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PART-A

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SECTION: A
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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

o **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'.**

o 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'.**

o 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?

o **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".**

o **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.

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o **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

o 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.

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

Attempts made for their inclusion

o 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.**

o 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.

o 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:

o 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.

o 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?

o **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.

o **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.

o **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.

o **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.

o **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.

o **Institutional weakness**

o **an asymmetric political landscape**

Need for Internal Party Democracy:

o **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.

o **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.

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

o **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.

o **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?

o 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.

o **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.

o 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:

o 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.

o The formation of the PFI was formally announced at a rally in Bengaluru during what was called the **"Empower India Conference**".

About the Ban:

o The Ministry of Home Affairs declared the PFI an "**unlawful association**" along with its associates which include:

o 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:

o It has been found that the PFI has linkages with **Jamaat-ul-Mujahideen Bangladesh (JMB),** both of which are proscribed organizations.

o 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).

o 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:

o Originally enacted in 1967, the UAPA was amended to be modelled as an anti-terror law in 2004 and 2008.

o In August 2019, Parliament cleared the Unlawful Activities (Prevention), Amendment Bill, 2019 to designate individuals as terrorists on certain grounds provided in the Act.

o 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

o The consequences of being declared unlawful include criminalization of its membership and the forfeiture of the properties of the organization.

o Under **Section 7 of the UAPA**, the government has the power to prohibit the use of funds of an unlawful association and,

o Under **Section 8**, all places that are used by unlawful association can be notified and seized.

o 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:

o The **tribunal consists of only one person**, who has to be a High Court judge.

o 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.

o **Section 3 of the UAPA Act**: The government has powers to declare an association "unlawful".

o 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".

o A government order would not come into effect until the tribunal has confirmed it.

o 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:

o 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.

o Later the Tribunal by issuing a written notice calls upon the association to show cause within 30 days.

o 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:

o The tribunal can regulate its own procedure, including the place at which it holds its sittings.

o It can hold hearings in different states for allegations pertaining to those states.

o 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

o The Union government wants the States to undertake activities focused on restoring degraded land and reversing desertification using MGNREGS funds.

o The funds will go towards both material and wage components.

o 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:

o **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.

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

o **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

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

o **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.

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

o **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.

o **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.

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

o **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

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

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

o 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

o **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.

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

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

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o **National Action Programme to Combat Desertification:** It was prepared in 2001 to address issues of increasing desertification and to take appropriate actions.

o **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.

o **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

o The Bill is an attempt by the government to **update the extant regulatory framework** in keeping with the advancements and challenges in the sector.

o 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:

o 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):

o 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).

o 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:

o **Expands the definition**: The current draft of the Bill expands the definition of "telecommunication services" to include OTT communication services.

o **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.

o **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:

o **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.

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

- o **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:

- o **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:

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

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

o 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.

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

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

o 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.

o **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.

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

About Global Innovation Index (GII):

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

o 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.

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

o **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.

o 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?

o 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.

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

o 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.

o 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?

o **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.

o **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.

o **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

o India's North East has seen a mushrooming of '**community reserves'** in the last 11 years.

o A community reserve is usually formed by the local village council and the forest department signing a memorandum of understanding (MoU).

o Provisions of the Wild Life (Protection) Act apply to an area once it becomes a community reserve.

What are Community Reserves?

o 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."

o 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.**

o 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?

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

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

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

o **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.**

o 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:

o **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.**

o 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).

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

o 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.**

o 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:

o **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.

o 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.

o 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

o It conserves the species and its habitat

o Useful in conserving large populations of a species

o It is a less disruptive method of conservation

o It is a cost-efficient conservation method

Challenges associated

o Occurrence in marginal habitats

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

o Lack of regular survey in in-situ conservation

o Only Priority species are focused

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◉ **WAY FORWARD**

- o **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.

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

- o **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**

- o 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.

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

◉ **ABOUT**

What is fifth-generation network?

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

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

Significance of the Initiative:

o **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.

o **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.

o **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?

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

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

o **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.

o **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.

o **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?

o **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.

o **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.

o **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?

o **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.

o **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.

o **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.

o **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?

o   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.

o   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

o   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:

o   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.

o   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.

o   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.

o   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:

o   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.

o   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.

o   **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.

o   There is also no **requirement for security clearance**, license, or any other restrictions.

Progress so far:

o   Rural Development Ministry had **mapped over 45 lakh kilometers of rural road**s by using 21 data layers of a digital map of India.

o   This will be helpful to **create digitized information** regarding water bodies, green areas, plots, and other structures essential for administrative purposes.

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

o **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

o **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.

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

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

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

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

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

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Section: B (SPECIALS)

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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

o 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.

o 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.

o 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:

o **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.

o **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.**

o **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.

o **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.

o **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

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

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

o 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?

o 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.

o 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:

o Right to safe and legal abortion.

o Right to control one's reproductive functions.

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

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

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

Significance:

o **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.**

o **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)

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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:
  o **Swachhta Hi Sewa (SHS)** – is a fortnightly campaign undertaken by the public offering "shramdaan" for sustaining cleanliness in the country.
  o **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**:
  - o Plastic waste management,
  - o Biodegradable solid waste management (including animal waste management),
  - o Greywater (Household Wastewater) management
  - o 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.**

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- 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**:
  o **Phase-I and Phase-II** of this scheme were operational from April to June 2020 and July to November 2020 respectively.
  o **Phase III** of the scheme was operational from May to June 2021.
  o **Phase-IV** of the scheme during July-November, 2021 and

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

o **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.

   o 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:**

o 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.**

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

▌ **Eligibility:**

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

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

o 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.

o All **primitive tribal**

o 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:**

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

o   Strengthened their participation in the financial decision.

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

o   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.
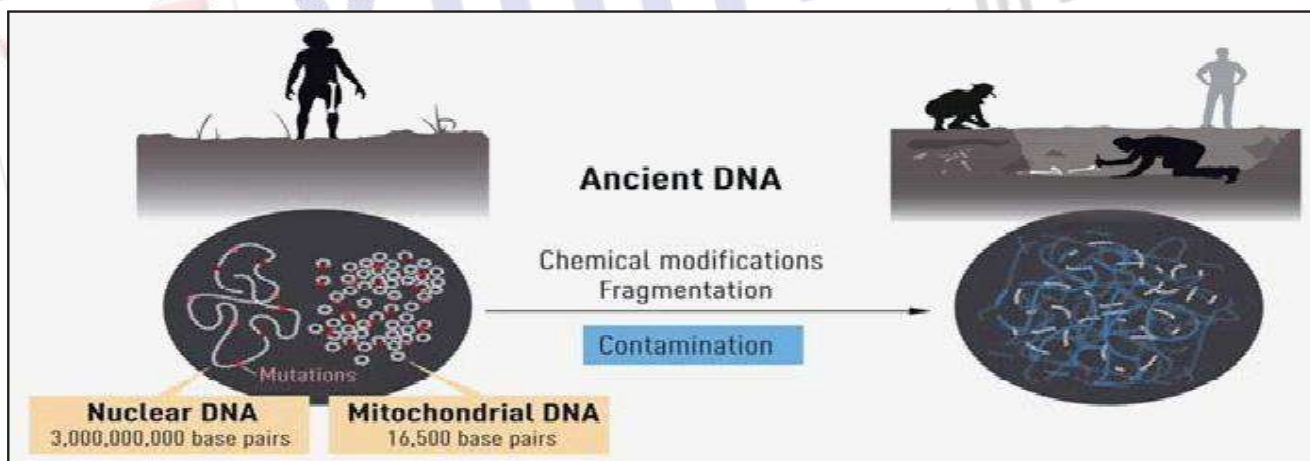
Accomplishing a seemingly impossible task:

- 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
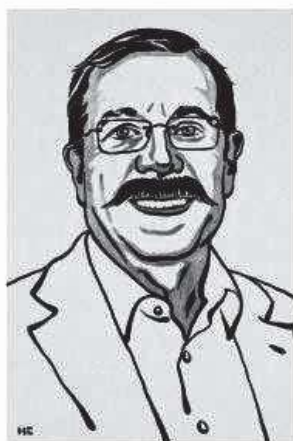
Ill. Niklas Elmehed © Nobel Prize Outreach	Ill. Niklas Elmehed © Nobel Prize Outreach	Ill. Niklas Elmehed © Nobel Prize Outreach
Alain Aspect	**John F. Clauser**	**Anton Zeilinger**
Prize share: 1/3	Prize share: 1/3	Prize share: 1/3
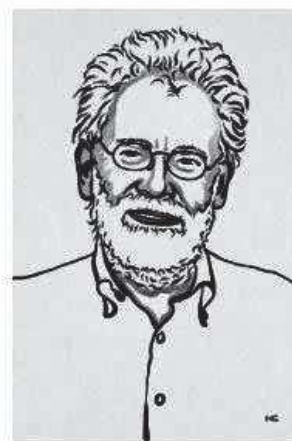
- Their experiments have conclusively established that the 'entanglement' phenomenon observed in quantum particles was real, not a result of any 'hidden' or unknown forces.
- They can be utilised to make transformative technological advances in;
  o Computing,
  o hack-free communications, and

o 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.**

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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'.**

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- 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**:
  o Alzheimer's disease typically destroys neurons and their connections in parts of the brain involved in memory, including the **entorhinal cortex and hippocampus**.
  o 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.
  o Ultimately, the disease is **fatal.**
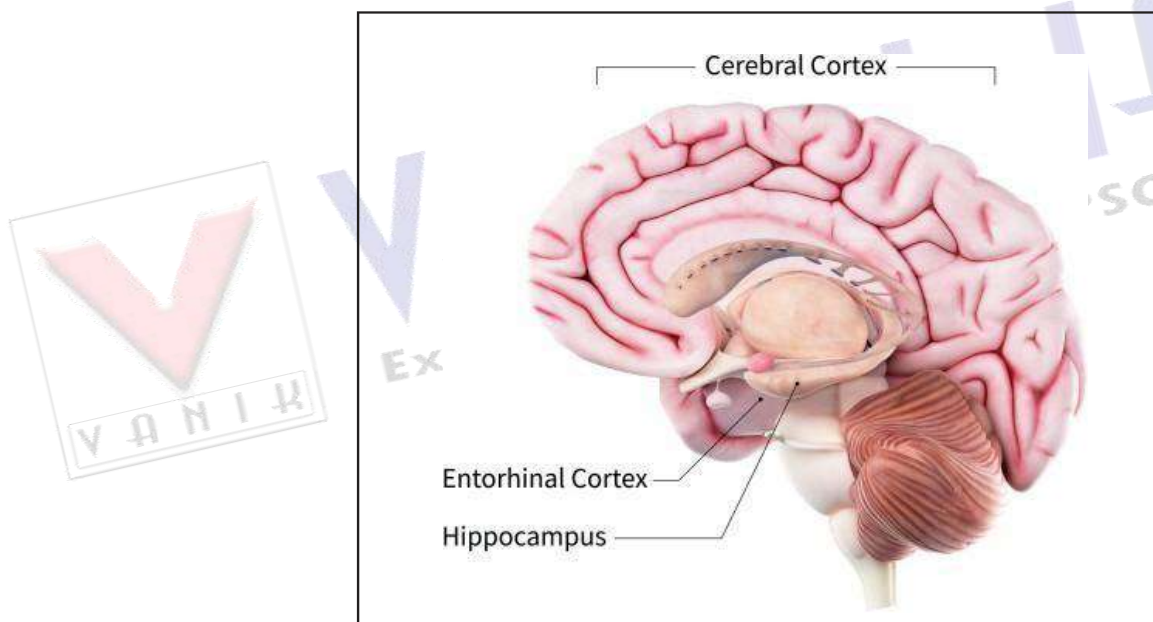
How they are responsible for Alzheimer

- 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

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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)
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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 MENTORINGYOUNG AUTHORS – YUVA 2.0

◉ **CONTEXT:** **The Ministry of Education, Department of Higher Education, has launched YUVA - 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:
  o Chlorpyrifos (pesticide)
  o Chlorinated paraffin beyond prescribed standards (flame retardant)
  o Long-chain perfluoro carboxylic acids (plastic stabilizing substances)
  o Dechlorane plus (flame retardant)

o 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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PART-B

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SECTION: A (MAINS)

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PRISON IN INDIA

CONTEXT:

In the recently highlighted issue, the Border Security Force handed over the Bangladeshi illegal migrants to their country without any procedure as established due to the lack of spaces in 'Prisons'.

a **This has highlighted the concerns regarding overcrowded and staff less prisons in India.**

What is the present situation?

An analysis of prison statistics by the **India Justice Report (IJR)** has found:

o **Increase in arrest:** An increase of 7.7 lakh in the number of people arrested in 2021 as compared to 2020.

o **Increased prisoners:** The number of prisoners has shot up from 3.7 lakh to 5.54 lakh in the same period — a 48% increase.

o It was most acute in **three northern States/Union Territories** — Uttarakhand, Uttar Pradesh, and Delhi. In these three regions, the occupancy rate crossed **180%** in 2021 (180 prisoners for every 100 vacancies).

o The **highest increase** was observed in Delhi, where the occupancy rate increased from 60% to 183%. **Decrease in staff:** While on the one hand, jails are overflowing, on the other, the **vacancies for prison officers** are alarmingly high in some States.

o In **Uttarakhand, Chhattisgarh, Bihar and Jharkhand** over 60% of officer positions were vacant.

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Types of Prisons:
- In India there are three levels of Prison
- Taluka level (Sub jails)
- district level (district jails)
- central level (central jails)

There are also some other types of jail such as women jails, Borstal school, open jails, and special jails.

What are the major issues across the jails in India?

o **Overcrowding:** Under-trials of the prisoners is prominent in Indian states, which ultimately lead to overcrowding in jails.

o **Shortage of staff:** The ratio between the prison staff and the prison population is approximately 1:7. It means only one prison officer is available for 7 prisoners.

o **Custodial Tortures /Deaths**

Other issues

o prolonged detention of under-trial prisoners
o unsatisfactory living conditions
o lack of treatment Programs
o Constant allegations for the indifferent and even inhuman approaches of prison staff
o Lack of legal aid
o Physical abuse of prisoners by the guards
o Suicide in prisons

Measures taken by the Government

o **E-Prisons Project**: The E-prisons project supplements the Prisoner Information Management system (PIMS) which provides a centralized approach for recording and managing prisoner information and generating different kinds of reports.

o **Model Prison Manual 2016:** The manual provides detailed information about the legal services (including free services) available to prison inmates. The Ministry of Home Affairs has issued an advisory to all **States and UTs informing** them about the legal aid facility available to under-trial prison inmates.

o **National Legal Services Authority**: It has launched a web application to facilitate the under trial prisoners with **free legal services**. The objective of the above application is to make the legal services system more transparent and useful.

Right of Prisoners
- The rights of prisoners are covered under the **Prison Act, 1894.**
- **Important Rights**
- Right To Legal Aid
- Right To Speedy Trial
- Right Against Solitary Confinement And Protection From Torture

Exemplary developments
- The **Maharashtra government and Azim Premji Philanthropic Initiatives** Pvt Ltd have signed a MoU recently with an aim to work together to design, implement, and monitor and document a model programme to provide legal help to prisoners, especially under-trials.

Required measures:

o **More space share**

o **New reforms to the judicial process to decrease the length of trials and reduce the number of inmates.**

o **Modernisation:** Need to make jails modern and technologically adept with stringent security measures

o **Better standard of living**: Need to introduce better living and health facilities, libraries, and training programmes for prisoners to help them get back to society.

o **Focus on mental health**: Effective initiatives to promote mental development.

o **Introducing Pattern-or-Practise Investigations (PoP Investigation)** against prison administration, on lines of the United States that first introduced PoP Investigations in 1991 to initiate police reforms, could be key to solving the crisis.

Prominent recommendation of A. N. Mulla. committee (1980) are:

- Improving prison condition by making available proper food, clothing, sanitation etc.
- The focus must be on human rights of prisoners besides improving their amenities.
- Undertrial in jails to be reduced to bare minimum and they be kept away from convicts.
- The prison staff to be properly trained and organized.
- The focus must be on Rehabilitation and reforming of offender.
- The Government should make an effort to provide adequate financial resources.

INDIA'S IMR INDICATES A STEP TOWARDS 'GENDER EQUALITY'

CONTEXT:

As a significant development, the female Infant mortality rate (IMR) has registered a decline in India. The identical IMR of boys, and girls a step towards gender equality.

Highlights of the Report:

o **Sample Registration System Statistical Report 2020**, has highlighted a decline in Infant Mortality Rate (IMR).

o No gender difference has been observed in 2020 (Male -28, Female - 28).

o The IMR has remained higher for female babies than males but the gap had reduced since 2011.

o A **drop in the Neonatal Mortality Rate** from 22 per 1000 live births in 2019 to 20 per 1000 live births in 2020.

o India will soon achieve the **Sustainable Development Goals (SDG)** targets by 2030.

SDG 3.2: SDG 3.2 seeks to end preventable deaths of newborns and children under the age of 5. Countries are currently looking to reduce neonatal mortality to at least 12 deaths per 1,000 live births and under 5 mortality rates to at least 25 deaths per 1,000 live births.

Infant Mortality Rate:

o Infant mortality is the death of an infant before his or her first birthday.

o The infant mortality rate is the number of infant deaths for every 1,000 live births.

o In addition to giving us key information about maternal and infant health, the infant mortality rate is an important marker of the overall health of a society**.**

IMR has 2 components:

o **IMR:** infants dying within 1 year of birth

o **Neonatal Mortality Rate (NMR):** It is defined as the 'number of deaths during the first 28 completed days of life per 1,000 live births in a given year or period'

Causes:

o **Abysmal Doctor-to-Patient Ratio**: There is a problem of understaff in Medical sciences in India

o **Availability of Life-saving Equipment:** We have low availability of life-saving equipment like ventilators, life support systems, radiant warmers, blood-pressure monitoring systems, etc.

o **Pre-admission Causes:** These include, underweight babies who are more prone to infections within the first **48 hours** of their birth.

o **Insufficient Resources**: The current GDP allocation for the health sector is just 2.1 % of the total GDP. In other countries, this rate varies from 3.5-5%.

o **Malnutrition:** According to **National Family Health Survey-5:** At least 67 percent of children (6-59 months) have anemia and 57.0 percent of women (15-49 years) are anemic.

Introducing Behavioral Change:

o Several schemes have been launched by the respective governments but the one that stands out is ***Beti Bachao, Beti Padhao,*** and ***National Girl Child Day.***

o It came into existence when the country was observing a consistent decline in the Child Sex Ratio (CSR). The decline from 945 in 1991 to 927 in 2001 and further to 918 in 2011 is alarming.

Beti Bachao, Beti Padhao:

o The Scheme was launched in 2015.

o This is a joint initiative of the **Ministry of Women and Child Development**, the **Ministry of Health and Family Welfare,** and **the Ministry of Human Resource Development.**

o The Overall Goal of the Beti Bachao Beti Padhao (BBBP) Scheme is to **celebrate the girl child** and **enable her education**.

Other objectives:

o Prevention of gender-biased sex-selective elimination

o Ensuring survival & protection of the girl child

o Ensuring education and participation of the girl child

> **National Girl Child Day:**
> - National Girl Child Day was first initiated in 2008 by the Ministry of Women and Child Development.
> - The main focus is on changing society's attitude towards girls, decreasing female feticide and creating awareness about the decreasing sex ratio.

A Positive Change:

o **Encouraging Trend:** The data suggests that the girl child is receiving better care and attention from parents as well as the health staff.

o **Reduced Gender Discrimination**: It also indicates that gender discrimination is largely absent when it comes to addressing the causes of infant mortality:

➤ Preterm birth

➤ Low birth weight

➤ Pregnancy-related complications

Interventions for improving Infant Mortality Rate (IMR):

o **Promotion of Institutional Delivery through Janani Suraksha Yojana (JSY):** Promoting Institutional delivery by the skilled birth attendant is key to reducing both maternal and neonatal mortality.

o **Emphasis on facility-based new-born care at different levels to reduce Child Mortality:** Setting up of facilities for the care of sick new-borns such as Special New Born Care Units (SNCUs), New Born Stabilization Units (NBSUs) and New Born Care Corners (NBCCs).

o **Capacity building of health care providers**: Various pieces of training are being conducted under NHM to train doctors, and nurses for early diagnosis and case management of common ailments of children and care of the mother during pregnancy and delivery.

o **Management of Malnutrition:** Nutritional Rehabilitation Centres (NRCs) have been established for the management of severe acute malnutrition.

o **Appropriate Infant and Young Child Feeding (IYCF)** practices are being promoted in convergence with the Ministry of Woman and Child Development.

o **Universal Immunization Programme (UIP):** Vaccination protects children against many life-threatening diseases. The Government of India supports the vaccine programme by the supply of vaccines and syringes, Cold chain equipment, and provision of operational costs.

o **Janani Shishu Suraksha Karyakaram (JSSK):** entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including Caesarean section.

o **Home-based new born care (HBNC):** Home-based new-born care through ASHAs has been initiated. The purpose of Home Based New Born Care is to improve new born practices at the community level and early detection and referral of sick new born babies.

o **Mother and Child Tracking System (MCTS):** A name-based Mother and Child Tracking System have been put in place which is web-based to ensure registration and tracking of all pregnant women and new born babies.

o **Anaemia Mukt Bharat:** In 2018, the Government of India launched the Anaemia Mukt Bharat (AMB) strategy with the target to reduce anaemia in vulnerable age groups.

Definitive Role of Governance:

o **Increased Institutional Deliver:** Percentage of live births in hospitals shot up from 35% in 2006 to 67% in 2011 to 82% in 2020.

o **Improved Healthcare services:** The percentage of deaths with medical attention received at hospitals has risen from 28% in 2006 to 34% in 2011 and 49% in 2020.

o **Increased Expenditure on health:** Economic growth has boosted spending in social sectors. Public health focus. Combined government expenditure on health had increased from Rs 2.73 lakh crore in 2019-20 to Rs 4.72 lakh crore in 2021-22, a 73% increase.

o **Improvement in Social Indicators:** As per the latest **National Family Health Survey (NFHS)-5**, social indicators such as sex ratio and health outcome indicators, viz., **infant mortality rate**, **under-five mortality rate**, and **institutional birth rates** have improved over years.

Suggestive measures:

o **Bringing Behavioural Change**: Increasing female education and economic prosperity help to improve the ratio.

o **Sensitizing Youth**: There is an urgent need to reach young people for reproductive health education and services as well as to cultivate gender equity norms.

o **Stringent Enforcement of Law:** India must implement the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994 more stringently and dedicate more resources to fighting the preference for boys.

INDIA'S DRUG REGULATION PROBLEM

CONTEXT:

The recent WHO allegation saying cough syrups manufactured by an Indian firm could potentially be linked to the death of 66 children in Gambia raises the burning crucial questions related to drug regulation in the country.

◉ ABOUT

What was the reason for death of Children? (A Case Study)

o The syrup was found by WHO to be adulterated with **diethylene glycol (DEG) and ethylene glycol.**

o These chemicals are toxic to humans, and can result in **abdominal pain, vomiting, diarrhoea, inability to pass urine, headache, and altered mental state.**

o It can also lead to acute kidney injury that can prove **fatal** in children.

◉ ANALYSIS

What are the present Drug regulations in India?

Drug regulation in India is a complex process managed by law, mainly the Drugs and Cosmetics Act of 1940, and by multiple ministries, including the **Ministry of Health and Family Welfare**. The law creates a web of regulatory authorities to govern the process at both the central and the state level.

At Centre level:

o At the central level, the **Drugs and Cosmetics Act, 1940**, has created **the Central Drugs Standard Control Organisation (CDSCO),** within which the Drugs Controller General of India (DCGI) is the key regulatory authority, acting under the advice of the Drug Technical Advisory Board (DTAB) and the Drug Consultative Committee (DCC).

o CDSCO operates through zonal offices spread across the country, which have designated roles in drug regulation, such as inspections, recalls, and market surveillance.

o CDSCO also has a role in overseeing the functioning of state authorities involved in drug regulation.

At State Level:

o There exist **State Drug Regulatory Authorities (SDRAs),** which are statutory bodies created under the Drugs and Cosmetics Act, 1940.

o Falling under the ambit of the respective Health Departments of each state, SDRAs are tasked with limited aspects of **drug regulation.**

o SDRAs are often conjoined with the **food regulation department** under the Food and Drug Administration (FDA) in that state, which complicates the proper demarcation of regulatory responsibilities.

What is the Process of drug regulation?

o CDSCO has been entrusted with the responsibility for the approval of new drugs, and the conduct of clinical trials in the country, as well as laying down the standards for drugs.

o It also controls the quality of imported drugs, oversight over the SDRAs and an advisory role in ensuring uniformity in the enforcement of the Drug Control Act.

o Applications for approval of New Drugs are evaluated by the **12 Subject Expert Committee (SEC)** (formerly referred to as New Drug Advisory Committees (NDAC)), consisting of experts usually drawn from **Government Medical Colleges and Institutes** across India.

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The *Drugs and Cosmetics Act* also has **provisions to compensate the families** of victims of adulteration. It calls for the penalty to be extracted from a convicted manufacturer and given to families of the victims.

What are the challenges associated with Indian drug regulations?

o **Non-scientific classification of offence:** The distinction between minor and major offenses isn't scientific in India. States do not prosecute dissolution, disintegration, or impurity failures because they deem them minor offense.

o **Liberal punishments:** lack of adequate fines and punishment has made the crime of Pharma sectors more prominent.

o **Competition between states to boost the Pharma sector**: As government of India has made pharma sector under innovation criteria for rankings among states has led it under a competition to establish drugs and pharma industry.

o **Interstate variation in the prosecution**: The variations among the States' regulation against drug control and Quality check makes it difficult to analyse the real problem.

What are the reasons behind the lack of drug regulations in India?

o **Lack of R&D:** The Indian pharma industry faces lack of research components and real time good manufacturing practices.

➤ No doubt investment (as % of sales) in research & development by Indian pharma companies increased from 5.3 per cent in FY12 to 8.5 per cent in FY18 but it is still low as compared to US counterparts that invest in R & D 15–20% of their sales.

o Compliance issues and good manufacturing practices:

➤ This has somehow always been a problem for the Indian companies. The on-going rumour is that the **United States Food and Drug Administration** are trying to block the growth of the companies.

Thakur's Prescription

Problem	Solution
Poor coordination, inconsistent application of law across states	Amend Rule 69 of D&C Act
Weak drug quality investigation system	Use statistical method to draw drug samples for testing
Weak prosecution of sub-standard drugmakers	Enforce Section 27 of D&C Act; DCC guidelines (2008) "illegal and unconstitutional"
Lack of safety norms for generic drugs sold in India	Make bioequivalence studies, stability testing mandatory for all generics; Establish a system for nationwide withdrawal of bad batches of drugs
No proper list of sub-standard drugmakers	Mandate states to contribute info. to an easily searchable national database
Sub-standard drugs used in govt hospitals	Enact a public procurement law for uniform blacklisting norms and transparency between procuring agencies

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Why is the approval of USFDA important?

- The approval of USFDA is important because the **largest consumer of pharma products** is the USA and India is a major exporter.
- The opinion of the USFDA is considered to be the standard in the sector as well.
- The companies are trying to improve their standards and this issue can be solved by having officials who are more stringent and inspections on a regular basis can be done.

POLITICAL INCLUSION OF DIFFERENTLY ABLED VIA SUITABLE INFRASTRUCTURE

CONTEXT:

Recently, a petition admitted by the Supreme Court that called for the introduction of ITTS technology to allow blind voters to verify their votes has set off a debate, with some disability rights activists raising concerns over the practical issues that may crop up.

The present method

- o At present, a blind voter could vote with the help of a companion who would be able to read **the VVPAT slip** or vote on their own using the Braille signs on the EVM, but not be able to verify the vote.
- o This method raised issues of **autonomy and secrecy**.

Voters with disabilities

- Voters having one of the 21 disabilities, mentioned by the Rights of Persons with Disabilities Act 2016, are termed as voters with disabilities.
- The **21 disabilities include blindness, low vision, dwarfism, locomotor disability, intellectual disability, mental illness**, among others.
- According to the 2011 Census, there are about 2.68 crore disabled persons in India, of whom about 50 lakh persons have disability in seeing.
- But their votes carry just as much importance as any other.

Barriers to electoral participation for PwD category

- o inadequate or inaccessible voter education
- o difficulties in voter registration and physical access to polling stations
- o inability to vote independently and privately
- o absence of or inappropriate assistance from poll personnel

How ITTS software can help?

- o It is a stand-alone, real-time system to capture the **image of the paper slip** generated by the printer in VVPAT, extract text from it and convert the text into speech that can be listened to through the headphones.
- o The ITTS device consists of four main components:
  - ➤ Camera
  - ➤ programmable system (optical character recognition software and text-to-speech engine)
  - ➤ headphones
  - ➤ battery

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Constitutional Rights:

o **Article 41** of the **Directive Principles of State Policy (DPSP)** states that State shall make effective provision for securing right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, within the limits of its economic capacity and development.

o The subject of '**relief of the disabled and unemployable'** is specified in state list of the **Seventh Schedule** of the constitution.

Possible Impacts:

Positive	Negative
- Help PwD to enhance their political participation. - Entertain their will and problems associated to them will be addressed by the representatives they choose. - Increase confidence and people comfortable with them in the society.	- Machine malfunction - Technology failure can become a cause of concern for people's criticism. - Lack of training module for PwD regarding technology. - Stakeholders' consent is not involved. - Lack of Awareness to stakeholders

Suggestive measures

➤ Provisions for community training and people participation must be included.

➤ Inclusion of alternate equipment in case of technological failures.

➤ Educate the stakeholders regarding their rights and duties.

ONLINE GAMING MARKET IN INDIA, AND PROPOSED RULES

CONTEXT:

A task force set up by the Ministry of Electronics and Information Technology (MeitY) has prepared a final report of its recommendations to regulate the online gaming industry in India.

◉ BACKGROUND:

o Online gaming has flourished during the pandemic. The average time spent on online gaming has gone up almost 65% from pre-Covid levels.

o India currently has no comprehensive legislation with regards to the legality of online gaming or boundaries that specify applicable tax rates within the betting and gambling industry.

o In this regards a task force was mandated to study global best practices and recommend a regime for a uniform regulatory mechanism for online gaming.

Recommendations of Task Force:

o **A Central-Level Law:** A central-level law should apply to real money and free games of skill, including e-sports, online fantasy sports contests, and card games among others.

➤ Casual games with no real money element in the form of stakes may be kept outside the scope of such rules. Unless they have a high number of users in India, or permit the publication or transmission of information in the nature of any inappropriate content like violence, nudity, addictive content or misleading content.

o **Dispute Resolution:** A **three-tier dispute resolution mechanism**, similar to that prescribed under the Information Technology Rules, 2021 for online streaming services, consisting of:

➤ A grievance redressal system at the gaming platform level,

➤ Self-regulatory body of the industry, and

➤ An oversight committee led by the government.

o **Formation of a Regulatory Body:** This body will determine what qualifies as a game of skill or chance, and accordingly certify different gaming formats, seek compliance and enforcement.

o **Online Gaming platform Mechanism as a legal entity:** Any online gaming platform – **domestic or foreign**– offering real money online games to Indian users will need to be a legal entity incorporated under Indian law.

➤ These platforms will also be treated as 'reporting entities' under the **Prevention of Money Laundering Act, 2002.**

o They will be required to report suspicious transactions to the Financial Intelligence Unit-India.

o **Nodal Ministries: MeitY may act as the nodal ministry** to regulate online gaming, **except for the e-sports category** on which the Department of Sports can take the lead.

➤ Certain other aspects of online gaming such as advertisements, code of ethics relating to content classifications etc. could be regulated by the **Information and Broadcasting Ministry**.

- The **Consumer Affairs Ministry** can regulate the sector for unfair trade practices.

Online Gaming Market in India:

• **Market growth**: The online gaming industry in India grew at a compounded annual growth rate (CAGR) of 38% between 2017-2020, as opposed to 8% in China and 10% in the US.

• **New user base**: India's percentage of new paying users (NPUs) in gaming has been the fastest growing in the world for two consecutive years, at 40% in 2020 and 50% in 2021.

• **Revenue generation:** The revenue of the Indian mobile gaming industry is expected to reach $5 billion in 2025.

Banning of Online Gaming:

o Many social activists, government officials and those in law enforcement believe that online games like rummy and poker are **addictive in nature**, and when **played with monetary stakes leads to depression, mounting debts and suicides**.

o Earlier, the World Health Organisation (WHO) had announced a plan to include **"gaming disorder"** as a mental health condition.

INDIA'S SPACE ECONOMY

CONTEXT:

According to the report titled 'Developing the Space Ecosystem in India: Focusing on Inclusive Growth', India's space economy was pegged at $9.6 billion in 2020 and is expected to touch $12.8 billion by 2025.

What does Space Economy mean?

o Space Economy can be understood as **the full range of activities and the use of resources that create value and benefits to human beings in the course of exploring, researching, understanding, managing, and utilising space.**

o **New Space Economy 2022** represents an innovative approach to the Space Sector under multiple aspects, such as the number and typology of the main players and investors, the space application, its economic impact, old objectives linked to science and the Space Race, together with new objectives such as

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What is likely to spur the market forward?

o increased demand for small satellites

o increase in demand for military and defense satellite communication solutions

o Setting-up spaceparks across the country will be key to attracting global startups working in the space sector

ET tech

Global space economy: Present and future

In 2020 $447 billion

By 2035 $800 billion (Est.)

By 2047 $1.5 trillion (Est.)

India Space Policy 2022

Size of the Indian space economy: **$5 billion**

● **3%** India's contribution to the global space economy

○ **Over 10%** Estimated contribution: Over 10% by 2030 (CAGR of 48%)

PERCENTAGE OF THE GDP: 0.19% (SLIPPED FROM 0.26% IN 2011-12)

Source: ISRO, Economic Survey 2022-23
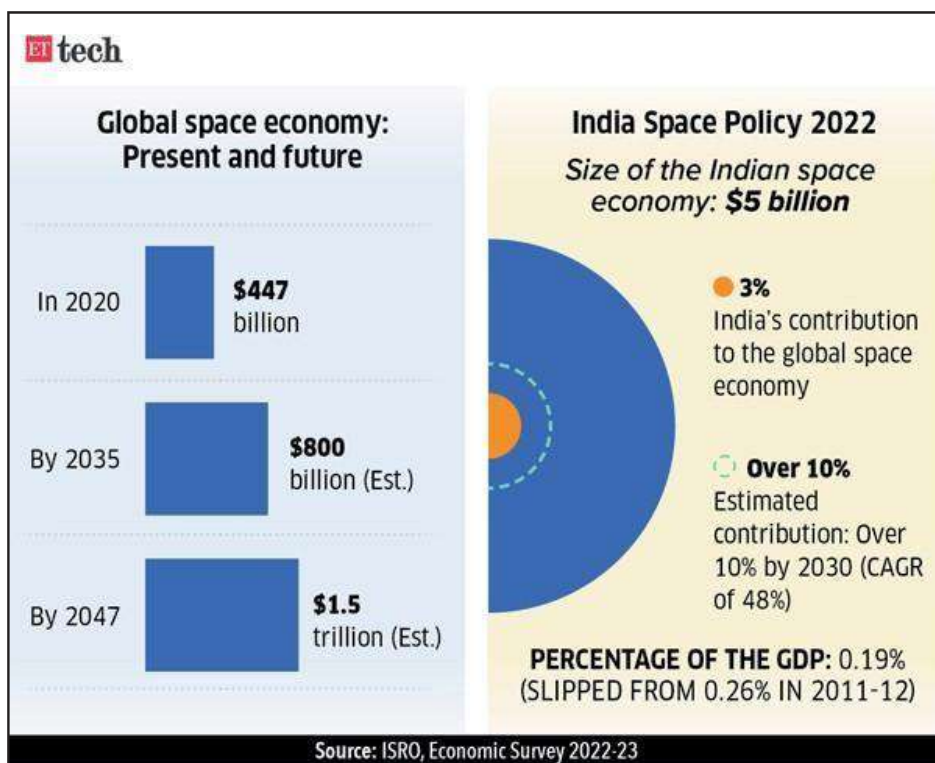
How India is going to achieve the estimated targets?

o By increasing its Indigenous manufacturing of Satellites and Space objects.

o By Inclusion of Private players in the field of Space.

o By attracting global start-ups working in the space sector and help to incubate space tech companies in India.

> **Do you know?**
> - India has of over **100 space tech start-ups** with investments in the segment touching **$68 million** in 2021.

Recent Government Initiatives:

o **Privatisation:** The government opened up the space sector to private sector players.

o **IN-SPACe & ISpA:** In 2020, the government announced the formation of the **Indian National Space Promotion and Authorisation Centre** (IN-SPACe) and the Indian Space Association (ISpA).

o **Updated Policies:** The government recently updated the **SpaceCom** and **SpaceRS policies,** liberalizing the traditional satellite communication and remote sensing sectors.

o **New Drone Rules:** The government also released new rules for dronesas well as guidelines for acquiring and producing geospatial data.

o **Registration for space objects:** The national registration mechanism for space objects has been implemented, with five satellites registered. A total of six memorandums of understanding have been signed with private or academic entities for sharing technical expertise and facilities.

Steps to scale up

Updated SpaceCom & SpaceRS policies: liberalised traditional satellite communication & remote sensing sectors

New rules for drones & guidelines for geospatial data

National registration mechanism for space objects: five satellites registered

What further measures are required?

o A comprehensive policy for the space sector

o Introduction of production linked incentive (PLI) scheme

o Promotion of independent launch solutions for private sector satellites

NEED OF LEGAL RIGHTS TO ANIMALS, TREES, AND RIVERS

CONTEXT:

The report for the Law Society explores the scope of recalibrating the relationship between humans and mother earth in the future.

About the Report:

o The report is titled as *"Law in the Emerging Bio-Age"* by the Law Society (an independent professional body for solicitors in England and Wales).

o The subsequent report concluded that the evolution of this relationship demands new regulations, **including rights for non-humans**.

Key Questions raised in the report:

o Role of legal structure in improving human relations with living systems and our planet.

o Role of law in supporting the evolution of ethics in the capacity to manipulate living systems.

o Outcomes of granting rights to non-human life forms.

o Articulating legal frameworks to make them fit for the future.

o Legal Practitioner for the **bio age.**

Why it is necessary to grant nature rights?

o **Need to protect nature** — animals, plants, rivers, and beyond — because their existence is more than sustaining human lives. It is the holistic recognition that all life and all ecosystems on our planet are deeply intertwined.

o **Nature has an intrinsic right to exist** free of harm, regardless of the value, it provides humans.

o **Impact of anthropogenic activities:** Impacts from human activity on land and in the water, is influencing nature.

  ➤ Climate change, ocean acidification, permafrost melting, habitat loss, eutrophication, stormwater runoff, air pollution, and contaminants are a few examples calling for attention.

o **Impact of climate change:** Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. They are affecting non-human entities and their right as well.

Few Exemplary Regulations:

o **Ecuador was the first to recognize the rights of nature.** Article 71 begins: "Nature, where life is reproduced and occurs, has the right to integral respect for its existence.

o **Bolivia** adopted a biocentric/biocentric approach through the Law on the **Rights of Mother Earth (2010);** the enumerated rights are the rights to life, diversity of life, water, clean air, equilibrium, restoration, and pollution-free living.

o There is also a campaign to make **ecocide a prosecutable offense** at the international criminal court (ICJ), Hague.

Need to give non-human entities rights:

o **To tackle climate breakdown and biodiversity loss,** countries need to provide the 'rights' to the neglected elements of nature.

o **Something very different has to be done** to leave this planet more survivable to future generations.

o It means **granting legal rights and protections to non-human entities** such as animals, trees, and rivers is essential.

o Human makes up a fraction of this global ecosystem, and an **evolving legal framework** suited for the future requires **assigning rights to non-human entities**.

Existence of Nonhuman Rights:

o **Rights of Nature**: The concept of nature is not currently understood to include individual animals. But the provisions recognizing the **rights of nature** still implicitly acknowledge that a nonhuman can have rights.

  ➤ It is also important to understand that, theoretically, the rights of nature may be violated even in the absence of any injury to humans.

o **Judicial Recognition:** Rivers have been treated as legal persons in some jurisdictions, notably in Bangladesh, Colombia, Ecuador, India, New Zealand, and the United States.

  ➤ A **landmark judgment of the Uttarakhand High Court (UHC),** has extended the *legal personhood* to the Ganga, the Yamuna, their tributaries, and all other natural objects.

  ➤ In another case, the High court of Punjab and Haryana recognized all animals in the animal kingdom, including avian and aquatic species, as legal entities.

  ➤ **Banning Jallikattu Practice:** The Supreme Court order of 2014 bans jallikattu, because traditional sports involved the taming or overpowering of bulls.

Constitutional Provisions:

o *Article 51-A* of the Constitution of India states that it is the fundamental duty of all citizens to have compassion for living creatures.

o *Article 48-A* of the constitution of India requires the State to protect and improve the environment and to safeguard the forests and wildlife of the country.

o At **local and village level**, Panchayats have been empowered under the constitution to take measures such as soil conservation, water management, forestry and protection of the environment and promotion of ecological aspect.

New Legal Framework:

o **Inclusive Framework:** We need a framework that is more ecocentric than anthropocentric.

o **Ethical questions:**

➤ Ethics of bringing back species from extinction or eradicating existing ones.

➤ Wiping out mosquitoes, which carry malaria and other diseases**.**

➤ Calves are taken away from their mothers and even pets,

◉ WAY FORWARD:

o **Neo-Pantheism:** It is like enshrining, the idea of pantheism into 21st-century legal frameworks. It amounts to essentially granting personhood rights to non-human entities.

o **Beyond Numinous Rights:** The rights given to non-human entities must not be seen from the limits of culture and religious beliefs.0

o **Repositioning Laws:** It is a moral duty and legal obligation of the state to protect the rights of animals and change animals' legal status based on changing morality and existing legal principles.

THE SOLUTION TO RADICALISATION IN INDIA

CONTEXT:

The ban on the PFI has raised the question of the effectiveness of banning radical organizations in arresting the rise of radicalization.

a **Such developments raise questions over the fruitfulness of politico-legal actions like banning an out*fit* to keeping a check on the growth of radicalization.**

About Radicalization:

o Radicalization is the process by which an individual or a group comes to adopt increasingly radical views in opposition to a political, social, or religious status quo.

o It is when someone starts to believe or support extreme views and then participates in extremist groups or acts.

Types of Radicalizations:

o **Right-Wing Extremism:** This type of radicalization is usually associated with fascist, racist, ultranationalist, and supremacist ideas**.**

o **Left-Wing Extremism:** It focuses mainly on anti-capitalist demands and calls for the radical transformation of political and social systems.

o **Politico-Religious Extremism:** This form of radicalization generally involves a political interpretation of religion.

o **Single-Issue Extremism:** The category usually includes radical environmental or animal rights groups, anti-abortion extremists, certain anti-gay/anti-feminist movements, and ultra-individualist or independent extremist movements.

The inception of PFI:

➤ It is a radicalized Islamist outfit, operating for close to **three decades**.

➤ The PFI's has been alleged of having links with outlawed Islamist organizations such as:

➤ the Students' Islamic Movement of India (SIMI)

➤ the Bangladesh-based terror organization

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➤ Jamat-ul-Mujahideen-Bangladesh (JMB)

➤ and the Islamic State of Iraq and Syria (ISIS)

o The PFI has also been carrying out its activities in other states of India through like-minded organizations.

PFI and its activities:

o PFI and similar organizations can be seen as **not having Islamic subtitles** in their organization's names. This is purposefully done to **legitimize the PFI's official claim as a "neo-social organization**".

o They also try to **forge alliances with non-Muslim organizations** to **avoid any surveillance from state agencies.**

o PFI is one of the most well-organized radical outfits, ensuring that it **leaves no trace or evidence of its activities behind.**

"Ban" as a solution to religious radicalism:

The Answer to the question is perhaps non-affirmative.

o **Resorting to incarnation:** The past observation shows that extremist organizations have a record of morphing from one organization to another. It's difficult to rule out the new incarnation of the same organization in the future.

o **Limitations of Politico-legal actions**: The banning of these radical outfits is undoubtedly crucial to curb violent activities, but such a measure is insufficient **given their structured approach.**

o **Investing at the social level**: Right after the ban, the government must reach out to those communities from which these radical outfits often seek support.

➤ This will not only expose them but also make them aware of the nefarious ideologies of these organizations.

➤ **The absence of comprehensive measures** at the social level often **nullifies the initial role of politico-legal measures.** As the **banned outfits have inherent tendencies of resurfacing** and portraying of them as messiahs to the downtrodden to further their radical agenda.

o **Supporting Minorities:** Radicalisation is usually a process, not an event. During that process, it is possible to intervene to **prevent minorities/vulnerable people** from getting radicalized.

➤ The government must also work towards assuring the protection of minority communities from any attempts at victimizing and marginalizing them. This would help in curbing the very foundation of radicalism.

Prevention of radicalization:

o Countering terrorist propaganda

o Curbing hate speech

o Addressing radicalization in prisons

o Promoting inclusive society, education, and common values

o boosting research, evidence-building, monitoring, and networks

Working on "Prevent Strategy":

o **Responding to the Ideological Challenges:** All such groups have an ideology. Promoting that ideology, frequently on the internet, facilitates radicalization. So, disrupting their ability to promote radicalization is a fundamental part of Prevent's strategy.

o **Prevent people from being drawn into radicalization** and ensure that they are given appropriate advice and support.

o **Working with sectors and institutions:** Priority areas include education, faith, health and charities, and socio-religious groups, which are often used to radicalize people in the name of upliftment.

Government Initiatives:

o **Legal mechanisms:** The **National Investigation Agency (NIA**) Act was introduced in 2008 after the terrorist attacks in Mumbai (2008).

➤ The **Unlawful Activities (Prevention) Act (UAPA**) was introduced in 1967. It aims to provide for the more effective prevention of certain unlawful activities of individuals and associations dealing with terrorist activities.

o **Institutional mechanisms: Counter-Terrorism and Counter Radicalization (CTCR) divisions** of the Ministry of Home Affairs are the key wings of the Government of India dealing with "radicalization, counter-radicalization, terrorism, and counter-terrorism".

o **Cyberworld and technology mechanisms: The Indian Penal Code (IPC) Sections** 124A, 153A, 153B, 295A, and 505 prescribe a firm approach against any word, spoken or written, that promotes disharmony, enmity, and hatred.

CLICK CHEMISTRY & ITS APPLICATIONS

CONTEXT:

Recently, the Nobel Prize in chemistry, 2022 was awarded to scientists Carolyn R. Bertozzi, Morten Meldal and K. Barry Sharpless for their development of 'click chemistry' and 'bioorthogonal chemistry'.

a **So let us assess the applications of 'Click chemistry' and understand how it works.**

◉ ABOUT:

o Click chemistry is a method for attaching a 'probe' or 'substrate' of interest to a specific biomolecule, a process called bio-conjugation.

o The possibility of attaching fluorophores and other reporter molecules has made click chemistry a very powerful tool for identifying, locating, and characterizing both old and new biomolecules.

> Fluorophores are **microscopic molecules, which may be proteins, small organic compounds, or synthetic polymers that absorb light of specific wavelengths and emit light of longer wavelengths**.

o One of the earliest and most important methods in bioconjugation was to express a reporter on the same open reading frame as a biomolecule of interest.

o Notably, **GFP was first** (and still is) expressed in this way at the **N- or C- terminus** of many proteins. However, this approach comes with several difficulties.

o For instance, GFP is **a very large unit** and can often affect the folding of the protein of interest.

> **Bio-orthogonal Chemistry:**
> - Bioorthogonal chemistry represents a class of **high-yielding chemical reactions** that proceed rapidly and selectively in biological environments without side reactions towards endogenous functional groups.

o To overcome these challenges, chemists have opted to proceed by identifying pairs of **bioorthogonal reaction partners**, thus allowing the use of small exogenous molecules as **biomolecular probes**.

◉ ANALYSIS

What are its applications?

o Click chemistry, is a way of building molecules like snapping Lego blocks together.

o It takes **two molecules** to click, so researchers refer to each one as '**click partners'**.

o It is a term that was introduced by **K. B. Sharpless in 2001** to describe reactions that are high yielding, wide in scope, create only by-products that can be removed without chromatography, are stereospecific, simple to perform, and can be conducted in easily removable or benign solvents.

o The click reaction has proven to be **very useful for modifying functional biomolecules because of its high chemoselectivity**.
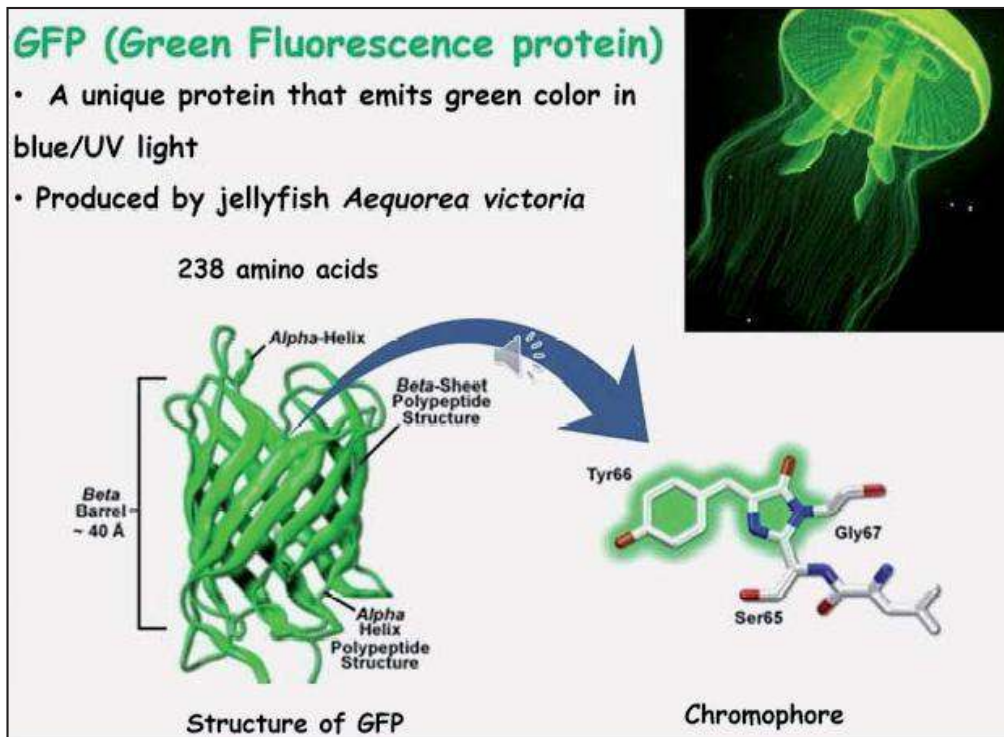
o Biologic oligomers and polymers, such as peptides, nucleic acids, and carbohydrates, have been modified by using the copper-catalyzed azide-alkyne cycloaddition click reaction.

How it works?

o Click chemistry is the **1,3-dipolar cycloaddition of an azide and alkyne to form 1,2,3-triazole**, which has been applied for a wide range of applications due to its simple workup and purification steps, rapidly creating new products.

o For a reaction to be considered a click reaction, it **must satisfy certain characteristics**:

o modularity

  ➤ insensitivity to solvent parameters

  ➤ high chemical yields

  ➤ insensitivity towards oxygen and water

➤ regiospecificity and stereo specificity

➤ A large thermodynamic driving force (>20 kcal/mol) to favour a reaction with a single reaction product. A distinct exothermic reaction makes a reactant "spring-loaded".

- **The process would preferably:**

    ➤ have simple reaction conditions

    ➤ use readily available starting materials and reagents

    ➤ use no solvent or use a solvent that is benign or easily removed (preferably water)

    ➤ provide simple product isolation by non-chromatographic methods (crystallisation or distillation)

    ➤ Have high atom economy.

Is Click Chemistry irreversible?

➤ 'Click chemistry' allows for the linking together of chemical modules, however, there are currently no methods that also allow for facile **'de-clicking'** to unlink them.

Additional applications include:

o Two-dimensional gel electrophoresis separation

o Modification of natural products and pharmaceuticals

o Drug discovery

o Modification of DNA and nucleotides by triazole ligation

o Polymers and biopolymers

o Surfaces

o Material science

o Nanotechnology etc.

Limitations:

o Limitations emerge from the chemistry of the probe to its target. In order for this technique to be useful in biological systems, click chemistry must run at or near biological conditions, produce little and (ideally) non-toxic byproducts, have (preferably) single and stable products at the same conditions, and proceed quickly to high yield in one pot.

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Section: B
(SPECIALS)
CURRENT AFFAIRS

JUDICIAL APPOINTMENTS BY THE COLLEGIUM IS QUESTIONABLE: WHY?

CONTEXT:

Recently addressing the National Cultural Diversity Summit of Asian Australian Lawyers' Association Inc., former Chief Justice of India (CJI) has made certain observations regarding the collegium system which once again brought the much-debated issue of the process of judicial appointments to the fore.

◉ **BACKGROUND**

o The collegium system evolved out of a series of judgments of the Supreme Court that are called the "**Judges Cases".**

o The collegium came into being through the interpretations of the relevant provisions of the Constitution that the Supreme Court made in these Judges Cases.

> **Evolution of the System:**
>
> - **First Judges Case (1981):** It declared that the "primacy" of the CJI's (Chief Justice of India) recommendation on judicial appointments and transfers can be refused for "cogent reasons."
>   - ➤ The ruling gave the Executive primacy over the Judiciary in judicial appointments for the next **12 years**.
> - **Second Judges Case (1993):** SC introduced the Collegium system, holding that "**consultation**" really meant "concurrence".
>   - ➤ It added that it was not the **CJI's individual opinion**, but an institutional opinion formed in consultation with the two senior-most judges in the SC.
> - **Third Judges Case (1998):** SC on the President's reference (**Article 143)** expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues.

◉ **ABOUT**

What is Collegium system?

o The collegium is a group consisting of the **Chief Justice of India and the four senior-most judges** of the **Supreme Court** that decides the **appointment of judges** to the apex court.

How it works?

o The Judges of the higher judiciary are appointed only through the collegium system, and the government has a role only after names have been decided by the collegium.

o Names recommended for appointment by a **High Court collegium** reach the government only after approval by the **CJI** and the **Supreme Court collegium**.

o Sometimes the government delays making the appointments, especially in cases where the government is perceived to be unhappy with **one or more judges** recommended for appointment by the collegium.

Appointment Procedures:

For Judges of Apex Court	For High Court CJ
- For other judges of the SC, the proposal is initiated by the CJI. - The CJI consults the rest of the Collegium members, as well as the senior-most judge of the court hailing from the High Court to which the recommended person belongs. - The consultees must record their opinions in writing and it should form part of the file. - The Collegium sends the recommendation to the Law Minister, who forwards it to the Prime Minister to advise the President.	- The Chief Justice of the High Court is appointed as per the policy of having Chief Justices from outside the respective States. - The Collegium takes the call on the elevation. - High Court judges are recommended by a Collegium comprising the CJI and two senior-most judges. - The proposal, however, is initiated by the outgoing Chief Justice of the High Court concerned in consultation with two senior-most colleagues..

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	- The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister

◉ **ANALYSIS**

What is the role of Government in the judicial appointments?

o The role of the government in this entire process is limited to **getting an inquiry** conducted by the **Intelligence Bureau (IB)** if a lawyer is to be elevated as a judge in a High Court or the Supreme Court.

o The government can also raise objections and seek clarifications regarding the collegium's choices, but if the collegium reiterates the same names, the government is bound to appoint them.

On what grounds has the collegium system been criticised?

o **On account of Transparency**: The system is non-transparent, since it does not involve any official mechanism or secretariat.

o **No definite Eligibility:** it is seen as a closed-door affair with any prescribed norms regarding eligibility criteria, or even the selection procedure.

o **Lack of Consensus and Consultation**: There is no public knowledge of how and when a collegium meets, and how it takes its decisions. There are no official minutes of collegium proceedings.

What were Attempts to reform the Appointment System?

o The attempt made to replace it by a **'National Judicial Appointments Commission'** (through Ninety-ninth Amendment Act, 2014) was struck down by the court in 2015 on the ground that it posed a threat to the independence of the judiciary.

◉ **WAY FORWARD**

o Filling up of vacancies is a **continuous and collaborative process involving the executive and the judiciary,** and there cannot be a time frame for it. However, it is time to think of a permanent, independent body to institutionalise the process with adequate safeguards to preserve the judiciary's independence guaranteeing judicial primacy but not judicial exclusivity.

o It should **ensure independence, reflect diversity, and demonstrate professional competence and integrity.**

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Section: C
(PRELIMS)

CURRENT AFFAIRS

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FIRST PHASE OF THE 'SHRI MAHAKALESWAR CORRIDOR' INAUGURATED

◉ **CONTEXT:** **Prime Minister inaugurated the first phase of the 'Shri Mahakaleswar Corridor' in Ujjain, Madhya Pradesh.**

About Mahakaleshwar Jyotirlinga

- The temple is located in the historical city of Ujjain in Madhya Pradesh, India. It is situated on the banks of the holy river, Shipra.

- Mahakal is the only jyotirlinga facing south; the rest face east. That is because the south is believed to be the direction of death.

- The jyotirlingas, or shrines, are believed to be the most sacred abodes of Shiva.

- **Origin:** The time of origin of the temple may be assigned to the pre-historic period as the Puranas say it was first established by Prajapita Brahma.

- **Style:** The Mahakaleshwar temple has been built in Maratha, Bhumija and Chalukya architectural styles.
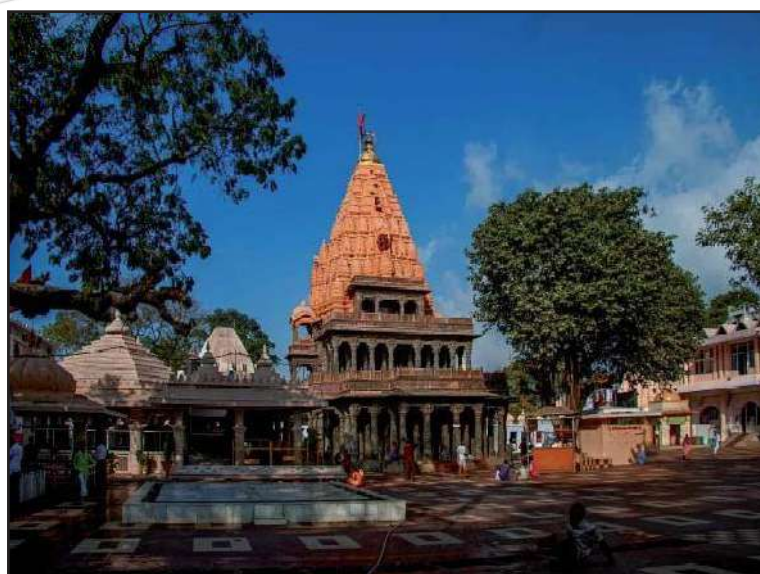
What are Jyotirilingas?

- Jyotirlingas are sacred shrines of Lord Shiva; it is believed that Lord Shiva himself visited these places and hence they have a special place in the hearts of devotees.

- There are 12 of them in India.

- Jyotirlinga means 'column or pillar of light'. The 'stambha' symbol represents that there is no beginning or end.

Shri Mahakaleswar Corridor:

- It is the first phase of the Mahakaleshwar Temple corridor development project worth ⏢856 crores.

- After completion will become one of the largest corrid⏢

- The project spreads around the old Rudrasagar lake.

- The lake has also been redeveloped as part of the Mahakal River project.

- The project will not only bring a large number of devotees to Ujjain but will also make the city a global tourist destination.

Other jyotirlinga sites:

- Somnath in Gujarat

- Dwarka's Nageswar in Gujarat

- Mallikarjuna at Srisailam in Andhra Pradesh

- Omkareshwar in Madhya Pradesh

- Kedarnath in Uttarakhand

- Bhimashankar in Maharashtra

- Triambakeshwar in Maharashtra

- Aurangabad's Grishneshwar in Maharashtra

- Viswanath at Varanasi in Uttar Pradesh

- Baidyanath Temple in Jharkhand's Deoghar

- Rameshwar at Rameswaram in Tamil Nadu

About Ujjain:

- The city of Ujjain was also one of the primary centers of learning for Hindu scriptures, called Avantika in the 6th and 7th centuries BC.

- Astronomers and mathematicians such as Brahmagupta and Bhaskaracharya also made Ujjain their home.

- According to Surya Siddhanta (4th century), which is one of the earliest available texts on Indian astronomy, Ujjain is geographically situated at the intersection of zero meridians of longitude (Madhyarekha) and the Tropic of Cancer (Karkavrutta) intersect.

- This is the reason often sighted for it being connected to time and space, and the main Shiva temple is dedicated to Mahakal, the lord of time.

KONDA REDDI TRIBE

◉ **CONTEXT:**   **Dried bamboo shoots form an essential part of the dietary chart to the member of Konda Reddi. It is because of the belief of them being highly nutritious.**

About Konda Tribe:

- It is **one of the most backward tribal groups** in the states of **Andhra Pradesh and Telangana.**

- They inhabit on both the banks of the Godavari River (East and West Godavari districts), in the hilly-forest region of Khammam (Telangana) and Srikakulam (Andhra Pradesh).

- They live in the **interior forest areas largely cut off from the mainstream**.

- Traditionally, they were **shifting cultivators,** and recently, some of them have adopted settled agriculture and horticulture.

- Their mother tongue is Telugu with a unique accent.

- Konda Reddis has also been recognized as a **Primitive Tribal Group (now Particularly Vulnerable Tribal Group).**

- The **Konda Reddis are known for their eco-friendly practices** such as the use of household articles made of bamboo, bottle gourd, and seed**.**

Details:

- The tribal people inhabiting the forest are entitled to collect every form of bamboo tree, which is classified as **Minor Forest Produce (MFP).**

- **They have the right to exploit its commercial value for their livelihood.**

- As per their practice, they hang the garlands of bamboo shoots on the roofs of their dwellings and dry them for a week.

- After about a week, when the shoots are fully dried, the families store them for consumption till the next monsoon.

> **Minor Forest Produce (MFP):** MFP includes all non-timber forest produce of plant origin and includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins, and many forms of food including nuts, wild fruits, honey, lac, tusser, etc.

BETI BACHAO, BETI PADHAO NOW INCLUDES SKILLING

◉ **CONTEXT:** **The Centre has expanded the scope of its flagship outreach program 'Beti Bachao, Beti Padhao' to include skilling.**

Details:

- The government has decided to include skilling for girls in its Beti Bachao, Beti Padao programme and has included the following component in the scheme:

  o Ensuring a 1% annual increment in enrolment at the secondary school level

  o To raise awareness about safe menstrual hygiene

  o To promulgate the elimination of child marriages

- The scheme will now also focus on **increasing the enrolment of girls in secondary education**, particularly in **STEM (Science, Technology, Engineering, Mathematics) subjects**.

- Women have been historically under-represented in areas such as technology.

> **About Beti Bachao, Beti Padao:**
>
> - It was **launched in January 2015 with the aim to address sex-selective abortion** and the **declining child sex ratio** which was 918 girls for every 1,000 boys in 2011.

- This is a **joint initiative** of the Ministry of Women and Child Development, the Ministry of Health and Family Welfare, and the Ministry of Human Resource Development.
- The program is being implemented across 405 districts in the country.

RTI PLEAS PILE UP AT INFORMATION COMMISSIONS

◉ **CONTEXT:** **Vacant posts and inadequate members are taking a toll on the transparency regime and it is resulting in pendency in the resolution of RTI pleas.**

Details:

- As per the latest update-
  - About 3.15 lakh complaints or appeals are pending with 26 information commissions across India.
  - The highest number of pending cases was in Maharashtra at 99,722 followed by Uttar Pradesh at 44,482.

> **Right to Information (RTI)**
> - Right to Information (RTI) means that **any Indian citizen** can request any information (which is supposed to be public knowledge) from the offices and departments of the state or central governments.
> - The **RTI Act, 2005** mandates that the said offices and departments must process such requests in a timely manner.
> - Under this Act, access to information from a public agency has become a **statutory right** of every citizen.
> - It is a fundamental right flowing from **Article 19(1) (a) of the Constitution.**

Problem Areas:

- **Not Imposing penalties:** Commissions did not impose penalties in 95% of the cases where penalties were potentially imposable.
  - **Large Backlog of cases**: The large backlog of cases has built up, resulting in a long waiting time for disposal, as governments have failed to make appointments of information commissioners in a timely manner.
  - **Tardy disposal rates**: In several commissions, there is a lack of transparency in their functioning which is resulting in a tardy disposal rate.
  - **Vacant Posts**: Out of a total of 165 posts of information commissioners, 41 are vacant, including two chief State information commissioners.
  - **Women's Representation**: There are only 5% (only 8) of women information commissioners in the country.

JUSTICE DINESH SHARMA TO HEAD UAPA TRIBUNAL

◉ **CONTEXT:** **The Centre has appointed Justice Dinesh Kumar Sharma as the presiding officer of the tribunal for the Unlawful Activities (Prevention) Act (UAPA), related to the ban on the Popular Front of India (PFI).**

About:

- The **National Investigation Agency** and **Enforcement Directorate** had alleged that PFI was engaged in raising and collecting funds from abroad.

- They were also reported transferring funds to India through "**clandestine and illegal channels**".

- The Ministry of Home Affairs (MHA) declared the Popular Front of India (PFI) and its front organizations including its student wing- the Campus Front of India (CFI) as **an "unlawful association"** under the Unlawful Activities (Prevention) Act (UAPA).

- The Muslim organization has been banned for five years along with eight associates or front organizations.

UAPA Law

- **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-related crimes, **it deviates from ordinary legal procedures** and **creates an exceptional regime** where **constitutional safeguards of the accused are curtailed**.

CENTRE NOTIFIES CREDIT GUARANTEE SCHEME FOR STARTUPS

⊙ **CONTEXT:** **The Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry has notified the credit guarantee scheme for start-ups.**

About Credit Guarantee Scheme for Startups (CGSS):

- This scheme would help to provide the much-needed **collateral-free debt funding to start-ups**.

- The scheme will act as a **key enabler and risk mitigation measure** for the lending institutions enabling collateral free funding to startups.

- The scheme has been approved for the purpose of **providing credit guarantees** to loans extended by **Member Institutions (MIs)** to finance eligible borrowers.

- **Member Institutions (MIs)** include financial intermediaries (banks, financial institutions, Non-Banking Financial Companies) engaged in lending/investing and conforming to the eligibility criteria approved under the Scheme.

- The credit guarantee cover under the Scheme would be **transaction based and umbrella based.**

- The exposure to individual cases would be **capped at Rs. 10 crore per case** or the actual outstanding credit amount, whichever is less.

- The **umbrella-based guarantee cover** will provide guarantee to **Venture Debt Funds (VDF)** registered under **Alternative Investment Funds (AIF)** regulations of Securities and Exchange Board of India (SEBI).

Statistics about Start-ups in India:

- India has become the **3rd largest start-up ecosystem** in the world after the US and China.

- India is home to as many as **75,000 Startups**.

- **49% of start-ups are from tier-2 and tier-3 cities.**

- There are currently **105 unicorns,** out of which 44 were born in 2021 and 19 in 2022.

- Startups are also emerging in the fields like IT, agriculture, aviation, education, energy, health and space sectors.

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MUSLIM FEDERATION TO RESERVE SEATS FOR WOMEN IN ITS PANEL

◉ **CONTEXT:** For the first time ever the seats have been reserved on caste lines in any Muslim body in the country.

Details:

o All India **Two seats each have been earmarked for women and notified Muslim OBC representatives.** This is the **first time ever that seats have been reserved on caste lines** in any Muslim body in the country.

o It has announced plans to reserve seats for women and Pasmanda community representatives to the body's **25-member national executive**.

How these changes have been introduced?

- The changes have been brought in with select amendments to the '**Constitution of the Mushawarat'.**

- The amendments were brought in through a referendum that took place via **a postal ballot.**

- The moment the amended constitution got the consent of the members, it was considered passed.

- A little over 81% of the members voted in favour of reservation for women through a referendum while nearly 74% voted in favour of Pasmanda reservation.

PANEL TO STUDY SC STATUS OF DALITS POST-CONVERSION

◉ **CONTEXT:** A three-member commission to be headed by ex-CJI K.G. Balakrishnan has been asked to study the SC status of Dalits post-conversion.

Details:

> The **2011 Census places** the number of scheduled castes in India at 16.6 percent of the total population, or approximately 166,635,700 people.

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- The Union government is seeking to examine the issue of whether Scheduled Caste (SC) status can be accorded to Dalits who have over the years converted to religions **other than Sikhism or Buddhism.**

- This is crucial when there is already a petition in the Supreme Court, regarding the inclusion of **Dalit Christians** and **Dalit Muslims** and the removal of the religious criteria for inclusion as SCs.

Who can be considered a scheduled caste?

- The **Constitution (Scheduled Castes) Order, 1950** provides for only those belonging to **Hindu, Sikh, or Buddhist** communities to be categorized as SCs.

- **Initially, the Order only allowed for Hindu communities to be classified as SCs** based on the social disabilities and discrimination they faced due to untouchability.

- It was **amended in 1956 to include Sikh communities** and again in **1990 to include Buddhist communities as SCs.**

Caste:

- Caste is something that is determined by the birth of an individual.

According to D.N. Mazumdar;

– *'Caste is a closed class' i.e. class refers to people based on property, business, occupation i.e. one cannot change his own caste system but can change the class system and can be a member of many classes at the same time.*

AGRI-CREDIT SOCIETIES TO BE SET UP IN ALL PANCHAYATS

◉ **CONTEXT:** **Union Home and Cooperation Minister said that primary agricultural credit societies (PACS) will be set up in all panchayats of the country.**

What are Primary Agricultural Credit Societies?

- PACS are **ground-level cooperative credit institutions** that provide short-term, and medium-term agricultural loans to the farmers for the various agricultural and farming activities.

- It works at the grassroots gram Panchayat and village level.

- The first Primary Agricultural Credit Society (PACS) was formed in the year 1904.

- The PACS functioning at the base of the cooperative banking system constitutes the major retail outlets of short-term and medium-term credit to the rural sector.

PACS in the country:

- There are about 95,000 PACS in the country of which only **65,000 are active** at present.
- According to the union home minister, **all panchayats must have one such body by 2027.**
- This will be helpful in promoting farming and dairy activities at the grassroots level.
- The cooperation ministry is working on a plan to set up multi-purpose PACS in panchayats over the next five years.

Functions of PACS

- Maintaining the supply of the hired light machinery for agricultural purposes.
- To arrange for supplying of agricultural inputs. Examples -are seeds, fertilizers, insecticides, kerosene, etc.
- It will carry out activities like the sale of gas and petrol and the storage and marketing of dairy and farm products to alleviate poverty and empower women.
- It helps its members by providing marketing facilities that could enhance the sale of their agricultural products in the market at the proper prices.
- Generating optimum financial benefits for people engaged in animal husbandry and allied sectors.

PILOT LAUNCH OF E-RUPEE FOR SPECIFIC USE CASES

◉ **CONTEXT:**   **The Reserve Bank of India (RBI) is going to commence limited pilot launches of the e-rupee, or Central Bank Digital Currency (CBDC) or digital rupee, for specific use cases.**

About e-rupee:

- **E-rupee is the same as a fiat currency** and is exchangeable one-to-one with the fiat currency. Only its form is different.
- It can be **accepted as a medium of payment**, legal tender, and a safe store of value.
- The digital rupee would **appear as a liability on a central bank's balance sheet.**

Types of e-rupees:

- Based on the usage and the functions performed by the digital rupee and considering the different levels of accessibility, CBDC can be demarcated into two broad categories:

▮ **General purpose (retail) (CBDC-R):**

- o It is an **electronic version of cash** primarily meant for retail transactions.
- o It will be **potentially available for use by all,** that is, private sector, non-financial consumers, and businesses and can provide access to safe money for payment and settlement as **it is a direct liability of the central bank.**
- o However, the RBI has not explained how the e-rupee can be used in merchant transactions in the retail trade.

▮ **Wholesale (CBDC-W):**

- o It is **designed for restricted access to select financial institutions.**
- o It has the potential to **transform the settlement systems for financial transactions** undertaken by banks in the government securities (G-Sec) segment, inter-bank market, and capital market more efficiently and securely.

What's RBI's plan?

- The development of CBDC could **provide the public with a risk-free virtual currency** that will give them legitimate benefits without the risks of dealing in private virtual currencies.
- The approach to the issuance of CBDC will be governed by **two basic considerations**:
  o To create a digital rupee that is as close as possible to a paper currency.
  o To manage the process of introducing the digital rupee in a seamless manner.
- RBI is not in favour of e-rupee with interest. Because people might withdraw money from banks and convert it to digital rupee - causing banks to fail.

Advantages of e-rupee:

- Reduction in operational costs involved in physical cash management
- Fostering financial inclusion
- Bringing resilience
- Efficiency and innovation in the payments system.
  • Add efficiency to the settlement system

- Boost innovation in the cross-border payments space
- Provide the public with uses that any private virtual currencies can provide, without the associated risks.

INDIA & U.K. FTA & ISSUES

◉ **CONTEXT:** **Despite the setback over Suella Braverman's (U.K. Home Secretary) comments on Indian migrants (discomfort about "open borders" with India), officials are optimistic to conclude a framework India-UK FTA.**

What are the persistent issues between India and UK?

- Illegal Migrants
- Mobility
- Data Localization
- Reducing tariffs on Scotch whisky
- Access to legal services

About Free Trade Agreement:

- It is a **pact between two or more nations to reduce barriers** to imports and exports among them.
- Under a free trade policy, goods and services can be bought and sold across international borders **with little or no government tariffs, quotas, subsidies, or prohibitions** to inhibit their exchange.
- The concept of free trade is the **opposite of trade protectionism or economic isolationism.**

India's Trade with the UK:

- The UK remained the **sixth largest investor in India**, with a cumulative investment of approximately **USD 31.92 billion during FY 2000-22.**
- This constituted around 5**.4% of the total Foreign Direct Investment (FDI)** into India.
- India's **trade in goods and services** with the UK amounted to **USD 31.34 billion in FY 2022**, as against USD 19.51 billion in 2015.

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- 618 UK Companies have been identified in India, they together employ approximately **4.66 lakh people** and have a combined **turnover of Rs 3,634.9 billion.**

Importance of Indo-UK Partnership

▌ **For the United Kingdom:**

- o **India is a key strategic partner for the UK** in the Indo-Pacific both in terms of market share and defense.

- o For Britain, a successful conclusion of an FTA with India would provide a **boost to its 'Global Britain' ambitions** as the **UK has sought to expand its markets beyond Europe since Brexit.**

- o Britain has been trying to seize opportunities in the growing economies of the Indo-Pacific to cement its place on the global stage as a serious global actor.

- o The British would be **better able to achieve this goal with good bilateral relations with India.**

▌ **For India:**

- o The UK is a **regional power in the Indo-Pacific** as it **possesses naval facilities in Oman, Singapore, Bahrain, Kenya, and British Indian Ocean Territory.**

- o The UK has also confirmed £70 million of British International Investment **funding to support the usage of renewable energy in India**, which will help in building renewable energy infrastructure and developing solar power in the region.

- o India has sought **easy market access for Indian fisheries, pharma, and agricultural products** besides **duty concession for labor-intensive exports.**

STUDY FINDS 'SHARP' DECLINE IN VULTURE POPULATION

Context: According to a New UK study, decline in Vulture population is one the key issues seen by all around the world. This issue has been addressed by many countries via conservation efforts, however still there is a need to improve the vulture tracking measures.

Why vultures matter?

- Vultures feeding on dead animals help **areas getting rid of carcasses** that, otherwise, would provide foul smells and scenery for a much longer period hence also known as **nature's cleanup crew**.

- Vultures also play a valuable role in keeping wildlife **diseases in check**.

Causes of decline:

> **Diclofenac i**s a veterinary non-steroidal anti-inflammatory drug (NSAID), which is used to treat pain and inflammatory diseases such as gout in carcasses that vultures would feed off.

- Uncontrolled veterinary usage of **non-steroidal anti-inflammatory drugs** (NSAID), including Aceclofenac, Ketoprofen and Nimesulide.

- Illegal use of the banned drug Diclofenac, are toxic to vultures if they feed on carcasses within **72 hours** of the drugs' administration to such livestock.

Vultures in India:

- Vultures are scavenging birds of prey. They are nature's most efficient scavengers.

- India shelters about **nine species** of vultures, but most of them face the danger of extinction.

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Sr. No.	Name of the Vulture Species	IUCN status	Pictorial Representation
1.	Oriental White-backed Vulture (Gyps Bengalensis)	Critically Endangered	
2.	Slender-billed Vulture (Gyps Tenuirostris)	Critically Endangered	
3.	Long-billed Vulture (Gyps Indicus)	Critically Endangered	
4.	Egyptian Vulture (Neophron Percnopterus)	Endangered	
5.	Red-Headed Vulture (Sarcogyps Calvus)	Critically Endangered	
6.	Indian Griffon Vulture (Gyps Fulvus)	Least Concerned	
7.	Himalayan Griffon (Gyps Himalayensis)	Near Threatened	
8.	Cinereous Vulture (Aegypius Monachus)	Near Threatened	
9.	Bearded Vulture or Lammergeier (Gypaetus Barbatus)	Near Threatened	

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Important Government Initiatives:

- **Vulture Conservation 2020-2025**: A Vulture Care Centre (VCC) was set up at Pinjore, Haryana in 2001 to study the cause of deaths of vultures in India.

- **The Jatayu Conservation Breeding Centre** in Pinjore is the world's largest facility within the state's Bir Shikargah Wildlife Sanctuary for the breeding and conservation of Indian vulture species.

- **SAVE (Saving Asia's Vultures from Extinction):** The consortium of like-minded, regional and international organizations, created to oversee and coordinate conservation, campaigning and fundraising activities to help the plight of south Asia's vultures.

- **Objective:** To save three critically important species from extinction through a single programme.

- **SAVE partners**: Bombay Natural History Society, Bird Conservation Nepal, RSPB (UK), National Trust for Nature Conservation (Nepal), International Centre for Birds of Prey (UK) and Zoological Society of London.

- **Ramadevarabetta Vulture Sanctuary**: The vulture sanctuary was officially set up in 2012, but the long-billed, Egyptian and white-backed vultures have been roosting in the hills of Ramanagara for several decades. These are the three species found in Ramanagara out of the nine found in India.

MICROPLASTICS DETECTED IN HUMAN BREAST MILK

◉ **CONTEXT:** Scientists have found microplastics in breast milk, raising concerns over potential health risks for infants.

Concern:

- In general, babies and young children are more vulnerable to chemical and particle exposure.
- Presence of microplastics in breast milk is of great concern for the extremely vulnerable population of infant.
- Researchers have also stressed that the advantages of breastfeeding are much greater than the disadvantages caused by the presence of polluting microplastics.

Advice to pregnant women:

- Avoiding food and drink packaged in plastic, cosmetics and toothpastes containing microplastics, and clothes made of synthetic fabrics.

What are microplastics?

- They are defined as plastics less than five millimeters in diameter—smaller in diameter than the standard pearl used in jewelry. It can be harmful to our ocean and aquatic life.
- There are two categories of microplastics: primary and secondary.
  - o **Primary Microplastics:** They are tiny particles designed for commercial use and microfibers shed from clothing and other textiles. E.g. Microbeads found in personal care products, plastic pellets and plastic fibres.
  - o **Secondary Microplastics**: They are formed from the breakdown of larger plastics such as water bottles.

Chemicals in plastic products:

- The two most important substances to watch out for in plastics are **bisphenol A (BPA),** used in a variety of consumer products, and certain '**phthalates'.**

- BPA has been classified as an **endocrine disruptor,** which means that it has toxic effect on our ability to reproduce, they may damage fertility or the unborn child.

India-Specific Initiatives:

- **Elimination of Single Use Plastic**: In 2019, the Prime Minister of India pledged to eliminate all single-use plastic in the country by 2022, with an immediate ban in urban Delhi.
- **Important Rules**: Plastic Waste Management Rules, 2016 state that every local body has to be responsible for setting up infrastructure for segregation, collection, processing, and disposal of plastic waste.
  ➤ **Plastic Waste Management (Amendment) Rules 2018** introduced the concept of Extended Producer Responsibility (EPR).
- **Un-Plastic Collective**: Un-Plastic Collective (UPC) is a voluntary initiative launched by the UNEP-India, **Confederation of Indian Industry and WWF-India.**
  ➤ The Collective seeks to minimise externalities of plastics on the ecological and social health of our planet.

VYOMMITRA'S SKILLS GET A LIFT OFF WITH DIGITAL GREY MATTER

◉ **CONTEXT:** **Vyommitra', the humanoid designed and developed by the ISRO has been successfully integrated with a computer 'brain' which enables it to 'read' control panels aboard and communicate with the ISRO ground stations.**

About Vyom Mitra:

- **The humanoid has been developed by the ISRO Inertial Systems Unit, Thiruvananthapuram.**

- **Vyom Mitra is a half-humanoid** and her body stops at the torso and has no legs.

- The humanoid will simulate the human functions required for space before real astronauts take off.

- She has been **designed to resemble a human with facial expressions** and **speech and sight.**

- Vyommitra is also set to get a **digital twin**. The 'twin' will undergo computer simulations where the control systems are tested for microgravity conditions.

- Vyommitra will fly aboard the first unmanned test flight ahead of the crewed Gaganyaan flight expected in 2024.

SPACE EXPLORATION FINDS 'SODIUM CONTENT' THROUGHOUT THE MOON SURFACE

◉ **CONTEXT:** **Recently, the Scientists from Indian Space Research Organisation (ISRO) have mapped out the global distribution of sodium on the Moon's surface.**

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◉ **ABOUT**

About the Exploration

- The research has been done using **CLASS instrument** carried by the second Indian Moon mission, **Chandrayaan-2.**
- It uses a large area **soft X-ray spectrometer**.
- This is the first effort to provide a global-scale measurement of sodium on the lunar surface using **X-ray fluorescent**

Characteristics of Sodium:

- Sodium is a soft metal that tarnishes within seconds of being exposed to the air.
- It also reacts vigorously with water.
- Sodium is used as a heat exchanger in some nuclear reactors, and as a reagent in the chemicals industry.
- It has **a low melting point, with a relative density of 0.97 at 20ºC (68ºF)**.
- From the commercial point of view, sodium is the most important of all the **alkaline metals.**

New Findings:

- The study found a thin **veneer of sodium atoms** that are weakly bound to the lunar surface apart from the minor quantities found in lunar rocks.
- These sodium atoms on the surface are liberated when enough energy is given to them by solar ultraviolet radiation and solar wind ions.
- Sodium is the only element apart from **potassium** that can be observed through telescopes in the lunar atmosphere (its exosphere).
- This new map of sodium would enable understanding of the **surface-exosphere**

X-ray fluorescent spectra:

- **X-ray fluorescence** is commonly used to study the **composition of materials** in a non-destructive manner.
- When the sun gives out solar flares, a large amount of X-ray radiation falls on the moon, triggering X-ray fluorescence.
- The CLASS measures the energy of the X-ray photons coming from the moon and counts the total number.
- The energy of the photons indicates the atom (for instance, sodium atoms emit X-ray photons of 1.04 keV) and the intensity is a measure of how many atoms are present.

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Section: D
(QUICK BYTES)
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WORLD MENTAL HEALTH DAY

◉ **CONTEXT:** The World Mental Health Day is observed on 10th of October every year. The Covid-19 pandemic has even made all of us realise the importance of mental health. To celebrate this day, GOI had announced to launch T-MANAS portal.

Mental illness is an amalgamation of biological, social, psychological, hereditary, and environmental stressors.

Other Government Initiatives:

- **National Mental Health Programme (NMHP):** Aim to be implemented in 704 districts for which support is provided to States/UTs through the **National Health Mission.**

- **Community Health Centre (CHC) and Primary Health Centre (PHC) levels** were established to address outpatient services, assessment, counselling/ psycho-social interventions, continuing care and support to persons with severe mental disorders, drugs, outreach services, ambulance services etc.

- **National Tele Mental Health Programme**: In Budget (2022-2023), India's Finance Minister announced the programme to improve access to quality mental health counselling and also care services.

- **T-MANAS** (Tele-Mental Health Assistance and Nationally Actionable Plan through States) aims to provide mental health support and interventions to people in remote and neglected areas.

- **Mental Healthcare Act, 2017:** It aims to provide mental healthcare services for persons with mental illness.

- **KIRAN:** The Ministry of Social Justice and Empowerment has launched a 24/7 toll-free helpline to provide support to people facing anxiety, stress, depression, suicidal thoughts, and other mental health concerns.

- **Manodarpan Initiative:** It is an initiative of the Ministry of Education under Atmanirbhar Bharat Abhiyan. It is aimed to provide psychosocial support to students, family members, and teachers for their mental health and well-being during the times of Covid-19.

> **Madhya Pradesh** is going to be the first State in the country to draft a suicide prevention strategy and the government has formed a task force for it.

SCO'S ANTI-TERROR EXERCISE HOSTED BY INDIA

◉ **CONTEXT:** **The National Security Guard (NSG) of India is hosting the multinational JATE 'Manesar Anti-Terror 2022' under the framework of the SCO Regional Anti-Terrorist Structure at the NSG Manesar Garrison.**

About the event:

- The exercise is aimed at exchanging expertise and best practices, and build synergy between the **Counter Terrorism Forces** of the **SCO RATS member countries** to enhance capabilities for conducting anti-terrorist operations and countering other security threats collectively.

- **Stage-1** of the exercise was conducted from July 27 to August 1, 2022 by the National Counter Terrorism Forces (NCTF) of SCO member countries in their respective territories.

- **Stage-2** of the Exercise is being conducted from October 08 to 13 at NSG Manesar Garrison, in which eight representatives from NCTF of Republic of Kazakhstan, Kyrgyz Republic, Republic of Uzbekistan, Russian Federation and NSG of Republic of India are participating.

- **Objective:** The exercise will provide a platform to the participating member countries to enhance their operational capabilities and exchange experience in combating terrorism, separatism and extremism, which are common regional security challenges.

Section: E
(MISCELLANEOUS)
CURRENT AFFAIRS

NOBEL PRIZE IN LITERATURE

CONTEXT:

French author Annie Ernaux, known for her deceptively simple novels drawing on personal experiences of class and gender, was awarded the 2022 Nobel Prize in Literature.

About Annie Ernaux:

o **Ernaux, née Duchesne,** was born in Lillebonne Normandy in 1940.

o She worked as a schoolteacher, and as a teacher at the Centre for Distance Education.

o She retired in 2000, devoting herself fully to her writing.

o More than 20 of her books have been school texts in France for decades.

o According to the jury, she was honoured "for the courage and clinical acuity with which she uncovers the roots, estrangements and collective restraints of personal memory".

About the Nobel prize in literature:

o The Nobel Prize in Literature has been awarded 115 times to 119 Nobel Prize laureates between 1901 and 2022.

o The 2021 Nobel Prize in Literature has been awarded to novelist Abdulrazak Gurnah.

Contribution of Indians:

Poet and writer Rabindranath Tagore was the first non-European and Indian to get a Nobel Prize in 1913 in literature.

NOBEL MEMORIAL PRIZE FOR ECONOMICS

CONTEXT:

In the recently annouched Nobel prize in Economics, Douglas W Diamond, Philip H Dybvig and Ben S Bernanke won for research into banking and financial crises.

Ben S Bernanke was the former chairman of the US Federal Reserve from **2006 to 2014** with **Douglas W Diamond**, an economist at the University of Chicago, and **Philip H Dybvig** at Washington University in St Louis.

◉ **ABOUT**

About the Award

o The economics award, among the highest honours in the field, is not, technically, a **Nobel Prize.**

o It is called the '**Sveriges Riksbank Prize'** in **Economic Sciences** in Memory of **Alfred Nobel** as it was not among the original categories that Alfred Nobel set out in his will **in 1895.**

o It is funded by **Sweden's central bank** and has been given out only **since 1969**.

Contributions:

o Bernanke in **1983** wrote a paper that broke ground in explaining that **bank failures** can propagate a financial crisis rather than simply being a **result of the crisis.**

o **Diamond and Dybvig** wrote a paper on the risks inherent in maturity transformation, the process of turning short-term borrowing into long-term lending.

o Diamond also wrote about how banks **monitor their borrowers**, noting that knowledge about borrowers disappears upon bank failures, extending the consequences of the upheaval.

NOBEL PEACE PRIZE

CONTEXT:

The Nobel Peace Prize for 2022 has been awarded to human rights advocate Ales Bialiatski from Belarus, the Russian human rights organisation Memorial, and the Ukrainian human rights organisation Center for Civil Liberties.

⦿ ABOUT

Belarus's Ales Bialiatski

o **Ales Bialiatski is a Belarusian human rights activist**, who is currently being held in prison without trial.

o He was one of the initiators of the democratic movement in Belarus in the mid-1980s.

o He has devoted his life to promoting democracy and peaceful development in his home country.

o He is credited with founding the organisation **Viasna (Spring)** in 1996.

o Viasna is a broad-based human rights organization that documented and protested against the authorities' use of torture against political prisoners.

Russian human rights organisation, Memorial

o **Russian human rights organisation** was established in 1987, by human rights activists in the former Soviet Union.

o **Nobel Peace Prize laureate Andrei Sakharov** and human rights advocate Svetlana Gannushkina were among the **organization's founders.**

o Memorial is based on the notion that **confronting past crimes is essential in preventing new ones.**

o It wanted to ensure that the **victims of the communist regime's oppression would never be forgotten.**

Ukrainian human rights organisation, Center for Civil Liberties:

o **The Center for Civil Liberties was founded in Kyiv in 2007.**

o It was aimed at advancing human rights and democracy in Ukraine.

o The committee has described them as **one of the leading actors in Ukraine.**

o They have been **successful in influencing the formation of public opinion** and public policy.

o They have been **actively participating in international networks** and solidarity actions to promote human rights.

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About Nobel Peace Prize:

- The **Nobel Peace Prize** is one of the five Nobel Prizes established by the will of Swedish industrialist, inventor, and armaments manufacturer Alfred Nobel.

- The peace prize is along with the prizes in Chemistry, Physics, Physiology or Medicine, and Literature.

- **The first Nobel Peace Prize was awarded in 1901.**

- **Selection of Nobel Prize laureates**

  ➤ The **Norwegian Nobel Committee** is responsible for the selection of eligible candidates and the choice of the Nobel Peace Prize laureates.

  ➤ The Committee is composed of five members appointed by the Storting (Norwegian parliament).

  ➤ The **Nobel Peace Prize is awarded in Oslo**, Norway, not in Stockholm, Sweden, where the rest of the other Nobel Prizes are awarded.

IAF TO LAUNCH NEW WEAPON SYSTEM BRANCH

CONTEXT:

The Indian Air force day (8 October) has been celebrated as compleion of 90 years of the Air force foundation. The IAF chief has announced to create a new weapon system branch for the first time since Independence.

a **The theme for the year 2022 was "IAF: Transforming for the Future".**

About the new Branch

o Though a major reorganisation of the branch system was last done in 1971. This new branch represents a much-needed reform.

o The new Weapon Systems branch will combine four streams –

  ➤ Surface-to-Surface Missiles

  ➤ Surface-to-Air Missiles

  ➤ Remotely Piloted Aircraft (drones)

  ➤ Weapon System Operators

o The creation of this branch would result in savings of over Rs.3, 400 crore due to reduced expenditure on flying training.

Major Branches: The IAF has nine branches that officer cadets can join – Pilots, Navigators, Technical Officers, and Ground Duties (Administration, Logistics, Accounts, Education, and Meteorology).

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PART-C

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SECTION: A
(MAINS)

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REVISITING THE '1962 WAR' THAT SHAPED INDIAN FOREIGN POLICY

CONTEXT:

October 20, 2022, marked the 60th anniversary of a key event in modern Indian history, the 1962 border war with China.

◉ BACKGROUND

- The brief war, in which Beijing defeated Delhi, represents an often-underappreciated watershed in Delhi's foreign and security policies.

- 1962 marked the end of the **Nehruvian era** in Indian foreign policy and led to the emergence of a **decisively more muscular and more realist India** on the international stage.

- Even more importantly, the 1962 war inaugurated long-term changes in **Delhi's approach to international relations, which continue to shape Indian foreign policy to this day.**

> **India's Nehruvian foreign policy had five principal elements:**
> - non-alignment with the two Cold War superpowers
> - the tendency toward *moral politik* inherited from India's independence movement
> - the pursuit of Indian leadership among newly independent countries in the so-called Third World
> - the preference for cooperation over competition;
> - the de-emphasis of security and military power, for ideational and pragmatic reasons

The course of War:

- **Main cause of the war**: a disputed **Himalayan border**, 1959 Tibetan uprising, when India granted asylum to the **Dalai Lama.**

- India initiated a **defensive Forward Policy** from 1960 to hinder Chinese military patrols and logistics, in which it placed outposts along the border, including several north of the McMahon Line, the eastern portion of the **Line of Actual Control** proclaimed by Chinese Premier Zhou Enlai in 1959.

- Chinese military action grew increasingly aggressive after India rejected proposed Chinese diplomatic settlements throughout 1960–1962, with China re-commencing previously-banned "**forward patrols**" in Ladakh from 30 April 1962.

> **The McMahon Line:**
> - In 1826, British India gained a common border with China after the British wrested control of Manipur and Assam from the Burmese, following the **First Anglo-Burmese War** of 1824–1826.
> - McMahon Line is **the effective boundary between China and India** and the line is named after **Sir Henry McMahon**, foreign secretary of the British-run Government of India and the chief negotiator of the convention at Simla.

- Chinese troops pushed back Indian forces in both theatres, capturing **Rezang La** in Chushul in the western theatre, as well as Tawang in the eastern theatre.

- The war ended when China declared a ceasefire on 20 November 1962, and simultaneously announced its withdrawal to its claimed "**Line of Actual Control**".

Current boundaries
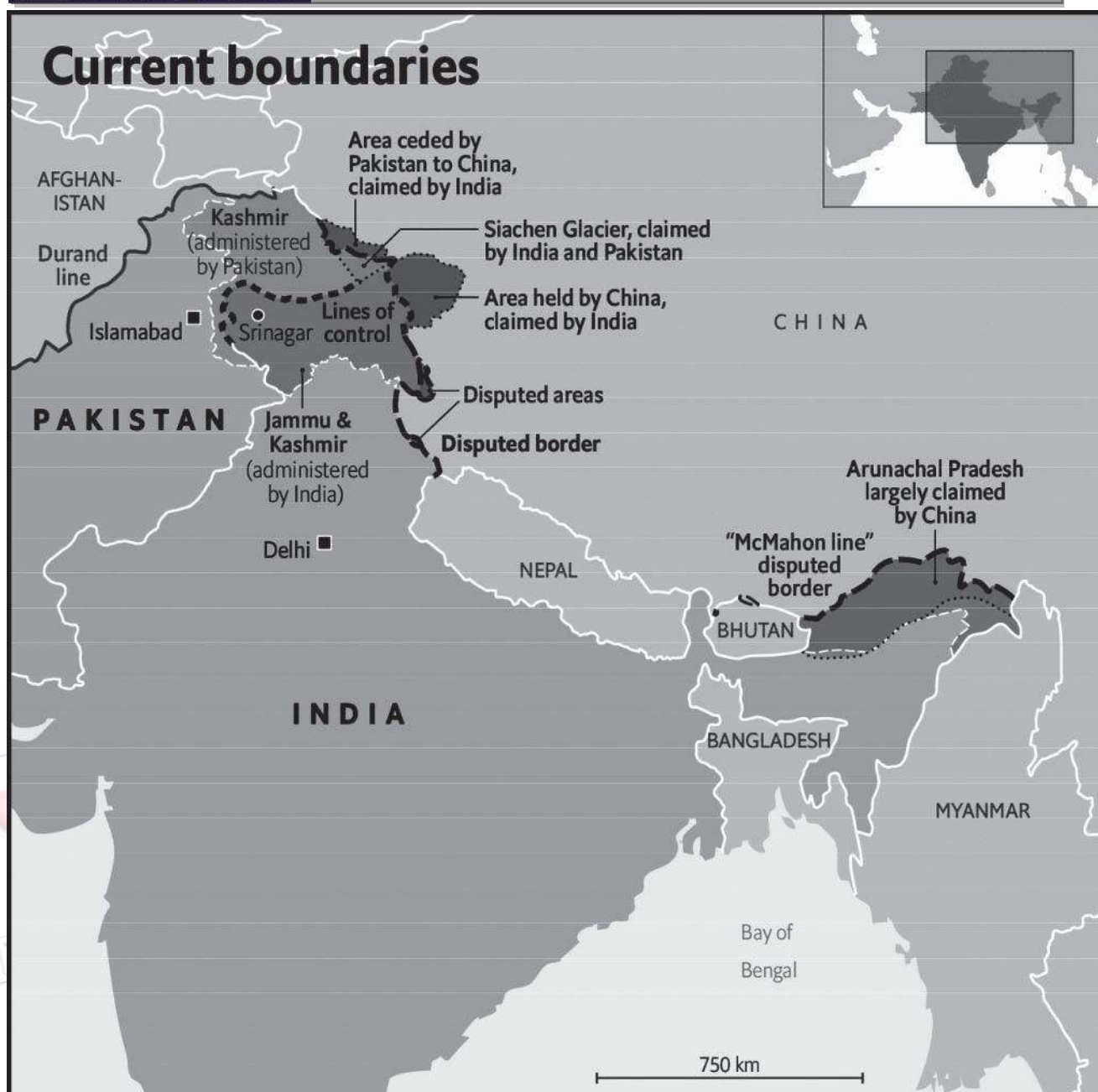
India-China (Territorial Disputes):

o China and India shared a long border, sectioned into **three stretches** by Nepal, Sikkim (then an Indian protectorate), and Bhutan, which follows the Himalayas between Burma and what was then West Pakistan.

o A number of disputed regions lie along this border. For ease of understanding, the India-China border can be divided into three areas - western sector, middle sector, and eastern sector.

> ➤ **Western Sector:** This sector comprises the area between Ladakh to Tibet and the Kunlun mountain range and also extends from Wakhan (Afghanistan edge) to the Karakoram Pass, thereafter following the alignment of the Kunlun mountain range.

Important Facts

- China and India share a disputed 3,488-km boundary.

- Besides India, Bhutan (477 km) is the only other country with which China has a disputed land border.

➤ **Middle Sector**: This comprises the states of Himachal Pradesh and Uttarakhand. This is the least disputed sector and covers 545 km of Indian borders. Except for the larger claim of China in the Barahoti sector in Uttarakhand, other claims and counterclaims are miniscule.

- **Eastern Sector:** The eastern sector conventionally refers to Sikkim and Arunachal Pradesh, but both these states have Bhutan separating them.

How the war changed India?

o Beyond ending the **Nehruvian period**, the war prompted three major long-term transformations in India's foreign and security policy that shape it to this day.

o **Strong defence:** The war led Delhi to focus on its military and thus inaugurated the rise of India as a major military power. After the war India's defense spending rose massively.

o **Realpolitik direction:** Second, the 1962 war produced a long-term shift toward greater *realpolitik* in Indian foreign policy.

o **Marking threat:** It led Delhi to permanently redefine China as a potential security threat and thus change its understanding of its own security environment.

o Even after Beijing and Delhi relaunched their relationship in 1988 and signed major defense agreements in 1993 and 1996, India continued to identify China as a major, potential security threat.

CHINA'S 'NINE-DASH LINE' PUTS ECONOMIC INTEREST AT RISK: INDONESIA

CONTEXT:

Recently, the Chinese government said it has "overlapping claims" with Vietnam over maritime rights in parts of the East Sea, Indonesia showed the concerns and rejected China's offer for any negotiations and said that Jakarta's economic interests are threatened by China's Nine-Dash Line.

◉ ABOUT

o China currently claims 'indisputable sovereignty' over the **South China Sea**.

o These nine dash lines are not geographical boundaries but are interpreted by China to advance its claims.

o The line runs as far as 2,000km from the Chinese mainland to within a few hundred kilometres of the **Philippines, Malaysia and Vietnam.**

Countries maritime Borders in South China Sea:

o **Several countries are bordering the South China Sea:** Peninsular Malaysia, Thailand (via the Gulf of Thailand), Philippines, Singapore, East Malaysia, Brunei, Indonesia, Vietnam, China, and Taiwan.

Source: United Nations Convention on the Law of the Sea (UNCLOS)

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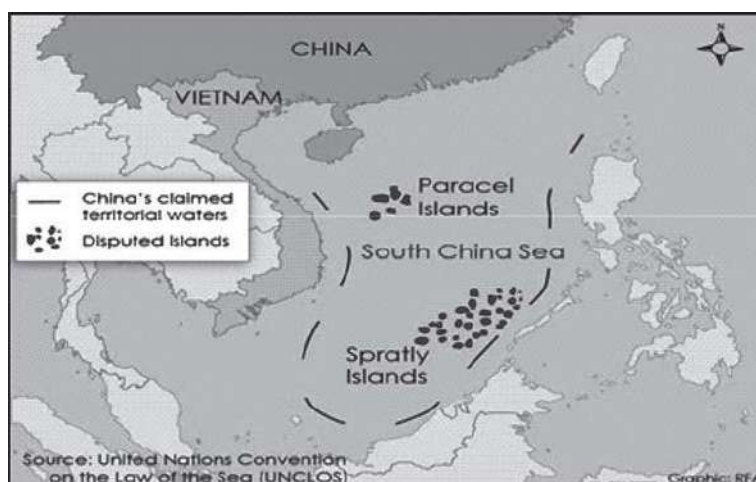
Why it is a significant location?

o **For China:** China claims most of the contested sea, reaching almost to the Philippines shores and has built artificial islands with heavy military developments on them which worries the neighbouring nations and it rejects the UN backed international tribunal ruling as well.

   ➤ The nine dash line asserted by China violates the principle of **Exclusive Economic Zones (EEZ).**

o **For Other Island Countries:** The stalled negotiations between China and ASEAN made headway on Code of Conduct as four of the ASEAN nations also made territorial claims on the disputed waters which adds to the problem with already non-negotiable behaviour of China.

   ➤ The 9-dash line makes China's exclusive rights on marine resources of the region and hence affects the economy of developing island countries like Indonesia.

o **For India:** The South China Sea holds the major Oil trade route for countries in the Pacific and India affects if the economy of these counties gets impacted.

Historical Background:

- The nine-dash line was originally an 11-dash line, and Chinese geographer Yang Huairen helped to drew it.

- In 1952, it became the nine-dash line when in a moment of Communist camaraderie with Vietnam; Mao gave up China's claims over the Gulf of Tonkin.

Major crude oil trade flows in the South China Sea (2016) total 15.0 million barrels per day

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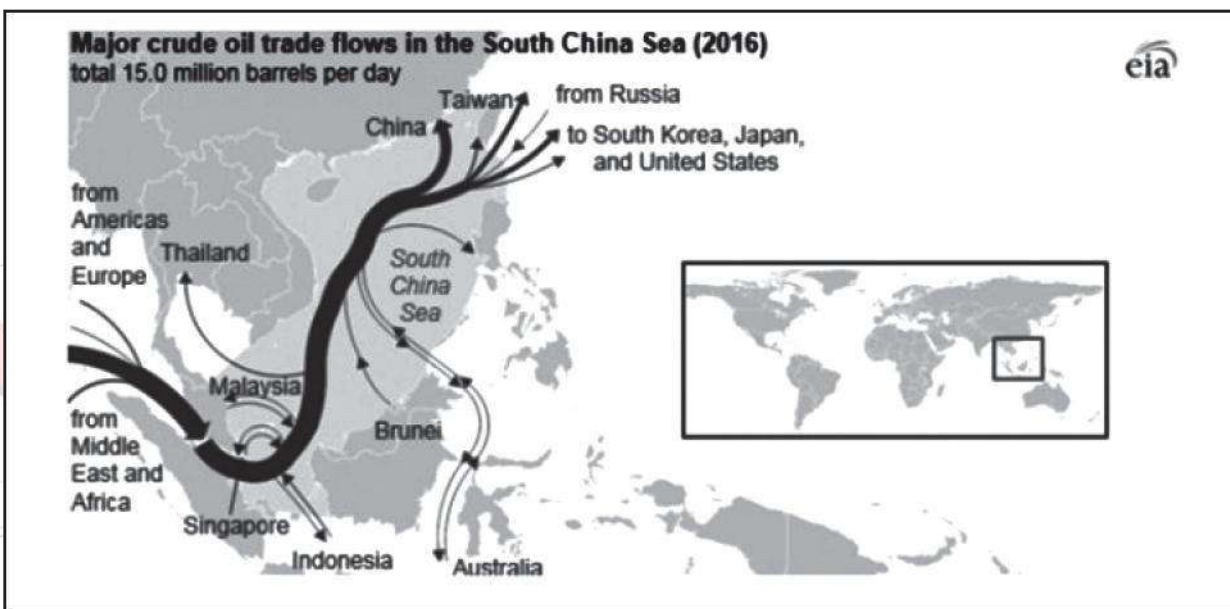
Exclusive Economic Zones (EEZ)

- It is a formula based on compromise and was recognized by the UN Conference on the Law of the Sea in 1976.

- It covers an area beyond and adjacent to the territorial sea: it can extend to a maximum of 200 nautical miles from the baselines.

- The EEZ includes the territorial sea which extends to 12 nautical miles. While the countries have sovereign rights over the territorial sea, the EEZ provides them the right to existing natural resources.

- **Activities allowed in EEZ are -**

   ➤ creation and use of artificial islands,

   ➤ Installations and structures.

   ➤ Marine scientific research and

   ➤ protection and preservation of the marine environment

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REPRODUCTIVE RIGHTS AND FREEDOM OF CHOICE

CONTEXT:

a Recently, the Petitions against the Surrogacy (Regulation) Act 2021 and the Assisted Reproductive Technology (Regulation) Act 2021 (ART Act) have been *fi*led before the Supreme Court challenging the Acts as being discriminatory and violative of reproductive autonomy and choice by denying access to Assistant Reproductive Technologies (ARTs) to single persons and people in live-in and same-sex relationships.

a Let us assess the provisions of both the laws.

◉ ABOUT

What is Surrogacy?

o Surrogacy is an arrangement in which a woman (the surrogate) agrees to carry and give birth to a child on behalf of another person or couple (the intended parent/s).

o A surrogate, sometimes also called a **gestational carrier**, is a woman who conceives, carries and gives birth to a child for another person or couple (intended parent/s).

> **Types**
> - **Altruistic surrogacy:** It involves no **monetary compensation** to the surrogate mother other than the medical expenses and insurance coverage during the pregnancy.
> - **Commercial surrogacy:** It includes surrogacy or its related procedures undertaken for a **monetary benefit or reward** (in cash or kind) exceeding the basic medical expenses and insurance coverage.

The Surrogacy (Regulation) Act, 2021:

o Under the **Surrogacy (Regulation) Act, 2021**, a woman who is a widow or a divorcee between the age **of 35 to 45 years** or a couple, defined as a legally married woman and man, can avail of surrogacy if they have a medical condition necessitating this option.

o It also bans **commercial surrogacy**, which is punishable with a jail term of 10 years and a fine of up to Rs.10 lakhs.

o The law allows only **altruistic surrogacy** where no money exchanges hands and where a surrogate mother is genetically related to those seeking a child.

Assisted Reproductive Technology Act, 2021

o The act defines ART to include **all techniques** that seek to obtain a pregnancy by handling the sperm or the oocyte (immature egg cell) outside the human body and transferring the gamete or the embryo into the reproductive system of a woman.

> **Oocytes:** is a cell in an ovary which may undergo meiotic division to form an ovum.

o ART services are to be provided through:
  ➤ ART clinics, which offer ART related treatments and procedures, and
  ➤ ART banks, which store and supply gametes.

- **Rights of a child born through ART:**
  ➤ A child born through ART will be deemed to be a biological child of the couple (commission couple) and will be entitled to the rights and privileges available to a natural child of the commissioning couple.
  ➤ A donor will not have any parental rights over the child.

o The **National Registry** will be established under the act and will act as a central database with details of all ART clinics and banks in the country.

o The **State governments** will appoint registration authorities for facilitating the registration process. The Clinics and banks will be registered only if they adhere to certain standards (specialized manpower, physical infrastructure, and diagnostic facilities).

Need of regulated industry in India:

o The technologies can be used to transform traditional notions of family and strengthen the status of same-sex and other queer couples by expanding the ability to reproduce beyond heterosexual marital unions.

o Use of ARTs can also entrench notions of genetic parenthood as the "true" form of parenthood.

- **Issues:**
  ➤ In India, ARTs are offered by an **expensive privatised medical industry** that was unregulated for decades.
  ➤ ARTs provoke complex legal, ethical and social dilemmas, and their regulation requires consideration and balancing of conflicting interests and values.
  ➤ Therefore, the law has been introduced for the related issues.

What are the loopholes?

o **Leaving the other stakeholders'**: The Acts allow only married infertile couples and certain categories of women to avail of ARTs and surrogacy.

o **No Compensatory Allowance to the Surrogate mother**: Sale of gametes and any payment to the surrogate mother, other than insurance coverage and medical expenses, has been prohibited. Clinics and banks offering ART procedures have to be registered.

o **Health issues associated:** The availability of **donor oocytes**, considered fundamental for many ART procedures, is also in question since a limited number of oocytes can be retrieved and women can be oocyte donors only once. Such stipulations have been imposed to protect oocyte donors from health risks and exploitation. Shortage of oocytes due to regulatory pressures may lead to a shadow market of gametes.

o **Privacy issues:** The ART Act also requires the oocyte donor to share their **Aadhaar number**, which threatens the donors' privacy.

Arguments in favour of Compensatory Surrogacy:

o A Parliamentary Standing Committee in 2017 recommended compensated surrogacy and stated that mandating altruistic surrogacy was based on moralistic and paternalistic assumptions, and expecting free reproductive labour from women was "**grossly unfair and arbitrary**".

Against Commercial surrogacy:

o A **Parliamentary Select Committee** which examined the Surrogacy (Regulation) Bill 2019 took the stand that **commercial surrogacy** was unethical and antithetical to the "noble" and "selfless" instinct of motherhood.

MINISTRY OF I&B MANDATES TO TAKE NOD FOR STATE GOVERNMENTS' BEFORE ENTERING INTO THE BROADCASTING BUSINESS

CONTEXT:

In view of the recommendations as per Telecom regulatory authority of India (TRAI), the Ministry of Information and Broadcasting has ordered that the State Governments' are not allowed to enter into Educational broadcasting on their own and need to take consent from the public broadcaster, the 'Prasar Bharati'.

Key-highlights of Guidelines:

o The entry of Central/State/Union Territory governments into the broadcast activity for educational purposes would be allowed through **Prasar Bharati** route via "suitable" means.

o All such existing activities would also have to be brought under its purview.

TRAI:

- TRAI regulates telecom services including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.
- It also aims to provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.
- **Headquarters:** New Delhi.

Broadcasting in India:

o Broadcasting is referred to as a central source of news and information across the globe.

➤ **Broadcasting services:** Cable TV, DTH Services, Terrestrial services (Doordarshan), Internet ProtocolTelevision (IPTV), Radio (FM, AM, Community Radio).

o The body that regulates and governs the media and entertainment sector in India is enshrined in the **Cable Networks Act, 1995** and the **Prasar Bharti Act, 1990.** These are regulated by the

➤ Ministry of Information and Broadcasting

➤ Prasar Bharti

o The Information and Broadcasting Ministry is the nodal ministry for all matters relating to broadcasting.

Prasar Bharati

- Prasar Bharati is India's largest public broadcasting agency.
- It is a statutory autonomous body set up by an Act of Parliament.
- It comprises the **Doordarshan Television Network** and **All India Radio**, which were earlier media units of the Ministry of Information and Broadcasting.
- **Headquartered in**: New Delhi

Do States have a call on their own Broadcasting in India?

o Only the central government, as per **Article 246** of the Constitution, can legislate on such subject.

➤ **Entry No. 31 in List I (Union List)** of the **Seventh Schedule** to the Constitution of India covers "posts and telegraphs, telephones, wireless, broadcasting and other like forms of communication".

o In the context of the demand by some States to have their own broadcasting stations, the TRAI had cited the views of **Sarkaria Commission and the Verghese Committee**, the power of an exclusive call to the States regarding broadcasting could not be supported.

Do you know?

Reuters Institute' **Digital News Report 2021 '**revealed that DD News and All India Radio are the most trusted News brands in India.

REGULATIONS FOR ONLINE CHILD SEXUAL ABUSE IN INDIA

CONTEXT:

a Recently, as per the data collected by the CBI via conducting searches across States and Union Territories as part of a pan-India operation, 'Megh Chakra' against the online circulation and sharing of Child Sexual Abusive Material (CSAM), growing instances of online child sexual abuses has been found.

a There is a need to focus on the legislations regarding the issue.

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◉ **BACKGROUND**

o In India, though **viewing adult pornography** in private is not an offence; seeking, browsing, downloading or exchanging child pornography is an offence punishable under **the IT Act**.

o However, **Internet Service Providers (ISPs)** are exempted from liability for any third-party data if they do not initiate the transmission.

o As the public reporting of **circulation of online CSAM** is very low and there is no system of automatic electronic monitoring, India's enforcement agencies are largely dependent on foreign agencies for the requisite information.

o In November 2021, a similar exercise code-named "**Operation Carbon**" was launched by the CBI, against the cause.

Key factors

Real-life considerations for court while deciding bail

Age of the minor victim: The younger the victim, the more heinous the offence alleged

Age of the accused: The older the accused, the more heinous the offence alleged

Comparative age of victim and accused: The more their age difference, the more the element of perversion in the offence alleged

Familial relationship: The closer such relationship, the more odious the offence alleged

WHAT DOES SECTION 29 OF THE POCSO ACT SAY

When a person is prosecuted for committing an offence of sexual assault against a minor, the special court trying the case "shall presume" the accused to be guilty

◉ **ABOUT**

Legislations against Online child sexual abuse in India:

- **The IT Act 2000:**

  ➤ **Section 67B** of the Information Technology (IT) Act, 2000 provides stringent punishment for publishing, transmitting, or viewing child sexual abuse material online.

  ➤ The Information Technology **(Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** empower the users of Intermediaries and make the social media platforms accountable for their safety.

  ➤ The Rules require the intermediaries to adopt a robust grievance redressal mechanism including time-bound disposal of grievances.

  ➤ The government periodically blocks the websites containing outer child sexual abuse material (CSAM) based on INTERPOL's "worst of the list" received through the Central Bureau of Investigation (CBI), the national nodal agency for Interpol in India.

  ➤ The Information Technology Act, of 2000 provides a legal framework for addressing all types of prevailing cybercrimes reported in the country.

  ➤ **POCSO Act:**

➤ Further, Section 14 of the **Protection of Children from Sexual Offence (POCSO) Act** provides Punishment for using children for pornographic purposes. As per section 14:

➤ Whoever uses a child or children for pornographic purposes shall be punished with imprisonment for a term that shall not be **less than five years.**

Preventing children abuse:

o The role of parents: Parents must educate children About sexual advances or threats and protect them from abuse through the concept of unacceptable "bad touch". This communication must be constant, friendly, and frank, and teach children how their sexuality works so they don't unknowingly harass others.

o Donate money to NGOs: NGOs like Save the Children have dedicated services fighting child sex abuse and providing rehab to victims of abuse. It conducts pan-India programs engaging parents, teachers, communities, and even children About sexual abuse. Adolescents are involved in elaborate projects on Sexual and Reproductive Health (SRH).

- **Reporting incidents of child abuse:**

  ➤ Online system for children to report sexual abuse

  ➤ Report it to the police

India's efforts so far:

o **'Aarambh India'**, a Mumbai-based non-governmental organization, partnered with the IWF and launched India's first online reporting portal in September 2016 to report images and videos of child abuse.

o The Supreme Court of India, in *Shreya Singhal* **(2015),** said that **Section 79(3)(b)** of the IT Act means that the ISP, only upon receiving actual knowledge of the court order or on being notified by the appropriate government, shall remove or disable access to illegal contents.

  ➤ Thus, ISPs are exempted from the liability of any **third-party information**.

- In the **Kamlesh Vaswani (WP(C) 177/2013) case**, the petitioner sought a complete ban on pornography.

  o As per **Section 88 of the IT Act**, the orders were issued in March 2015 to Internet Service Providers to disable nine (domain) URLs that hosted contents in violation of the morality and decency clause **of Article 19(2)** of the Constitution.

INDIA AS A GLOBAL ORGANIC FERTILIZER HUB

CONTEXT:

a With the fact that India has become one of the fastest growing economies of the World, it has invested in almost all sectors including the Organic fertilizers. India has a huge potential of Organic fertilisers and can edge in the field than other developing Countries.

a So, let us see what India's potential is and how it can help it to grow sustainable future in Agriculture.

◉ ABOUT

What are Organic Fertilizers?

o **Organic fertilizers** are fertilizers that are naturally produced. Fertilizers are materials that can be added to soil or plants, in order to provide nutrients and sustain growth.

o Typical organic fertilizers include all animal waste including meat processing waste, manure, slurry, and guano; plus plant based fertilizers such as compost; and bio-solids.

o Inorganic "organic fertilizers" include minerals and ash.

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➤ **For Example**: The main organic fertilizers are, **peat, animal wastes, plant wastes from agriculture, and treated sewage sludge.**

Why Organic fertilisers should be promoted?

o India organic fertilizer market is anticipated to grow with an estimated CAGR in the forecast years **FY2023-FY2027**, on the grounds of surging demand for the organic food.

o With the increasing concerns regarding harmful effects of chemically infused fertilizers over the crops, soil, consumers, as well as the environment as a whole, the demands for the organic fertilizers and driving the growth of the India organic fertilizer market will increased in the upcoming five years.

o **Health benefits of utilizing organic fertilizers** for the plant growth is also a major reason why farmers in India are shifting toward utilization of organic fertilizers thus aiding the growth of the India organic fertilizer market in the next five years.

How it can impact the India's Agriculture sector?

o **India's dependence on Agricultural products:** Agriculture industry of the country is practically backbone of the Indian economy.

➤ Over **58% of the population** in the country is dependent on agricultural practices, equipment, tool, or production of the **Agro products** for their livelihood.

o **Contributes to increase in GDP**: The industry also contributes to **16.5% of India's gross domestic product (GDP),** while employing the largest workforce in the country.

o **Facilitate higher yield in fields**: Increasing number of agricultural farms, demands for high yielding crops, increasing agricultural practices, are also supporting the growth of the India organic fertilizers market in the next five years.

o **Increasing Research and Development**: Surging research and product development, increasing awareness among the farmers for using organic fertilizer over chemically infused products is also aiding the growth of the India organic fertilizer market in the future five years.

How do organic-based fertilizers contribute to sustainability?

o **Smart growth** – for an economy based on research, knowledge and innovation.

o **Sustainable growth** – for a resource-efficient, greener and more competitive economy.

o **Inclusive growth** – for a high-employment economy with social and territorial cohesion.

o The organic-based fertilizers industry generates local employment opportunities and regional economic development across both rural and urban areas, nurturing more vibrant manufacturing and farming communities.

Challenges associated:

o Organic food is more expensive because farmers do not get as much out of their land as conventional farmers do.

o Production costs are higher because farmers need more workers.

o Marketing and distribution is not efficient because organic fertilizers can be produced in smaller amounts as required.

o Organic farmers does not have sufficient knowledge and skills About localized soil systems, meteorology, ecology, and other factors that influence crop growth. Without the proper knowledge, an individual organic farmer will be unable to protect his crop in critical stages that may arise while farming processes.

o The crops are easily susceptible to illness that may slow down production.

o Organic farms have to go through tough certification processes.

Few Government Initiatives promoting Organic Fertilizer:

o **Paramparagat Krishi Vikas Yojana (PKVY):** Cluster formation, training, certification and marketing are supported under the scheme to a farmer towards organic inputs.

o **Participatory Guarantee System (PGS) certification.**

GLOBAL MULTIDIMENSIONAL POVERTY INDEX

CONTEXT:

The recently released Global Multidimensional Poverty Index (MPI) indicates that 41.5 crore people exited poverty in India during the 15-year period between 2005-06 and 2019-21.

Key Highlights of the Index: (India-specific Data)

o It shows that the **incidence of poverty fell** from 55.1% in 2005-06 to 16.4% in 2019-21 in the country.

o The **deprivations in all 10 MPI indicators saw significant reductions** as a result of which the MPI value and incidence of poverty more than halved.

o About 41.5 crore people exited poverty in India during the 15-year period between 2005-06 and 2019-21, out of which two-thirds exited in the first 10 years, and one-third in the next five years.

o Improvement in MPI for India has significantly contributed to the **decline in poverty in South Asia.**

o It is for the **first time that it is not the South Asian region** with the highest number of poor people, at 38.5 crores, compared with 57.9 crores in **Sub-Saharan Africa**.

o The **report doesn't fully assess the effects of the COVID-19 pandemic on poverty in India** as 71% of the **data from the National Family Health Survey-5 (**2019-2021) relied upon for MPI **were collected before the pandemic**.

o **Bihar is the poorest State in 2015-2016, seeing the fastest reduction in MPI value** in absolute terms. The incidence of poverty there fell from 77.4% in 2005-2006 to 34.7% in 2019-2021.
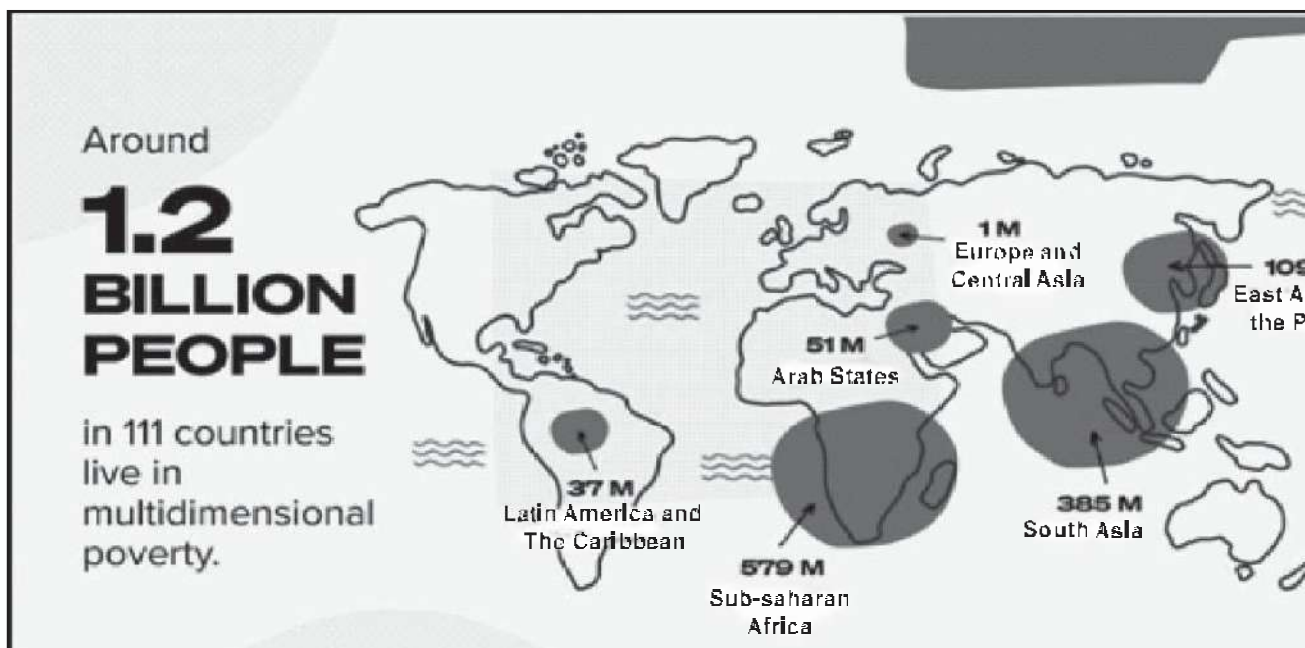
India's present scenario:

o India has by far the largest number of poor people worldwide at 22.8 crores, followed by Nigeria at 9.6 crores.

o Two-thirds of these people live in a household in which at least one person is deprived of nutrition.

o There were also 9.7 crore poor children in India in 2019-2021.

o About 4.2% of the population in the country still lives in severe poverty.

o Rural areas account for nearly 90% of poor people**.**

The Global Multidimensional Poverty Index:

- **The index** is an international measure of acute multidimensional poverty covering over 100 developing countries.
- It complements traditional monetary poverty measures by capturing the acute deprivations in health, education, and living standards that a person faces simultaneously.

How we can measure poverty?

o Poverty can be defined as a condition in which an individual or household lacks the financial resources to afford a basic minimum standard of living.

o Economists and policymakers estimate "absolute" poverty as the shortfall in consumption expenditure from a threshold called the "**poverty line".**

o The official poverty line is the expenditure incurred to obtain the goods in a "poverty line basket" (PLB).

o Poverty can be measured in terms of the number of people living below this line (with the incidence of poverty expressed as the head count ratio). The "depth" of poverty indicates how far the poor are below the poverty line.

o **Six official committees** have so far estimated the number of people living in poverty in India

  ➤ The working group of 1962

  ➤ V N Dandekar and N Rath in 1971

  ➤ Y K Alagh in 1979

  ➤ D T Lakdawala in 1993

  ➤ Suresh Tendulkar in 2009

  ➤ C Rangarajan in 2014

o The government did not take a call on the report of the Rangarajan Committee; therefore, poverty is measured using the Tendulkar poverty line.

o As per this, 21.9% of people in India live below the poverty line.

How poverty impacts India's economy?

- Less number of people getting resources.
- Growth inclination as rich becomes richer and poor becomes poorer
- Low income generation
- Drop in standard of living conditions
- Cheap labour and man-power available
- Gender inequality
- Low rate of education
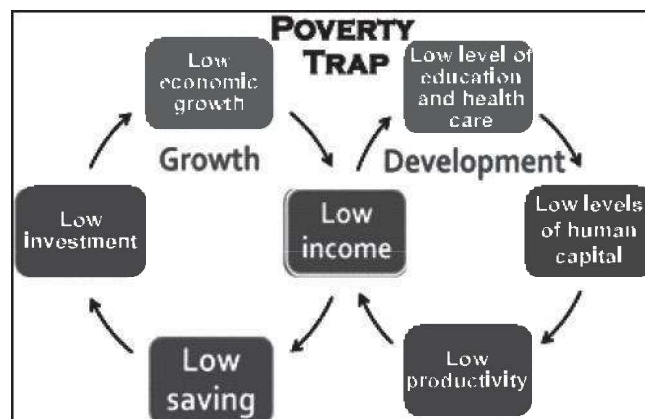
INDIA & THE BLUE ECONOMY: SYNERGIES IN THE NEIGHBOURHOOD

CONTEXT:

Recently, the Seychelles hosted the 'BlueInvest Africa conference '(September 7-9, 2022), where European and African companies met to exchange ideas, business strategies and investments related to Blue Economy. This has brought the discussions highlighting the countries quest for harnessing the blue economy including India.

◉ **ABOUT**

What is Blue Economy?

o The **Indian Blue Economy Task Force defines it as:** The Blue Economy encompasses a wide range of economic activities pertaining to sustainable development of resources and assets in the oceans, related rivers, water bodies and coastal regions – in a manner that ensures equity, inclusion, innovation and modern technology.

India and the Blue Economy:

o India's engagement in the Blue Economy is rising, as the country issues policy proposals, and actively participates in **international and regional dialogues** on the Blue Economy, maritime and marine cooperation.

o The **Federation of Indian Chambers of Commerce and Industry (FICCI)** published the **Blue Economy Vision 2025**, which states that the Blue Economy's impacts are not limited to the ocean but these are crucial for countries' food security, poverty, resilience against dangerous consequences of climate change, maritime cooperation, job opportunities and countries' socio-economic growth.

India's Vision:

o India has greater potential to foster cooperation in the **Indian Ocean** to design blue economic strategies.

o Since sustainability and climate are on top of the international agendas and in vision of the upcoming **G20's presidency**, India looks forward to ideate concrete Blue Economy policies.

o The **Indian ministry of earth sciences** plans to publish a National Policy on the Blue Economy which is still in its draft form.

o The proposal identifies the great contribution the Blue Economy can make **to India's Gross Domestic Product.**

o With the ocean economic activities and governance, the preservation of marine biodiversity and resources is stressed.

India and Regional Cooperation for Blue Economy:

o The **Indian Ocean Rim Association (IORA)** is the principal regional body to bring **21 members, seven dialogue partners and two observers** for roundtables on Ocean activities.

o The organisation has **six priority areas**:

➤ Maritime safety and security,

➤ trade and investment facilitation,

➤ fisheries management,

➤ disaster risk reduction,

➤ academic and scientific cooperation,

➤ Tourism and cultural exchanges.

o IORA's summits successfully enhanced the agenda on the **Blue Economy, sustainable employment and economic growth**.

o Moreover, two programmes are largely contributing to advance ocean cooperation and the Blue Economy in the Indian Ocean: **The Security and Growth for All in the Region (SAGAR)** and the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).**

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THE BLUE ECONOMY

uses smart shipping to lessen the impacts on the environment

is inclusive and improves the lives of all

harnesses renewable energy

is based on sustainable fisheries

creates jobs, reduces poverty and ends hunger

takes action against illegal fishing

conserves marine life and oceans

protects coastal communities from the impacts of climate change

tackles marine litter and oceans pollution

Government Initiatives:

o **Sagarmala Project:** The Sagarmala project is the strategic initiative for port-led development through the extensive use of IT enabled services for modernization of ports.

o **O-SMART**: India has an umbrella scheme by the name of O-SMART which aims at regulated use of oceans, marine resources for sustainable development.

o **Integrated Coastal Zone Management**: It focuses on conservation of coastal and marine resources, and improving livelihood opportunities for coastal communities etc.

o **National Fisheries Policy**: India has a National Fisheries policy for promoting 'Blue Growth Initiative' which focuses on sustainable utilization of fisheries wealth from marine and other aquatic resources.

INTERPOL LAUNCHES METAVERSE FOR GLOBAL LAW ENFORCEMENT

CONTEXT:

The Interpol launched the *f*irst-ever metaverse speci*f*ically designed for law enforcement agencies worldwide during its 90th General Assembly in Delhi.

What is Metaverse?

- The metaverse is a **3D version** of the Internet and computing at large.

> In his 1992 science fiction novel **"Snow Crash,"** Author Neal Stephenson coined the term "metaverse" in which he envisioned lifelike avatars who met in realistic **3D buildings** and other virtual reality environments.

o The intent of the metaverse is to give users the power to create their own experiences and also to interact with others in these spaces, and even collaborate with each other.

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o The metaverse combines aspects of **physical reality, virtual reality (VR), augmented reality (AR), artificial intelligence (AI), social media, online gaming, and cryptocurrencies**, allowing users to interact virtually.

Internet	Metaverse
• People can interact with something — be it a website, a game, or a social media platform. • With the internet, you can be online without necessarily interacting with other people.	• Metaverse puts the user in the middle of the action. To a degree, people can "live" in the metaverse. - The foundation of the metaverse is About digital human interaction. It's About people sharing a virtual universe together, be it for work, school, exercise, or simply for fun.

Application:

o The INTERPOL Metaverse is provided through the INTERPOL Secure Cloud, ensuring its neutrality.

o This "fully operational" Interpol Metaverse allows registered users to **tour a virtual facsimile** of the Interpol General Secretariat headquarters in Lyon, France without any geographical or physical boundaries, interact with other officers via their avatars, and even take immersive training courses in forensic investigation and other policing capabilities.

Elements of a Metaverse

Digital Currency — Concerts, Social and Entertainment Events — Marketplace/Digital Commerce — Online Shopping — Nonfungible Tokens (NFTs) — Infrastructure — Workplace — Device Independence — Social Media — Gaming — Digital Humans — Digital Assets — Natural Language Processing — **Metaverse**

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Section: B
(SPECIALS)
CURRENT AFFAIRS

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TERRORISM, THE BIGGEST VIOLATOR OF 'HUMAN RIGHTS'

In a recent address at the 90th Interpol General Assembly in New Delhi, the Home minister has mentioned the collective cooperation of members' to ensure that the fight against terrorism is sustained, comprehensive and continuous, for which India is committed to working with the Interpol.

What is Terrorism?

o Terrorism, by definition, is always **a crime**, but it can also be a **strategy in a war**. In the international community (including UN), terrorism has no legally binding, criminal law definition.

o For the sake of discussion, it can be described as; **according to the FBI:** *"Terrorism is the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."*

What are the causes of Terrorism?

o **Political Terrorism**: It was originally theorized in the context of insurgency and guerrilla warfare, a form of organized political violence by a non-state army or group.

o **Strategic**: Saying that a group has a strategic cause for using terrorism is another way of saying that terrorism isn't a random or crazy choice, but is chosen as a tactic in service of a larger goal. Terrorism is typically described as a strategy of the weak seeking to gain advantage against stronger armies or political powers.

o **Religious:** Religious ideas, such as martyrdom were seen as particularly dangerous. However, as thoughtful studies and commentators have repeatedly pointed out, such groups use selectively interpret and exploit religious concepts and texts to support terrorism. Religions themselves do not "cause" terrorism.

o **Socio-Economic**: Socio-economic explanations of terrorism suggest that various forms of deprivation drive people to terrorism, or that they are more susceptible to recruitment by organizations using terrorist tactics. Poverty, lack of education or lack of political freedom are a few examples.

What issues arises of Terrorism?

o Countering Terrorism can threaten the **right to life** of an individual.

o Challenges to the absolute prohibition against torture

o Transfer of individuals suspected of terrorist activity

o Liberty and security of the person is threatened

o Due process and the right to a fair trial of the suspects gets staked.

o Surveillance, data protection and the right to privacy is at risk due to terrorist activities.

How does it impact world's global order?

o Mass destruction of assets and Infrastructure.

o Violation of Human rights and Communal disputes.

o Creates socio-economic divide in the society.

o Communal Targeting against suspects of terrorism.

o Making the region under-developed and poverty ridden.

o Polarisation of Youth mind-sets.

What are the fundamental challenges?

o Fast evolving of terrorism

o Lack of definition of the term terrorism

o Lack of mechanisms to list terror entities

o The ease with which Islamic State (IS) attracted recruits from around the world.

o The ease with which they travelled across borders to join the so-called caliphate in Syria and Iraq.

o Increasing potential use of 3-D printing, robotics, artificial intelligence (AI), machine learning, unmanned aerial systems, and synthetic biotech, for illegal ends.

Does it violate Human rights and up to what extent?

Yes, Terrorism does violate the Human rights in every form possible including the following aspects:

o It threatens the dignity and security of human beings everywhere, endangers or takes innocent lives, creates an environment that destroys the freedom from fear of the people, jeopardizes fundamental freedoms, and aims at the destruction of human rights.

The World at War in 2022

Countries in which armed clashes between state forces and/or rebels were reported in 2022*

o Has an adverse effect on the establishment of the rule of law, undermines pluralistic civil society, aims at the destruction of the democratic bases of society, and destabilizes legitimately constituted Governments.

o Has links with transnational organized crime, drug trafficking, money-laundering and trafficking in arms, as well as illegal transfers of nuclear, chemical and biological materials, and is linked to the consequent commission of serious crimes such as murder, extortion, kidnapping, assault, hostage-taking and robbery.

o Threatens the territorial integrity and security of States, constitutes a grave violation of the purpose and principles of the United Nations, is a threat to international peace and security, and must be suppressed as an essential element for the maintenance of international peace and security.

What are the Solutions to the issues related to Terrorism?

o The promotion and protection of human rights while countering terrorism: **National counter-terrorism strategies** should, above all, seek to prevent acts of terrorism, prosecute those responsible for such criminal acts, and promote and protect human rights and the rule of law.

o Government interventions with global cooperation.

o Establishing an international Law on terrorism and its related issues like Left wing- extremism, regional terrorism etc.

◉ CONCLUSION:

Thus Terrorism can lead to several challenges and affects every section of the society irrespective of age, sex, region and religion. Hence there is a need to invoke a cooperative approach towards countering terrorism in every possible form.

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Section: C
(PRELIMS)
CURRENT AFFAIRS

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SIGNIFICANCE OF TAMIL MONTH 'MARGAZHI'

◉ **CONTEXT:**   The Margazhi masam is the ninth month in traditional Tamil Calendar which is meant to be an auspicious month for worshippers of both Shiva and Vishnu.

◉ **ABOUT:**

The Margazhi masam:

o   This month according to the Tamil Calendar falls from **16 December 2022 to 14 January 2023**.

o   The month of Margazhi is special to both **Vaishnavites and Saivites**.

o   **Andal's Thiruppavai** is recited in Vishnu temples in Margazhi. During this month, in the Arudra star, that **Lord Nataraja** showed his divine dance to **sages Vyagrapada and Patanjali**.

o   **Thiruvempavai and Thirupalliezhuchi** are recited by Saivites in Margazhi. Mancikavachagar composed Thiruvempavai in Thiruvannamalai.

o   **Five temples** are of significance to each of the five elements. Of these, the temple at Thiruvannamalai is for **Agni.**

o   The auspicious month of Margasheersha, also known as Margazhi in Tamil, is considered auspicious for putting efforts into one's own spiritual growth - be it Sadhana, Vrata, Bhajan or Pooja - for the Upasakas of **Shiva, Shakti, Vishnu** as well as others.

Celebrations in the masam:

-   The **kolam i**s drawn to welcome Lakshmi, the Goddess of Prosperity, into the home and drives away the evil spirits.

What is Kolam?

A **kolam or muggu** is a geometrical line drawing composed of straight lines, curves and loops, drawn around a grid pattern of dots. In Tamil Nadu and Sri Lanka, it is widely practised by female family members in front of their house entrance.
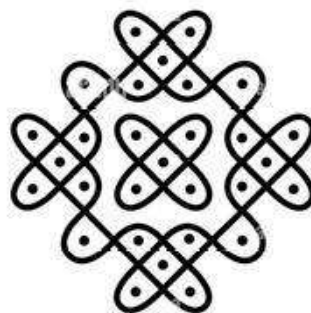
-   Early morning pujas are to be conducted in every household during the month.

Pan-India significance:

-   Margahzi or Margali masam is a corresponding month to Margashira masam and Poush month of other Hindu calendars. It also corresponds to the Bengali month of Agrahayan and Poush mash.

-   According to the Malayalam calendar, it coincides with Dhanur masam.

Hindu calendar vs. Gregorian calendar

-   The ancient Hindu calendar conceptual design is also found in the Hebrew calendar, the Chinese calendar, and the Babylonian calendar, but different from the Gregorian calendar.

-   Unlike the Gregorian calendar which adds additional days to the month to adjust for the mismatch between **twelve lunar cycles** (354 lunar days) and nearly 365 solar days, the Hindu calendar maintains the integrity of the lunar month, but inserts an **extra full month** by complex rules, once every **32–33 months**, to ensure that the festivals and crop-related rituals fall in the appropriate season.

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Months of the Indian Civil Calendar	Days	Correlation of Indian/ Gregorian	
1. Caitra	30*	Caitra 1	March 22*
2. Vaisakha	31	Vaisakha 1	April 21
3. Jyaistha	31	Jyaistha 1	May 22
4. Asadha	31	Asadha 1	June 22
5. Sravana	31	Sravana 1	July 23
6. Bhadra	31	Bhadra 1	August 23
7. Asvina	30	Asvina 1	September 23
8. Kartika	30	Kartika 1	October 23
9. Agrahayana	30	Agrahayana 1	November 22
10. Pausa	30	Pausa 1	December 22
11. Magha	30	Magha 1	January 21
12. Phalguna	30	Phalguna 1	February 20

KITTUR UTSAV CELEBRATIONS

◉ **CONTEXT:** **The two-day State-level Kittur Utsav is celebrated in Karnataka which has significance related to initial phase of Freedom struggle of India against the British in 1824.**

About Kittur Utsav

- Kittur Utsav is a state-level festival, celebrated in memory of **Kittur Rani Channamma**, who had fought the British 30 years before the **First War of Independence in 1857** but had not got any recognition at the national level.

- **Kittur Chennamma** was the Indian Queen of Kittur, a former princely state in present-day Karnataka.

- Kittur Chennamma was born on 23 October 1778, in Kakati, a small village in the present Belagavi District of Karnataka, India.

- She belonged to the **Lingayat community** and received training in horse riding, sword fighting, and archery from a young age.

> **Lingayat Community:**
> - The Lingayat/Veerashaiva community, a politically dominant group in Karnataka, are devotees of Shiva.
> - The Lingayats follow 12th-century saint-philosopher Basavanna who had rejected ritualistic worship and pre-eminence of the Vedas.

- She married Raja Mallasarja of the Desai family at the age of 15.

- She led an armed resistance against the British East India Company in 1824, in defiance of the Paramountancy, in an attempt to retain control over her dominion.

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- She defeated the Company in the **first revolt** but died as a prisoner of war after the second rebellion.

- As one of the first and few female rulers to lead rebel forces against British colonization, she continues to be remembered as a folk hero in Karnataka, she is also an important symbol of the **Indian independence movement**.

> **Doctrine of Lapse**
> - The Doctrine of Lapse was imposed on native states by the British.
> - Under this declaration, native rulers were not allowed to adopt a child if they had no children of their own.
> - Their territory formed part of the British Empire automatically.

CENTRE LAUNCHES PROGRAM TO STRENGTHEN KASHI-TN BOND

◉ **CONTEXT:** The Union Government recently announced 'Kashi-Tamil Sangamam', a month-long program to "strengthen" and "rekindle" the cultural and civilizational bond between Tamil Nadu and Varanasi.

◉ **ABOUT**

What is in this new program?

- **Time:** November 16 to December 16

The period will cover the Tamil month of **Karthikeya** during which all Tamil households go pray to Lord Shiva.

- This program is a part of the Ek Bharat Sreshtha Bharat initiative.

- It is aimed at rekindling the civilizational link between the new Kashi and Tamil Nadu — both deep centers of knowledge.

> **Ek Bharat Shreshtha Bharat** The initiative 'Ek Bharat Shreshtha Bharat' was announced in 2015. The program aims to actively enhance interaction between people of diverse cultures living in different States and UTs in India, with the objective of promoting greater mutual understanding among them. **Nodal Ministry:** Ministry of Education

Kashi in Hindu mythology:

- Kashi is known to be derived from 'Kasha', the name of an ancient king, whose dynasty later produced the famous legendary king Dividasa of Kashi.

- The Kashi Khand of the **Skanda Purana** explains Kashi to be the name of the place where the light of Shiva shines most brilliantly.

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The connection between Kashi and Tamil Nadu

- By the sixth century the Pallavas had adopted Hinduism and Shiva and Vishnu became the supreme Gods.
- The local deity, Murugan is incorporated into the Hindu pantheon.
- Brahmanical ideology became important for Pallava and Chola's self-glorification.
- The glorification of Shiva through grand temples is praised by the Tamil saints, called the Nayanars. In their poems, the Nayanars praised aspects of Hindu mythology like Ganga and Kashi, but at the same time, the Tamil region to is praised immensely.
- In the later Puranas, as sacred sites of southern India like Kanchipuram and Rameshwaram got added, they all came to be connected with Kashi as part of the same pilgrimage.
- There is a Kashi Vishwanatha Temple in almost every temple town of Tamil Nadu

PARTIAL SOLAR ECLIPSE OF THE YEAR 2022

◉ **CONTEXT:** **A Partial solar eclipse has been seen on the western horizon shortly before the sunset on 25th October, 2022.**

◉ **ABOUT**
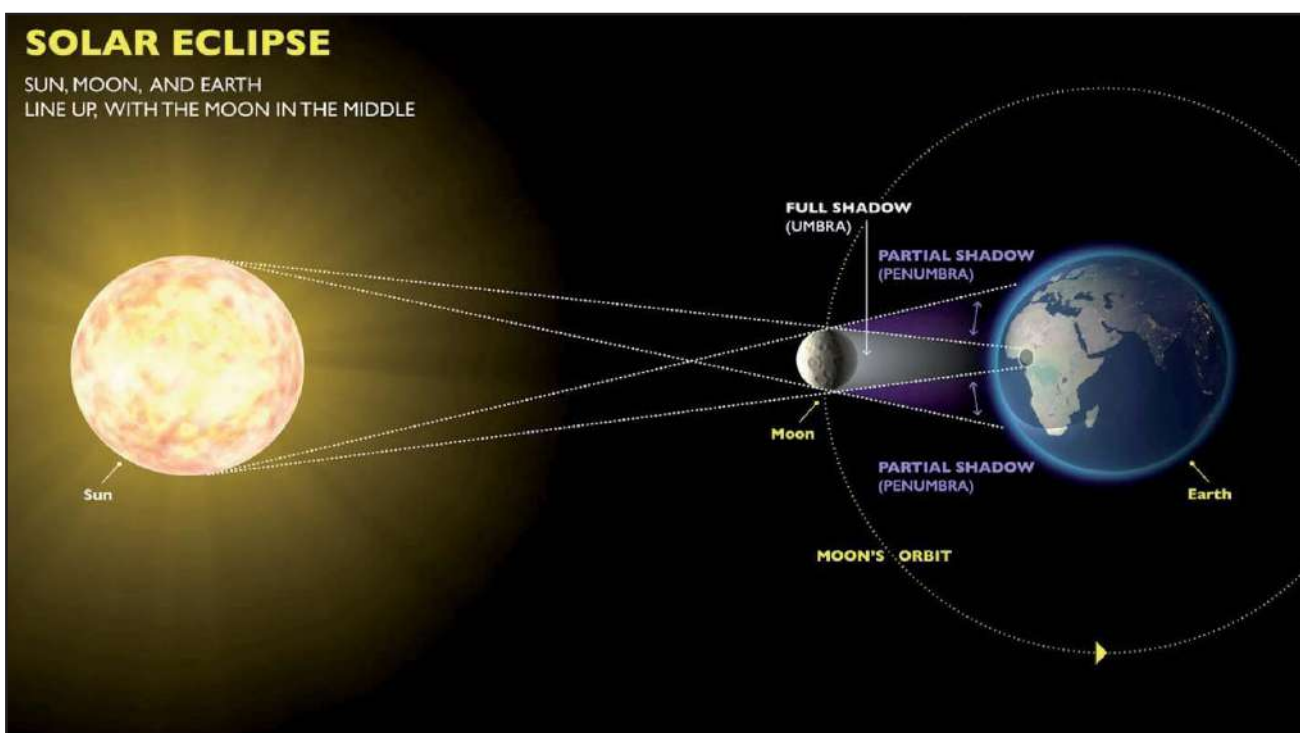
The Solar Eclipse:

- A solar eclipse occurs when the moon "eclipses" the sun.
- This means that the moon, as it orbits the Earth, comes in between the sun and the Earth, thereby blocking the sun and preventing any sunlight from reaching us.

There are four types of solar eclipses:

- **Partial solar eclipse**: The moon blocks the sun, but only partially. As a result, some part of the sun is visible, whereas the blocked part appears dark. A partial solar eclipse is the most common type of solar eclipse.

Types of Solar Eclipses

Partial   Annular   Total
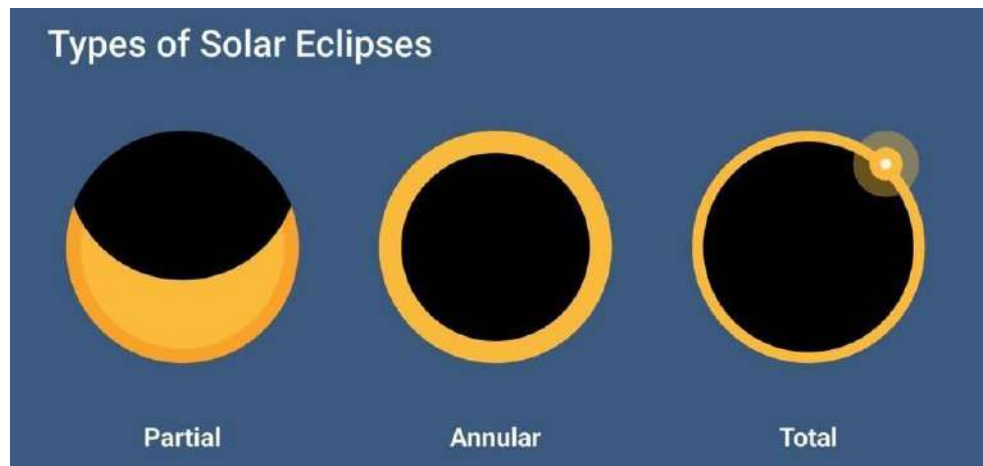
- **Annular solar eclipse:** The moon blocks out the sun in such a way that the periphery of the sun remains visible. The unobscured and glowing ring, or "annulus," around the sun is also popularly known as the "ring of fire." This is the second most common type of eclipse.

- **Total solar eclipse**: As the word "total" suggests, the moon totally blocks out the sun for a few minutes, leading to a period of darkness -- and the resulting eclipse is called a total solar eclipse.

  o During this period of darkness, one can witness the solar corona, which is usually too dim to notice when the sun is at its full glory.

  o Also noticeable is the diamond ring effect, or "Baily's beads," which occurs when some of the sunlight is able to reach us because the moon's surface is not perfectly round. These imperfections (in the form of craters and valleys) can allow sunlight to pass through, and this appears just like a bright, shining diamond.

- **Hybrid solar eclipse**: The rarest of all eclipses is a hybrid eclipse, which shifts between a total and an annular eclipse.

During a hybrid eclipse, some locations on Earth will witness the moon completely blocking the sun (a total eclipse), whereas other regions will observe an annular eclipse.

Lunar Eclipse vs. Solar Eclipse:

- When the Earth moves between the Sun and the Moon, the planet obscures the Moon's ability to reflect sunlight. The Moon's surface is then covered by Earth's shadow rather than the Sun's light. This phenomenon is called a lunar eclipse.

- A lunar eclipse only occurs on a full Moon.

- Whereas, a solar eclipse occurs when the moon moves between the earth and the Sun and obscures the sunlight from reaching the planet.

RISHI SUNAK BECOMES BRITAIN'S FIRST NON-WHITE PRIME MINISTER

◉ **CONTEXT:**   **Recently, Rishi Sunak was elected as Britain's first Indian-origin Prime Minister, scripting an impressive political comeback in British politics. This has shown the diversity in Modern day Britain and is expected to strengthen India-UK relations.**

◉ **ABOUT**

- Rishi Sunak (42) is now the youngest British **Prime Minister** in 210 years.
- He is also the **First Non-white person** elected as the Prime Minister

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of Britain of Hindu origin.

- He was born on 12 May 1980 and is a British politician who has served as the Leader of the Conservative Party.

- Sunak served as Chancellor of the Exchequer from 2020 to 2022 and Chief Secretary to the Treasury from 2019 to 2020.

- He has also been the Member of Parliament (MP) for Richmond (Yorks) since 2015.

Significance of Indian Diaspora:

- The Indian Diaspora in the UK is one of the **largest ethnic minority** communities in the country, with the 2011 census recording approximately **5 million people** of Indian origin in the UK equating to almost 1.8% of Britain's population.

- **Economy:** Indians contribute **6%** of the UK's GDP.

  o Indian diaspora-owned companies with combined revenue of 36.84 billion pounds **employ over 1, 74,000 people** and pay over 1 billion pounds in Corporation Tax.

- **Politics:** In 2019, the British House of Commons had 15 members of parliament of Indian origin.

- It contributes by way of **remittances, investment, lobbying for India, promoting Indian culture abroad, and building a good image of India** through its intelligence and industry.

- Many people of Indian origin hold top political positions in many countries, in the USA itself; they are now a significant part of Republicans and Democrats, as well as the government.

- India's diaspora played an important role in the **India-U.S. nuclear deal**.

- Indian diaspora is not just a part of India's soft power, but a fully transferable political vote bank as well.

Cultural Influence:

- There has been a gradual mainstreaming of Indian culture and absorption of Indian cuisine, cinema, languages, religion, philosophy, performing arts, etc.

- The **Nehru Centre is the cultural wing** of the High Commission of India in the UK which was established in 1992.

- 2017 was celebrated as the **India-UK year of Culture** to mark the 70th anniversary of Indian independence.

PAKISTAN OUT OF FATF 'GREY LIST'

◉ **CONTEXT:**   **Pakistan won a major reprieve, as the FATF, an international watchdog on terror financing and money laundering agreed to remove Pakistan's name from the 'grey list'.**

More on news:

- **Financial Action Task Force** has agreed to remove Pakistan's name from the list of countries under "**increased monitoring".**

- FATF has **"welcomed Pakistan's significant progress"** in its Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) mechanisms.

- **India has protested Pakistan's lack of action** against cross-border terror groups responsible for attacks on India.

- India's other neighbour, **Myanmar has been moved from the grey list to the "black list"** due to actions by the military leadership after the 2021 coup and will **face even more severe financial sanctions and an inability to procure IMF, World Bank, and ADB loans.**

Financial Action Task Force (FATF):

- It was established in July 1989 by a **Group of Seven (G-7)** Summit in Paris, initially to examine and develop measures to **combat money laundering**.

- In October 2001, the FATF expanded its mandate to incorporate efforts to **combat terrorist financing,** in addition to money laundering.

- Since its inception, the FATF has operated under a fixed life span, requiring a specific decision by its Ministers to continue.

- Its secretariat is housed administratively at the OECD.

How many countries are there in the FATF?

- The FATF, which reportedly comprises 36 countries and two regional organizations (European Commission and Gulf Cooperation Council), works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

> **What are the Black List and Grey List?**
>
> Those are two types of lists that FATF maintains.
>
> - A blacklist is given to the countries that FATF considers uncooperative tax havens. These countries are known as Non-Cooperative Countries or Territories (NCCTs).
>
> - A Grey list is a warning given to the country that it might come on the Black list. But even when a country comes under a grey list it faces many problems like problems in getting loans Economic sanctions Reduction in trade.
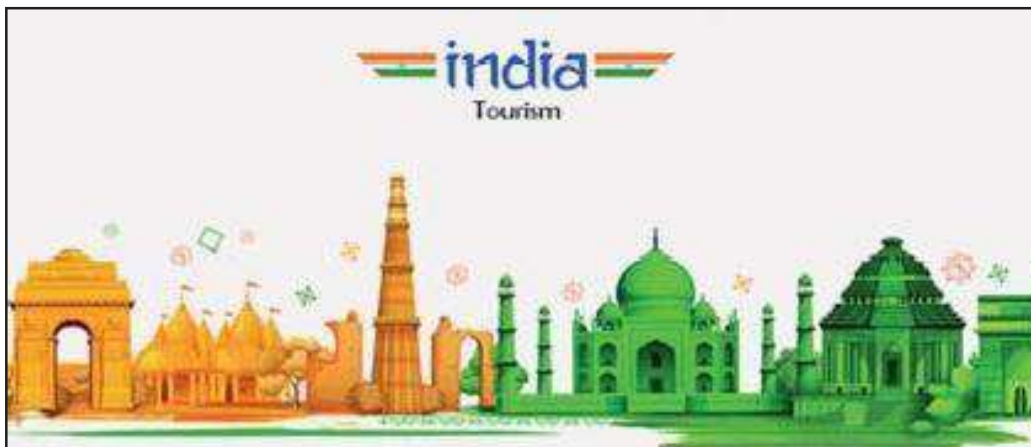
SWADESH DARSHAN 2

◉ **CONTEXT:** The Government is going to launch the 'Swadesh Darshan 2' Scheme with the sites being selected from 15 States across the country to move forward from theme-based destinations to Potential tourist destinations.

◉ **ABOUT**

Swadesh Darshan Scheme:

- Swadesh Darshan is a **Central Sector Scheme.**

- The scheme was launched **in 2014-15** for the integrated development of **theme-based tourist circuits**.

- Under the scheme, the **Ministry of Tourism** provides financial assistance to State governments, Union Territory Administrations, or Central Agencies for the development of tourism infrastructure in the country.

- The scheme was envisioned to synergize with other government schemes such as **Swachh Bharat Abhiyan, Skill India, and Make in India** with the idea of positioning the tourism sector as a major engine for job creation, the driving force for economic growth, building synergy with various sectors to enable tourism to realize its potential.

- Some of the **prominent circuits** launched under this were the **Buddhist tourist circle, Ambedkar Tourist Circle, and the North-East Tourist Circle.**

> A tourism circuit is a path that includes at least three popular tourist attractions that are not located in the same town, village, or city and are not far apart.

The 'Swadesh Darshan 2': (The revamped scheme)

- The Scheme is based on sites that have potential as tourist places and are to be launched in a phased manner.
- The first phase of the scheme is going to start in January 2023.
- **Aim:** The objective will move from 'theme-based tourist' circuits and focuses on 'revving up destination tourism'.
- The scheme has been revamped with the mantra of **"vocal for local".**
- **Fund allocation:** The Swadesh Darshan scheme is 100% centrally funded.
- **Sites selected:**
  o Fifteen States are part of the first phase which includes Madhya Pradesh, Karnataka, Tamil Nadu, Uttar Pradesh, and Maharashtra.
  o Two destinations from each State have been identified by the Ministry of Tourism.

▌ Some of the prominent places identified are;

  o Jhansi and Prayagraj in Uttar Pradesh,
  o Gwalior, Chitrakoot,, and Khajuraho in Madhya Pradesh and
  o Ajanta and Ellora in Maharashtra.
- Earlier the Swadesh Darshan Scheme 2.0 has been revived to develop sustainable and responsible destinations with a tourist and destination-centric approach.

BSE LAUNCHES ELECTRONIC GOLD RECEIPTS

- ◉ **CONTEXT:** The Bombay Stock Exchange (BSE) has received approval from the Securities and Exchange Board of India (Sebi) for its Electronic Gold Receipt (EGR), India's first spot physical gold exchange product.

- ◉ **BACKGROUND**

  - In India, electronic gold trading happens through gold derivatives or gold exchange-traded funds (ETFs) on stock exchanges.
  - EGR is the first spot physical gold exchange trading product.
  - In the Union Budget 2021-22, the government announced the setting up of a SEBI-regulated gold spot exchange.

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- Then, on September 28, 2021, Sebi introduced two new investment instruments,
  o EGR
  o silver ETFs

What Is An EGR?

- EGRs are depository gold receipts traded on the stock exchanges. They are held in Demat accounts, just like shares.
- For EGRs, the physical gold is sourced through imports, accredited domestic refineries, or designated delivery centres.
- The buyer could convert the physical gold into an EGR by depositing the yellow metal at the designated delivery centre. After the gold is sourced, a depository receipt is created for trading on BSE.

For example, a buyer can sell the EGR or convert it to physical gold.

FUNGAL INFECTIONS ARE A GLOBAL HEALTH RISKS: WHO

◉ **CONTEXT:** Recently, WHO published a report highlighting the first-ever list of fungal "Priority pathogens" – a catalogue of the 19 fungi that represent the greatest threat to public health.

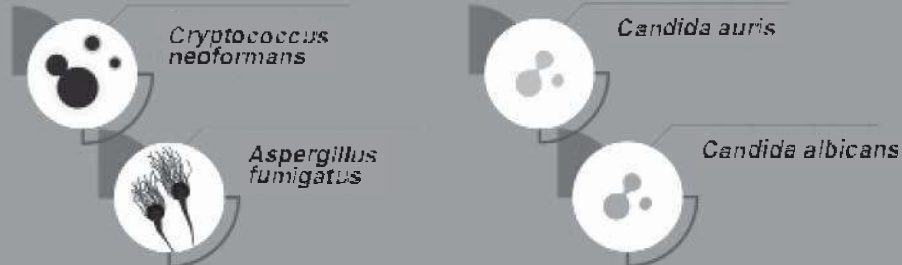◉ **ABOUT**

Highlights of the Report:

- The WHO **fungal Priority Pathogens List (FPPL)** is the first global effort to systematically prioritize fungal pathogens, considering the unmet research and development (R&D) needs and the perceived public health importance.
- The 19 Fungi identified as categorically as fungi of concern are mentioned in the table below.
- **Objective:** The WHO FPPL aims to focus and drive further research and policy interventions to strengthen the global response to fungal infections and antifungal resistance.
- Fungal pathogens are a major threat to public health as they are becoming increasingly common and resistant to treatment with only four classes of antifungal medicines currently available.]

> **Anti-Fungal Medicines:**
> - Antifungal drugs are medications that are used to treat fungal infections.
> - While most fungal infections affect areas such as the skin and nails, some can lead to more serious and potentially life-threatening conditions like meningitis or pneumonia.

- According to the Report, most fungal pathogens lack rapid and sensitive diagnostics and those that exist are not widely available or affordable globally.
- The invasive forms of these fungal infections often affect severely ill patients and those with significant underlying immune system-related conditions.
- Populations at the greatest risk of invasive fungal infections include those with cancer, HIV/AIDS, organ transplants, chronic respiratory disease, and post-primary tuberculosis infection.
- The WHO FPPL list is divided into three categories:
  o Critical,
  o High and
  o Medium priority.

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WHO fungal priority pathogens list (WHO FPPL)

Critical Priority Group

Cryptococcus neoformans

Candida auris

Aspergillus fumigatus

Candida albicans

High Priority Group

Nakaseomyces glabrata (Candida glabrata)

Histoplasma spp.

Eumycetoma causative agents

Mucorales

Fusarium spp.

Candida tropicalis

Candida parapsilosis

Medium Priority Group

Scedosporium spp.

Cryptococcus gattii

Lomentospora protificans

Talaromyces marneffei

Coccidioides spp.

Pneumocystis jirovecii

Pichia kudriavzeveii (Candida krusei)

Paracoccidioides spp.

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- The fungal pathogens *in each priority category* are so ranked primarily due to their public health impact and/or emerging antifungal resistance risk.

Fungal Infections:

There are many types of fungal infections. Some of the most common fungal infections are those of the skin, nails, and mucous membranes. Examples include:

- **Ringworm (also known as tinea)**: a fungal infection of the skin that can occur on your scalp, on your feet (athlete's foot), in your groin area (jock itch), and on other areas of your body
- **Nail fungus**: an infection that typically affects your toenails but can also affect your fingernails
- **Vaginal yeast infection**: an infection that occurs due to the overgrowth of Candida yeast in and around the vagina
- **Oral thrush**: a condition in which Candida yeast overgrows in your mouth.

GENETICALLY MODIFIED MUSTARD APPROVED

⊙ **CONTEXT:**   **Recently, the Genetic Engineering Appraisal Committee (GEAC) under the Union Ministry of Environment, Forest and Climate Change recommended the "environmental release" of the transgenic hybrid mustard DMH-11 for seed production and ordered to conduct the field demonstration studies with respect to its effects on honey bees and other pollinating insects.**

Let us understand exactly about the GM Mustard crops in India.

⊙ **ABOUT**

What is Hybridisation of crops?

- Hybridisation involves crossing **two genetically dissimilar plant varieties** that can even be from the same species.
- The **first-generation (F1) offspring** from such crosses tend to have higher yields than what either parent can individually give.

Is it possible to produce hybrids of all crops?

- Hybridisation is not easy for all crops including mustard, as its flowers have both f**emale (pistil) and male (stamen) reproductive organs**, making the plants largely self-pollinating.
- Since the eggs of one plant cannot be fertilised by the pollen grains from another, it limits the scope for developing hybrids — unlike in **cotton, maize or tomato**, where this can be done through physical removal of anthers.

> The **barnase-barstar system** enables breeding of hybrids from a wider range of mustards, including those of East European origin such as 'Heera' and 'Donskaja'.

How has hybridisation been achieved in mustard?

- The **hybrid mustard DMH-11** has been produced which contains **two alien genes** isolated from a soil bacterium called Bacillus '**amyloliquefaciens'.**
- The first gene ('barnase') codes for a protein that impairs pollen production and renders the plant into which it is incorporated **male-sterile**.
- This plant is then crossed with a **fertile parental line** containing, in turn, the second 'barstar' gene that blocks the action of the **barnase gene**.
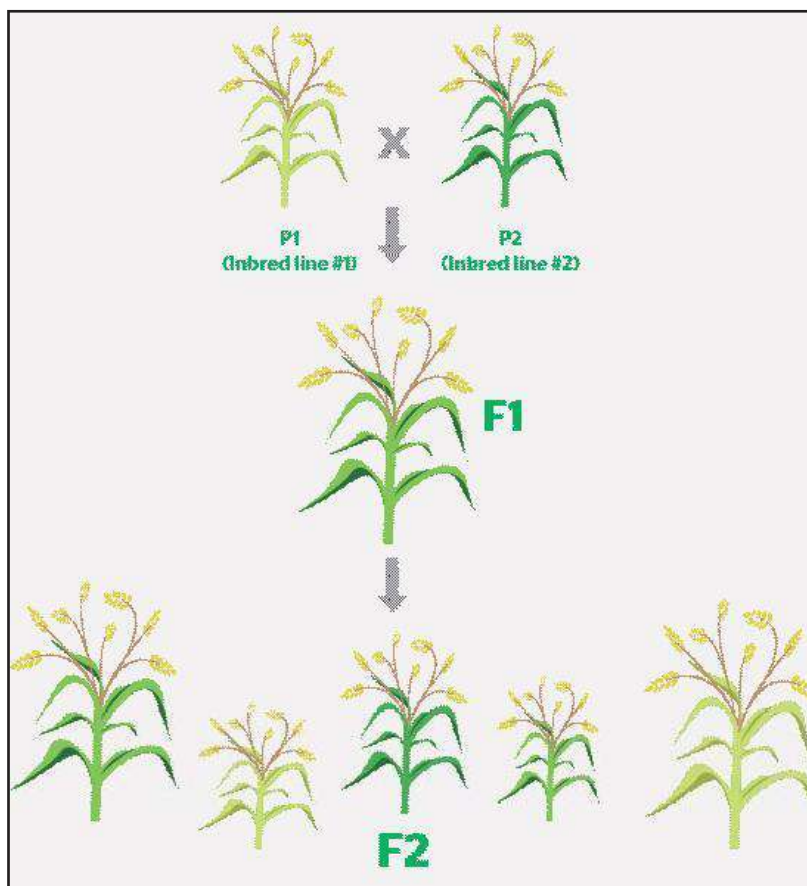
- The **resultant F1 progeny** is both high-yielding and also capable of producing seed/ grain.
- This system was used to develop DMH-11 by crossing a popular Indian mustard variety '**Varuna**' (the barnase line) with an East European '**Early Heera-2'** mutant (barstar).

> **Significance:**
> DMH-11 is claimed to have shown an average **28% yield** increase over Varuna in contained field trials carried out by the Indian Council of Agricultural Research (ICAR).

Role of GEAC:

- GEAC is a body responsible for appraisal of proposals relating to the release of GM organisms and products (ordinarily considered hazardous) into the environment.
- The GEAC is the apex **biotech regulatory body** in India. It is a **statutory body**.

▌ The functions of the GEAC are:

o It is responsible for the appraisal of activities that involve the large scale use of hazardous microbes and recombinants in research and industrial production from the point of view of the environment.

o The GEAC also assesses proposals regarding the release of genetically engineered products and organisms into the environment, and this includes experimental field trials as well.

o The body also looks into proposals regarding the use of living modified organism that comes in the risk category III and above in the import/manufacture of recombinant pharma products, or where the end-product of the recombinant pharma product is a modified living organism.

o The Committee has the power to take punitive action against people/body under the Environment (Protection) Act.

o The approval of the GEAC is mandatory before genetically modified organisms and products derived from them can be used commercially.

PRODUCTION OF MUSTARD IN INDIA

State	Production 2019-20(Tonnes)
Rajasthan	4,202.39
Haryana	1,149.85
Madhya Pradesh	1,038.15
Uttar Pradesh	956.72
West Bengal	712.34
Gujarat	333.50
Jharkhand	333.50
Assam	177.35
Bihar	89.31
Punjab	45.94

Total Production - 8,936.95
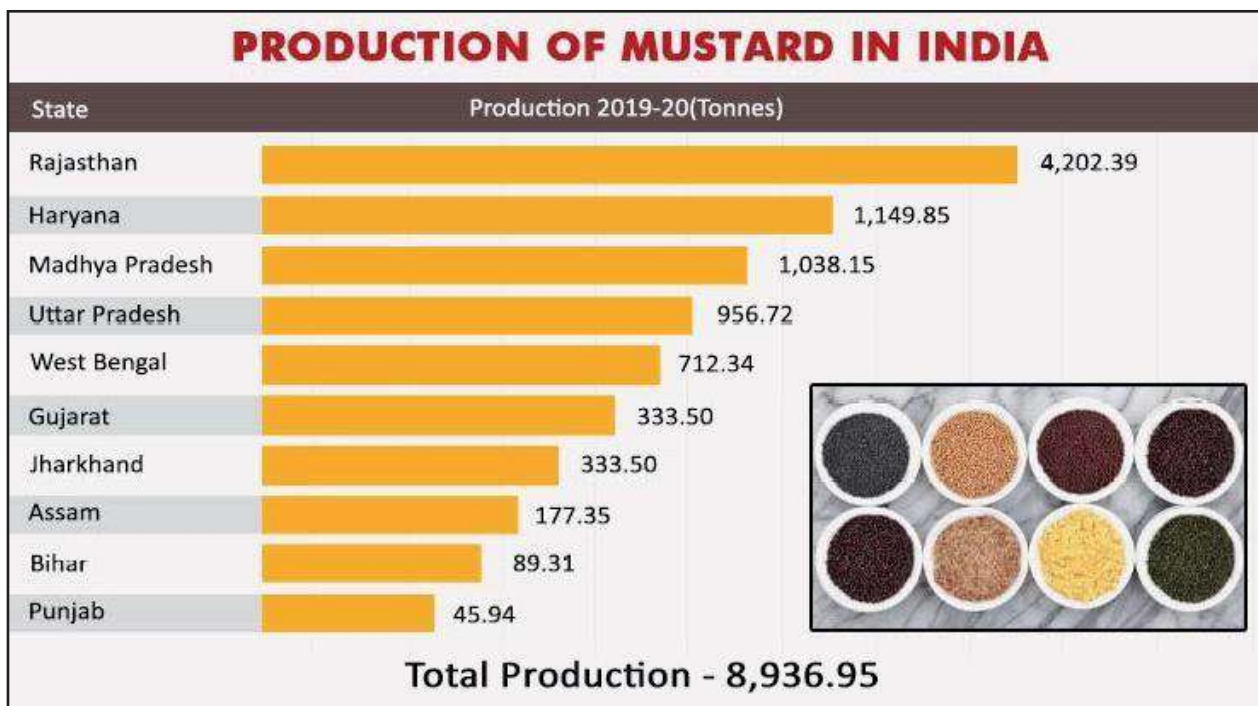
Concerns associated:

- The presence of a third 'bar' gene, which makes GM mustard plants tolerant to the spraying of **glufosinate ammonium**, a chemical used for killing weeds. This will cause displacement of manual labour engaged in weeding by promoting use of chemical herbicides.

- The GM mustard can threaten the population of honey bees as the Mustard flowers are a source of nectar for honey bees and many other pollinator insects.

KATRAJ ZOOLOGICAL PARK TO GET ZEBRAS FROM ABROAD

◉ **CONTEXT:** **Recently, the Pune Municipal Council has planned to procure five Zebras for its Rajiv Gandhi Zoological Park in Katraj from foreign zoos.**

Key Highlights:

- The five Zebras to be brought are planned to include two males and Three Females.

- The guidelines by the Central Zoo Authority of India (CZAI) will be followed for the transportation of captive wild animals.

Zebras in India:

- Zebras are equids, members of the horse family.

- There are three different species: plains, mountains, and Grevy's zebras.

- The Grevy's zebra is the largest, weighing from 770 to 990 pounds (350 to 450 kilograms)

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- The Grevy's zebra lives in the arid grasslands of Ethiopia and northern Kenya. The Grévy's zebra is considered endangered in India.
- Though Zebras live in Africa, each species of zebra has its own home area.

Recent Initiatives:

- The Lucknow Zoo has obtained **three Zebras** from Israel.

Rajiv Gandhi Zoological Park:

- The Rajiv Gandhi Zoological Park, commonly known as the Rajiv Gandhi Zoo or Katraj Zoo, is located in Katraj, Pune district, Maharashtra State, India.
- It is managed by the Pune Municipal Corporation. The 130-acre (53 ha) zoo is divided into three parts: an animal orphanage, a snake park, and a zoo, and includes the 42-acre (17 ha) Katraj Lake.
- The zoo has a collection of reptiles, mammals, and birds. Among mammals, the zoo has a white tiger and a male Bengal tiger named Tanaji.

Indian Laws related to Wild Animals in Captivity:

- The **Wildlife Protection Act** is the law governing the status of wildlife conservation and Transportation in India.
- Any animal which is kept or bred in captivity, which is described in **Schedule 1; Schedule 2**; **Schedule 3**; and **Schedule 4** of the act.
- The **'Chief wildlife warden'** is the **statutory authority** that heads the wildlife department of a state.
- Protection of animals is enshrined as a fundamental duty in the Indian Constitution and there exist several animal welfare legislations in India such as the **Prevention of Cruelty to Animals Act 1960** and the **Wildlife Protection Act 1972** at the Central level.

Central Zoo Authority of India:

- The Central Zoo Authority (CZA) is the body of the government of India responsible for the oversight of zoos.
- It is an affiliate member of the World Association of Zoos and Aquariums (WAZA).
- The Central Zoo Authority has been constituted under section 38A of the Wild Life (Protection) Act 1972.
- Composition:
- The Authority consists of a Chairman, ten members, and a Member Secretary.

MIGRATION OF CRITICALLY ENDANGERED GIBS TO PAKISTAN

⊙ **CONTEXT:** **In a recent sighting of three Great Indian Bustards (GIBs) inside the Pakistan's Cholistan desert has given rise to speculation that the 'endangered birds' might have flown across the international border from India's Desert National Park (DNP) due to loss of habitat for their survival and hunting.**

The Great Indian Bustard (GIBs):

- The Great Indian Bustard (*Ardeotis nigriceps*), is a bustard native to the Indian subcontinent.
- Bustards are **large terrestrial birds** found in **dry grasslands and steppe regions.**
- It is also known as the **Indian Bustard**; it is among the **heaviest flying birds in existence.**
- It is the **State bird of Rajasthan** and is considered India's most critically endangered bird.

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- It is considered the flagship grassland species, representing the health of the grassland ecology.
- The GIB is now found in a small number only in western Rajasthan, while Gujarat claims to have a few females left in its **Banni Grassland Reserve.**
- **Population:** As per the last count of the GIB in 2018, there were around 127 birds in the Desert National Park or the DNP in Rajasthan.

▌ **Protection Status:**

o International Union for Conservation of Nature Red List: Critically Endangered

o Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Appendix I

o Convention on Migratory Species (CMS): Appendix I

o Wildlife (Protection) Act, 1972: Schedule 1

Reasons behind the Migration of GIBs:

- As Rajasthan shares the international border with **Pakistan's Sindh** and Punjab provinces, it is suspected that the GIBs might have flown across to the neighboring country's desert.
- The GIBs in the Thar Desert has been facing threat to their survival because of intensive agricultural practices, lying of power lines, and industrialization.
- Experts have observed that the endangered birds have raised their families within the Desert National Park and outside in the rural pockets, where feed and grassland habitat is available.
- They also move in the crop fields to pick up insects and lizards and like to hide there.

SAVING THE VULTURES OF TAMIL NADU

◉ **CONTEXT:** **The Tamil Nadu government has formed a State Vulture conservation committee (SLVC) to check the declining population of vultures in the state.**

Tamil Nadu is home to four species of vultures:
- **White-rumped vulture (*Gyps bengalensis*)-** Critically Endangered
- **Long-billed vultures (*Gyps indicus*)-** Critically Endangered
- **Asian king-vulture (*Sarcogyps calvus*)-**Critically Endangered
- **Egyptian vulture (*Neophron percnopterus*)-**Endangered

About Vultures

- Vultures are scavenging birds of prey. They are nature's most efficient scavengers.
- India shelters about **nine species of vultures**, but most of them face the danger of extinction.

Vulture numbers are decreasing:

- The numbers are still extremely low, and even a single poisoning event could lead to several of the species going locally extinct, especially the long-billed Asian king vulture.
- Breeding seasons have also seen less hatching than is the norm.
- **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)** to treat cattle, such as **diclofenac, nimesulide, and ketoprofen** among others, have led to the crash in vulture populations across India.

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OCS SELECTIONS OF 2018

1 SELECTION IN EVERY
2 SELECTION ARE FROM VANIK

| 7 IN TOP 10 | 11 IN TOP 20 | 24 IN TOP 50 | 47 IN TOP 100 | 48% SELECTION FROM VANIK |

1 DEBASIS PANDA
2 RITUPARNA MOHAPATRA
3 AKASH KUMAR PANDA
4 SANTOSHINI DAS
5 NARAYANI P. PANDA
9 SHAKTI MOHAPATRA
10 SMARANIKA TULO

OCS 2019

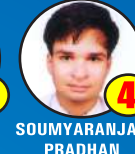**TOTAL SELECTION TILL NOW 76 OUT OF 153**
50% Selection from Vanik-IAS
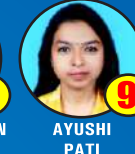**1 Selection Out of each 2 is from Vanik-IAS**

1 ASWINI KUMAR PANDA
3 RASHMIREKHA PATRA
4 SOUMYARANJAN PRADHAN
9 AYUSHI PATI
10 NIVEDITA NAYAK

12 AMARENDRA SWAIN
13 BISWA TRIPATHY
15 DEEPTIMOYEE PATRA
16 LAREN ROUTRAY
17 PRABHU PRASAD PANDA
19 BISWAJIT SAHOO
20 PRIYANKA PRIYADARSANI
23 SHIVANGI DASH
24 K. VENKETSWAR REDDY
27 THEPLIN SAHOO
29 SUCHISMEETA DAS
30 LITUSMITA MISHRA

31 PRIYABRATA PANDA
33 RANJAN KU. SAHOO
36 MILAN JAISWAL
37 SUMAN SUDHA
38 DEBABRATA MAHARANA
41 SIBA SANKAR SAHOO
43 SIDDHARTHA G. PARIDA
44 SAMARJIT TRIPATHY
45 MANASMITA MAHARANA
46 BYOMAKESH PRADHAN
50 SUDHANSU MOHAN SWAIN
51 ANUP PARAMGURU

53 PRABHU PRASAD PANDA
54 PRIYABRATA PALAKA
55 PRITISH PANDA
56 SAHEEN NAAZ
57 DEBI PRASANNA SARASWATA
58 SONIA SHREE MALLICK
60 SANGITA SEN
61 AISWARYA MISHRA
62 SOMESH RANABIJULI
68 SONAM PRIYADARSANI
71 NIRMAL KUMAR BHOUL
72 HARAPRIYA PRUSTY

74 ATANU KUMAR PATRA
75 PRAVAKAR PRADHAN
80 SOMEN BISWAL
81 RUBINA NAHID
84 SMRUTI S. SAHU
88 SUROJ KUMAR NAIK BEHERA
89 DEBANANDA SAHOO
90 SWADHIN MISHRA
91 UMAKANTA SAHOO
92 ANSUMAN SARANGI
93 AMARESH NAYAK
94 DIPTIMAYEE SHARMA

95 ASIT RANJAN SWAIN
101 APURBA RANJAN AICH
105 GUPTESWAR MAHAPATRO
109 ASUTOSH MALLICK
111 CHANDRADASH MOHANANDIA
113 RUDRA MADHAV BEHERA
116 ADYASHA PRIYADARSHINEE BAL
118 TAPAN KUMAR TARAI
119 DIVYA RATNA DAS
121 JYOTI RANJAN BAG
123 MANOJ KUMAR BEHERA
124 PURANJANA GANTA

126 KAMRAJ TANTY
127 UMASHANKAR KOYA
128 PRADESH KU. DIGAL
129 BANAJA DAS
130 P. MANASMITA
135 KRISHNA KU. JENA
141 SANJEET KU. NAIK
142 YAMUNA RANI MURMU
148 PURNENDU SABAR
152 SNIGDHARANI DEVI
153 JOGINATH DAS
AND MANY MORE SELECTIONS

ODISHA FOREST SERVICE SELECTIONS OF 2019

1 AYUSHI PATI

38% SELECTIONS FROM VANIK
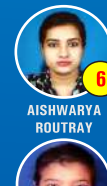**26 OUT OF 67**
7 SELECTIONS IN TOP 10
1 SELECTION IN EVERY 3 SELECTIONS

2 MANASMITA MAHARANA
3 BIBEK DAS
5 MANAS RANJAN BEHERA
6 AISHWARYA ROUTRAY
8 SHINE SHREE DASH
9 SATYAJEET KAR
15 AMIT PRAKASH NAYAK
16 ASHIS KUMAR PAIKRAY
17 PRITHVIRAJ PRADHAN
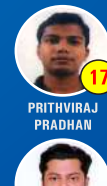
18 SOMESH RANABIJULI
21 SABNAM SAHOO
26 SIDDHANT KU. SAHU
29 BARSHA SAMAL
31 MD. FATAHUN AZEEZ KHAN
33 TAPAS KUMAR BEHERA
36 DEBASMITA SAHOO
37 SACHIDANANDA SUBUDHI
38 SUBHASIS K. PAHADASINGH
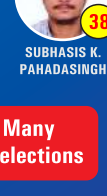
41 SNIGDHASARITA BALIARSINGH
44 SRADHAYA KU. MANTRY
46 MONALISHA MOHAPATRA
50 AMRUTA NAYAK
52 BANDANA PASAYAT
53 SUMAN SUDHA KUNDU
56 JAGADDISH DAS
And Many More Selections