** MGNREGS, or any other dedicated source of funding.

- The houses under PMAY come equipped with **a toilet**, **Saubhagya Yojna electricity Connection**, **Ujala Scheme LED bulb**, **Ujjwala gas Connection**, and **water connection under Har Ghar Jal.**

Other Infrastructures and Rural development related schemes
- Skill Upgradation and Mahila Coir Yojana
- UJALA
- Pradhan Mantri Kaushal Vikas Yojana
- Pradhan Mantri Ujjwala Yojana
- Swachh Bharat Mission (Toilet Construction)

TAJPUR SET TO BE BENGAL'S 1ST DEEP SEA PORT

⊙ **CONTEXT:**

To be developed by Adani Group, the port will be built on unused land with no need to demolish, or remodel existing structures, making it the state's 1st Greenfield port in close to 50 years.

Details:

- Tajpur will be the **second-biggest port in West Bengal**, after the Kolkata Port — now known as the Shyama Prasad Mukherjee Port (SMP).
- Tajpur Port is located near Tajpur in West Bengal's Purba Medinipur district, some 200 km from Kolkata.
- It will **enable a large 'Capesize',** which is the largest class of cargo vessels. Previously the shallow draft has constrained larger ships to call on ports in the state.
- It will be Bengal's first Greenfield port in close to half a century.
- A Greenfield project is one in which construction happens on unused land, where there is no need to remodel or demolish an existing structure.

⊙ **ABOUT:**

What are Deep Sea Ports?

- A deep-sea port is usually made up for the usage of very large and heavily loaded ships.
- The depth of water helps get them access to the deep-water ports.
- The deep-sea port is compatible with large heavy loaded ships which may require the water to be **30 feet deep** or even more.

Development of the port:

- Adani Ports and Special Economic Zone (APSEZ), which is India's largest port operator and a wholly owned subsidiary of Adani Ports, will be taking on this development project.
- The development of the port would entail an investment of Rs 25,000 crore.

Port-led development:

- The magnitude of investment is quite significant and has the potential to facilitate a lot of coastal development.
- It could **facilitate development on the eastern freight development corridor**, which goes through Amritsar (in Punjab) to Dankuni (in West Bengal).
- "It could **facilitate a lot of exports**- there is an abundance of coal, iron ore, and other minerals in that belt.
- When a port comes across, there will also be an improvement in the road infrastructure.

Viability of similar projects in the Future:

- Despite having a coastline due to technical issues more deep-water ports are not possible.
- Due to the heavy siltation of the Hooghly River, it is difficult to have more such ports on the coastline.

Significance:

- The Tajpur deep sea port will act as a **maritime gateway** for not only the state but the entire eastern region.

- With this project, **India's eastern region** is set to become a **hub of trade and investment**.

- It is expected to **ensure smoother access to neighbouring countries** like Bangladesh, Nepal, and Bhutan, shipping sector.

- It will bring **massive employment opportunities** and a wave of progress to Bengal.

UNESCO LISTS 50 ICONIC INDIAN TEXTILES

⊙ **CONTEXT:**   **UNESCO recently released a list of 50 exclusive and iconic heritage textile crafts of the country.**

⊙ **ABOUT:**
- According to UNESCO, one of the major challenges to the safeguarding of Intangible Cultural Heritage in South Asia is the **lack of proper inventory and documentation**.

- The publication, which aims to bridge this gap, brings together years of research on the 50 selected textiles.

- Some of the textiles are mentioned in the below-given table:

Textile	State/Region
Toda embroidery and Sungadi	Tamil Nadu
Himroo weaves	Hyderabad
Bandha tie and dye weaving	Sambalpur in Odisha
Khes	Panipat, Haryana
Chamba rumals	Himachal Pradesh
Thigma or wool tie and dye	Ladakh
Awadh Jamdani	Varanasi
Ilkal and Lambadi or Banjara embroidery	Karnataka
Sikalnayakanpet Kalamkari	Thanjavur
Kunbi weaves	Goa
Mashru weaves and Patola	Gujarat
Himroo	Maharashtra
Garad-Koirial	West Bengal

Textile in India:

- The manufacture and use of various forms of fine textile varieties can be traced back to the Indus Valley period.

- Due to the short life of the textiles, the only evidence is the paintings, sculptures, and inscriptions if any.

- The images in the paintings and sculptures are seen draped in fine transparent muslin. In fact, in most paintings, the fineness of the cloth is stressed by highlighting only the hem and folds of the dress.

- There is clear evidence of the variety of textiles and embroidery in the Ajanta murals and miniature paintings, temple murals.

- The art of weaving and dyeing cotton had been well developed, but silk weaving came later. The art was practiced from the 1st century and by the 4th and 5th centuries, woven silk formed a major portion of exports.

- Textiles were the major attraction that formed the bulk of the trade with Western and Eastern countries.

- Roman documents mention the export of silk from India to Europe around the sixth century A.D.

- Masulipatnam on the western coast was an important port, with traders coming in from China, Arabia, and European countries like Portugal, France, and England.

- Textile trade was carried on in the North, with caravan loads of woven textiles reaching Moscow.

- The Mughal Emperors with their flair for beauty and luxury brought in new skills which mingled with the existing art, resulting in fine artworks.

WORLD'S FIRST CNG TERMINAL AT BHAVNAGAR

⊙ **CONTEXT:** Prime Minister Narendra Modi laid the foundation stone for the "world's first CNG (Compressed Natural Gas) terminal" at Bhavnagar in Gujarat recently.

⊙ **ABOUT:**

About the Project:

- This is a **three-year-old project** that is expected to infuse **Rs 4,000 crore** into developing the **existing port infrastructure at Bhavnagar**.

- The **idea for the project** materialized during the **January 2019 Vibrant Gujarat summit** when a consortium of **London-based Foresight Group**, **Mumbai-based Padmanabh Mafatlal Group**, and **Rotterdam-based Boskalis** signed a Memorandum of Understanding (MoU) with Gujarat Maritime Board (GMB) for development of the CNG terminal.

- The consortium will invest in developing the north side of the Bhavnagar port under the **BOOT (Build, Own, Operate and Transfer)** policy of the state government, and state-run GMB will continue to operate the berths on the south side of the port.

About CNG:

- CNG, also known as compressed natural gas, is an **eco-friendly alternative to gasoline**.

- Made by **compressing natural gas (methane)** down to less than 1% of its volume, CNG fuel is safer than gasoline and diesel because it is **non-toxic** and does not contaminate groundwater.

- This natural gas is the same gas that you use daily to heat your home and water, cook on the stove, and even to dry your clothes in a dryer.

- The use of CNG fuel is becoming more popular with both commercial and non-commercial vehicles.

Difference between CNG and LPG:	
CNG	**LPG**
Its primary use is as an alternative for fuel in automobiles.	It has various uses such as heating and cooking in homes. LPG also has industrial and agricultural uses.
The primary component in CNG is methane.	The primary component in LPG is propane and butane.

It produces relatively lower quantities of greenhouse gases (in comparison with LPG).	It produces relatively large amounts of carbon dioxide, a greenhouse gas.
It is relatively safe as it disperses rapidly into the air.	It is highly flammable as it is much heavier than air.
The primary source of obtaining CNG is from oil wells, bed methane wells, coal wells, and even natural gas wells.	The main source of obtaining LPG is from the process of extracting natural gas from reservoirs.

GLOBAL SKILL SUMMIT 2022

⊙ **CONTEXT:** In the 13ᵗʰ edition of the Global Skills Summit (GSS) held recently, has drawn attention regarding India Skill development and related initiatives.

Key Highlights of the event:

- The Theme of the summit for year 2022: "**Education to Employability- making it happens".**

- Apart from the International Organizations like World Bank, ILO, UNDP, UNICEF, GIZ, and UN Women; the Summit will see participation from Industry leaders from organizations like LinkedIn, Adobe, Mahindra & Mahindra, Schneider Electric, Hindustan Unilever, Amazon and many more.

- Discussions were on encouraging **Entrepreneurship, Apprenticeship, and Craftsmanship.**

- The Summit aims to bring together key stakeholders to deliberate upon strategies and share best practices that help in developing a **21st-century skills ecosystem.**

- The Summit took a deeper look at future steps in skilling, changing demand in the job market, existing employment opportunities in India, and gainful engagement of entrepreneurs, craftsmen, and artisans.

Recent initiatives:

- FICCI Alliance for **Re-Imagining School Education (ARISE)** is a collegium of stakeholders who represent different facets of School Education.

- Members include several high-quality and reputed independent schools from across the country, eminent educators, foundations, civil society representatives, think tanks, and technical experts.

- The fundamental vision of **FICCI ARISE** is to become a catalyst in government and private efforts for raising the quality of learning outcomes across schools and to ensure that no child is left behind.

What are the recent government initiatives to enhance skills?

- **Skill India initiative**: The Government launched the Skill India Initiative in 2015.

- **Dedicated ministry:** The government has also created a dedicated Ministry for Skill Development and Entrepreneurship.

- **Coordinating agencies:** The National Skill Development Agency and the National Skill Development Corporation (NSDC) have also been created with the objective of coordinating and guiding all central government ministries involved in skill development initiatives.

- **Qualification Packs/National Occupational Standards (QPs/NOSs):** One of the key initiatives taken by the PSSC is the development of Qualification Packs/National

Occupational Standards (QPs/NOSs) with reference to key job functions in the sector that have high employment potential.

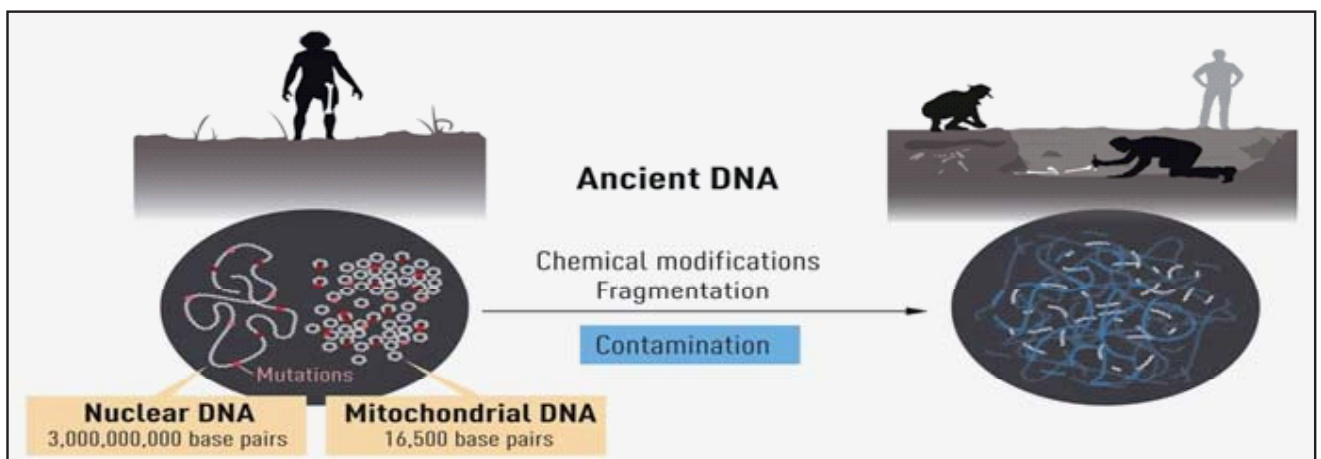# SWEDISH SCIENTIST GETS MEDICINE NOBEL FOR WORK ON HUMAN EVOLUTION

⊙ **CONTEXT:**   **The Nobel Prizes 2022 for medicine or physiology was awarded to Swedish geneticist Svante Pääbo for his discoveries concerning the genomes of extinct hominins and human evolution.**

⊙ **ABOUT:**   **About the Svante Pääbo:**

- Svante Pääbo (born 20 April 1955) is a Swedish geneticist specializing in the field of evolutionary genetics and a Nobel prize laureate.

- He has worked extensively on the Neanderthal genome.

- He was appointed director of the Department of Genetics at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany in 1997.

- He is also a professor at Okinawa Institute of Science and Technology, Japan.

About the Discovery:

- Svante Pääbo has accomplished sequencing the genome of the Neanderthal, an extinct relative of present-day humans.

- He also made the sensational discovery of a previously unknown hominin, Denisova. Comparisons with sequences from contemporary humans from different parts of the world showed that gene flow had also occurred between Denisova and Homo sapien.

Ancient DNA

Chemical modifications
Fragmentation

Contamination

Mutations

Nuclear DNA
3,000,000,000 base pairs

Mitochondrial DNA
16,500 base pairs

Accomplishing a seemingly impossible task:

- With time DNA becomes chemically modified and degrades into short fragments.

- After thousands of years, **only trace amounts of DNA are left**, and what remains is **massively contaminated with DNA from bacteria** and contemporary humans.

- Pääbo started to **develop methods to study DNA from Neanderthals**, an endeavour that lasted several decades**.**

- He decided to **analyse DNA from Neanderthal mitochondria** – organelles in cells that contain **their own DNA**. The mitochondrial genome is small and contains only a fraction of the genetic information in the cell, **but it is present in thousands of copies**, **increasing**

the chance of success.

Significance of the Discovery:

- His findings suggest that **gene transfer had occurred from these now extinct hominins to Homo sapiens** following the migration out of Africa around 70,000 years ago.

- This ancient flow of genes to present-day humans has **physiological relevance today**, for example **affecting how our immune system reacts to infections.**

IAF INDUCTS INDIGENOUSLY-BUILT LIGHT COMBAT HELICOPTER

⊙ **CONTEXT:**   The Indian Air Force has formally inducted the first batch of indigenously developed Light Combat Helicopter "Prachand'.

Details:

- **Prachand** has been formally inducted into the 143 Helicopter Units – an IAF fleet in Jodhpur Base, Rajasthan.

- **The name Prachand means "fierce".**

- The **attack helicopter also known as tank buster** will get its anti-tank guided missile (ATGM) only by mid-2023.

- The ATGM intended to be integrated with Prachand is the indigenous Helina, whose air force version is called

- As of now, the helicopter comes integrated with the **European air-to-air missile Mistral 2 launchers,** manufactured by the MBDA.

- The **Cabinet Committee on Security (CCS)** has approved the procurement of 15 indigenously developed Limited Series Production (LSP) LCH for Rs.3, 887 crore.

- 10 helicopters would be for the IAF and 5 for the Indian Army.

Features:

- 8-tonne twin-engine helicopter is **designed for deployment in high-altitude regions.**

- **Armed with air-to-air missiles**, 20 mm turret guns, rocket systems, and other weapons.

- **Stealth features**, armoured-protection systems, **night attack capability**, and crash-worthy landing gear for better survivability.

- **Reduced visual, aural, radar, and IR signatures** and crashworthiness features for better survivability add to its stealth capability.

- **Extended range,** high altitude performance, and all-weather combat capability.

- **Aviation technologies** like a glass cockpit and **composite airframe structures have been indigenized.**

> **Other indigenous defense products:**
> - Marut
> - Light Combat Aircraft
> - Aakash Missile System
> - Advance Light Helicopter

Made in India:

- The **Light Combat Helicopter (LCH)** is designed and developed by state-run aerospace

major Hindustan Aeronautics Ltd (HAL).

- The LCH has similarities with the Advanced Light Helicopter Dhruv, designed and developed by HAL.

Testing:

- The helicopter has been tested under stringent operating conditions including at sea level, in desert regions, and in Siachen.

Significance:

- It will enhance our capability.
- It will boost defense production.
- It will improve India's commitment toward self-reliance in Defence production.
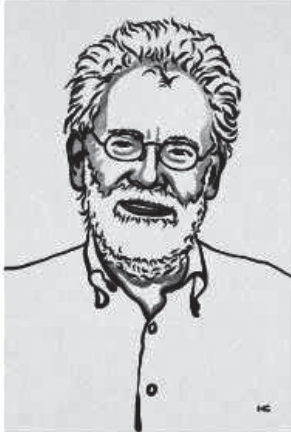
NOBEL PRIZE IN PHYSICS

⊙ **CONTEXT:**   **Recently, the Nobel Prize committee decided to honour three scientists — Alain Aspect of France, John Clauser of the US, and Anton Zeilinger of Austria who have conclusively established the 'theory of entanglement' in Quantum Physics.**

⊙ **ABOUT:**
- The awardees have made seminal contributions to have now enabled the possibility of a wide range of applications of quantum Physics.

The Nobel Prize in Physics 2022

Ill. Niklas Elmehed © Nobel Prize Outreach
Alain Aspect
Prize share: 1/3

Ill. Niklas Elmehed © Nobel Prize Outreach
John F. Clauser
Prize share: 1/3

Ill. Niklas Elmehed © Nobel Prize Outreach
Anton Zeilinger
Prize share: 1/3

- Their experiments have conclusively established that the 'entanglement' phenomenon observed in quantum particles was real, not a result of any 'hidden' or unknown forces.
- They can be utilised to make transformative technological advances in;
  - Computing,
  - hack-free communications, and

   ⊙ Science fiction-like concept of 'teleportation'.

The Entanglement Theory:

- By the start of the 20th century, the scientists observed that the behaviour of tiny sub-atomic particles like protons or electrons was not consistent with the classical **Newtonion laws of physics.**

- Quantum Theory went completely against everyday experiences. It allowed a particle to exist simultaneously at multiple locations, a phenomenon known as **superposition.**

- **'Entanglement'** was another of several weird properties exhibited by these tiny particles.

- **As per the theory,** Two particles, having 'interacted' with each other at some stage, were found to have got '**entangled**' in a way that the behaviour of one produced an instantaneous reaction in the other even if the two were no longer connected in any way and were separated by very large distances.

> **India and Quantum Physics**
>
> - ISRO, DRDO, Department of Atomic Energy, Department of Science and Technology have all been interested in, and supporting, projects on quantum key distribution that will build these secure communication channels.
> - Scientific groups at the **Raman Research Institute** have also made significant progress in these fields.

IAF TO INCREASE SUKHOIS ARMED WITH BRAHMOS SUPERSONIC CRUISE MISSILE

⊙ **CONTEXT:** The Indian Air Force (IAF) is set to increase the number of Sukhoi 30 (SU-30) MKI fighters integrated with BrahMos supersonic missile, which now has a range of over 500 kilometres.

About BrahMos Missile

- The BrahMos is **a ramjet supersonic cruise missile** of a short-range developed by the **Defence Research and Development Organisation (DRDO) and the Russian Federation's NPO Mashinostroyeniya (NPOM)**.

- It is named after **two major rivers** of India and Russia: **Brahmaputra and Moskva.**

- The use of BrahMos missiles for **land as well as anti-ship attacks.**

- They can be launched from **land, air and sea**, and all three variants are in service in the Indian armed forces.

- It is a two-stage (solid propellant engine in the first stage and liquid ramjet in second) missile.

- It operates on the "**Fire and Forgets**" principle i.e. it does not require further guidance after launch.

- BrahMos missiles are manufactured in India under a joint venture that was formed in 1998 between **India's Defence Research and Development Organisation** and **Russia's NPO Mashinostroyeniya.**

The Sukhoi 30 (SU-30) MKI fighter Jets

- The **Sukhoi Su-30MKI** is a twinjet multirole air **superiority fighter** developed by Russia's Sukhoi and built under licence by India's Hindustan Aeronautics Limited (HAL) for the Indian Air Force (IAF).

- A variant of the Sukhoi Su-30, it is a heavy, all-weather, long-range fighter.

- The first Russian-made Su-30MKI variant was accepted into the Indian Air Force in 2002, while the **first Su-30MKI** assembled in India entered service with the **IAF in 2004.**

- The IAF has nearly **260 Su-30MKIs** in inventory as of January 2020.

- The Su-30MKI is expected to form the backbone of the Indian Air Force's fighter fleet to 2020 and beyond.

> The IAF currently has **40 SU-30 MKI** with BrahMos, the only supersonic cruise missile in the world.

Significance of collaboration of both

- The range of the BrahMos missile was 290 km earlier; it has been extended to over 500 km.

- The land-launched BrahMos has a range of about 400 kilometres and work is also to increase its range to 800 and 1,500-km.

- Given the Su-30s' maritime strike capability, the IAF had made this move with an eye on increasing Chinese naval presence in the Indian Ocean Region.

ALZHEIMER'S DISEASE IS CAUSED BY DECLINE IN LEVELS OF AMYLOID-BETA: STUDY

⊙ **CONTEXT:**   A New research supports the hypothesis that Alzheimer's disease is caused by a decline in levels of a protein called amyloid-beta.

⊙ **ABOUT :**   **Details of the Study:**

- The research is focused on a protein called '**amyloid-beta'.** The protein normally carries out its functions in the brain in a form that is soluble, meaning dissolvable in water, but it sometimes hardens into clumps, known as '**amyloid plaques'**.

- The plaques are simply a consequence of the levels of soluble amyloid-beta in the brain decreasing.

- These levels decrease because the normal protein, under situations of biological, metabolic or infectious stress, transform into the **abnormal amyloid plaques**.

- In the Current study, it was also analysed that levels of amyloid-beta in a subset of patients with mutations that predict an overexpression of amyloid plaques in the brain, which is thought to make them more to develop **Alzheimer's disease.**

Alzheimer as a disease:

- In Alzheimer's disease the neurons stop functioning, lose connections with other neurons, and dies.

- Alzheimer's disrupts processes vital to neurons and their networks, including communication, metabolism, and repair.

- **Effects**:

  ◉ Alzheimer's disease typically destroys neurons and their connections in parts of the brain involved in memory, including the **entorhinal cortex and hippocampus**.

  ◉ Eventually, many other areas of the brain are damaged. Over time, a person with Alzheimer's gradually loses his or her ability to live and function independently.

  ◉ Ultimately, the disease is **fatal.**
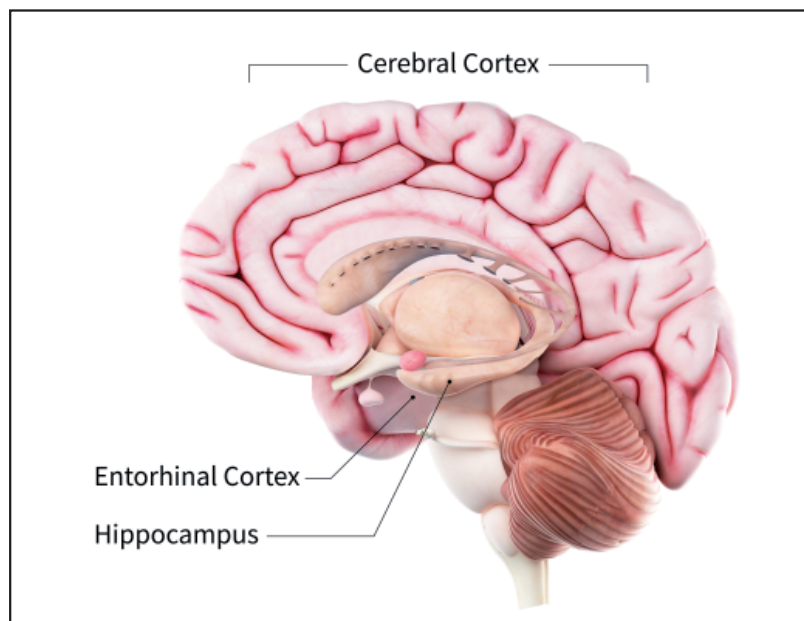
How they are responsible for Alzheimer

- The beta-amyloid protein involved in Alzheimer's comes in several different molecular forms that collect between neurons.

- It is formed from the breakdown of a larger protein, called amyloid precursor protein. One form, beta-amyloid 42, is thought to be **especially toxic.**

- In the Alzheimer's brain, abnormal levels of this naturally occurring protein clump together to form plaques that collect between neurons and disrupt cell function.

Characteristics of Brain with Alzheimer

- **Neurofibrillary tangles**: Neurofibrillary tangles are abnormal accumulations of a protein called tau that collect inside neurons. Healthy neurons, in part, are supported

internally by structures called microtubules, which help guide nutrients and molecules from the cell body to the axon and dendrites.

- **Chronic inflammation:** In Alzheimer's, parts of brain cells fail to clear away waste, debris, and protein collections, including beta-amyloid plaques.

- **Vascular contributions to Alzheimer's disease:** Vascular problems may lead to reduced blood flow and oxygen to the brain, as well as a breakdown of the blood-brain barrier, which usually protects the brain from harmful agents while allowing in glucose and other necessary factors.

- **Loss of neuronal connections and cell death**

WORLD MARITIME DAY

⊙ **CONTEXT:**   **World Maritime Day is observed every year on the last 'Thursday' of every September. This year it is observed on September 29.**

⊙ **ABOUT:**   **About World Maritime Day:**

- The English team 'maritime' originates from the Latin word 'maritimus,' which means 'of the sea.'

- The day sheds light on the role seafarers, service agents, and marine officials play in our personal life.

- Sea life is undoubtedly challenging given the strain of working long hours for uncertain compensation and being away from home.

- World Maritime Day is celebrated annually to offer an **opportunity to focus its attention on the significance of shipping** as well as other maritime activities and to emphasize a particular aspect of the work of the International Maritime Organization.

- Without the international transportation of goods which is facilitated by those in the maritime industry, the world's economy may be unable to function.

- World Maritime Day was **1st held in 1978,** to mark the 20 anniversary of the International Maritime Organization, which has been expanded from the **original 21 member states** to 167 and presently it encompasses all major nations, that are involved in the maritime industry.

- **The theme for 2022:** New technologies for greener shipping.

- The need to promote a green transition of the maritime industry into a sustainable future while leaving no one behind is reflected in this year's theme for the day.

- It offers a chance to concentrate on the significance of a sustainable maritime industry and the necessity to rebuild better and more sustainably in a post-pandemic world.

> **International Maritime Organization:**
>
> - The International Maritime Organization is a specialized agency of the United Nations which regulates the shipping industry.
>
> - The organization was established in the year 1948 in Geneva and came into force in 1959.
>
> - It now has 171 member states and 3 associate members.
>
> - Its headquarters are in London, United Kingdom.
>
> - The IMO's role is to develop and ensure a comprehensive regulatory framework for the shipping industry.

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Section: D
(QUICK BYTES)

CURRENT AFFAIRS

RBI'S SCALE-BASED REGULATION (SBR)

◉ **CONTEXT:**   **The RBI had introduced a scale-based regulatory framework for non-banking Finance Companies (NBFC), aimed at reducing risks for the financial sectors.**

◉ **ABOUT:**
- It is aimed to **tighten the regulatory noose on NBFCs** to **reduce the risk of bankruptcy** and defaults.
- The **systemic risks** posed by the fallout of the Infrastructure Leasing & Financial Services and Dewan Housing Finance Corporation Ltd. crises are one such example.
- NBFCs will be classified into **four categories – base, middle, upper and top layers**.
- These layers are based on their size, activity, and perceived riskiness.
- Once an NBFC is **identified as an NBFC-upper layer**, it will be subject to enhanced regulatory requirements **at least for four years** from its last appearance in the category.
- **Impact on Customers:** The regulations are likely to improve customer service. Alongside more disclosures may be expected from borrowers to **inculcate the practice of responsible borrowing and lending**

PM'S SCHEME FOR MENTORING YOUNG AUTHORS – YUVA 2.0

◉ **CONTEXT:**   **The Ministry of Education, Department of Higher Education, has launched YUVA 2.0 - Prime Minister's Scheme for Mentoring Young Authors.**

◉ **ABOUT:**
- It is an **Author Mentorship programme** to train young and budding authors (**below 30 years of age)** to promote reading, writing, and book culture in the country, and to project India and Indian writings globally.
- The launch of YUVA 2.0 (Young, Upcoming and Versatile Authors) is in **tune with the Prime Minister's vision to encourage the youth** to understand and appreciate India's democracy.
- **YUVA 2.0 is a part of the India@75 Project** (Azadi Ka Amrit Mahotsav) to bring to the fore the perspectives of the young generation of writers.
- **Theme:** 'Democracy (institutions, events, people, and constitutional values – past, present, future)'.
- The **National Book Trust, India, under the Ministry of Education is the Implementing Agency**.

UTTAR PRADESH GEARS UP FOR ITS FOURTH TIGER RESERVE IN CHITRAKOOT

◉ **CONTEXT:**   **The Uttar Pradesh cabinet has approved the notification of the State's fourth tiger reserve in Chitrakoot.**

◉ **ABOUT:**
- The fourth tiger reserve will come up in Chitrakoot district's **Ranipur Wildlife Sanctuary (RWS).**

- Ranipur Wildlife Sanctuary will be the **54th tiger reserve in India.**
- The planned reserve will also be the first in the state's portion in the Bundelkhand region.
- The sanctuary does not have any tigers of its own.
- Ranipur Wildlife Sanctuary is home to dry deciduous forests of Bamboo, Palash, Khair, Mahua, Dhau, Saal, and Tendu.
- Blackduck, Chinkara, Sambar, Cheetal, Bear, Leopard, Wolf, Wild dog, Blue bull, etc, can be found in the sanctuary.
- The other tiger reserves in Uttar Pradesh include Dudhwa, Pilibhit, and Amangarh (a buffer of Corbett Tiger Reserve).

GLOBAL AVIATION BODY ICAO JOINS INTERNATIONAL SOLAR ALLIANCE

⊙ **CONTEXT:** **The International Civil Aviation Organization (ICAO) has become the latest United Nations agency to join the International Solar Alliance (ISA) and has also signed a MoU.**

⊙ **ABOUT:**
- The MoU carries forward the legacy of ISA, which has been **co-founded by India and France in 2015**, the ISA is an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies.
- The event marks a new beginning for solar energy use in the global civil aviation sector.
- It will enable the **solarization of the aviation sector** across all Member States of the ISA, thereby ensuring lowering of carbon emissions.
- It aims to **check the growth of CO_2 emissions in the Aviation sector,** leading to India's **Net Zero Targets.**
- It will work towards providing information, providing advocacy, capacity building, and demonstration projects.

MEETING OF PERSISTENT ORGANIC POLLUTANTS (POP) REVIEW COMMITTEE (POPRC)

⊙ **CONTEXT:** **The 18th meeting of the Persistent Organic Pollutants Review Committee (POPRC-18) at the Stockholm Convention has included five more chemicals in its agenda.**

⊙ **ABOUT:**
- Stockholm Convention aims to eliminate or restrict the production and use of POPs or the substances that persist in the environment and pose risk to our health.
- The listed chemicals are:
  ◉ Chlorpyrifos (pesticide)
  ◉ Chlorinated paraffin beyond prescribed standards (flame retardant)
  ◉ Long-chain perfluoro carboxylic acids (plastic stabilizing substances)
  ◉ Dechlorane plus (flame retardant)

⊙ UV-328 (stabilizer used in some personal care products)

- **India's resistance:** The Pesticides Manufacturers and Formulators Association of India (PMFAI) had obstructed listing chlorpyrifos under the Stockholm Convention. According to them, Chlorpyrifos is not a carcinogen and its concentrations are low.

- Chlorpyrifos was registered under the Insecticide Act of 1968 since 1977.

- **China and India** are among the largest producers of **chlorpyrifos.**

- It has been banned by the **Punjab and Haryana governments** in August 2022.

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GS SCORE
An Institute for Civil Services

CSE RESULTS

TOP 100 ALL INDIA RANKING CSE 2021

02 04 07 12 24 25 29 31
32 43 44 45 46 49 52 53 54 55
66 67 68 76 80 83 89 92 93 95

SUCCESS IS A PRACTICE WE DO!

TOP 100 ALL INDIA RANKING CSE 2020

8 9 12 13 14 16 17 19 20
24 26 28 30 31 36 38 41 45 50
51 52 55 56 58 59 67 68 70 71 73
74 76 78 83 84 85 86 89 93 98 100

TOP 100 ALL INDIA RANKING CSE 2019

3 6 10 11 16 17 21 22 28
30 33 38 39 42 44 46 53 54 59 66 69
70 72 77 78 80 82 84 86 87 94 97 98