

GS | SCORE PLS

PERSONALISED LEARNING SYSTEM

**MONTHLY
CURRENT
AFFAIRS
MAGAZINE**



– **Disclaimer** –

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

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

CONTENTS

(AUGUST, 2023)

Section - A: MAINS CURRENT AFFAIRS

Section - A: MAINS CURRENT AFFAIRS			
	Area of GS	Topics in News	Page No.
GS I	HISTORY	<ul style="list-style-type: none"> Struggle for Temple Entry in Tamil Nadu 	02
	GEOGRAPHY	<ul style="list-style-type: none"> Atlantic Meridional Overturning Circulation (AMOC) 	02
GS II	INTERNATIONAL RELATIONS	<ul style="list-style-type: none"> India, Greece upgrade ties to 'strategic partnership' 	03
		<ul style="list-style-type: none"> India's Space Prowess and Global South 	05
		<ul style="list-style-type: none"> East Container Terminal (ECT) project 	06
	POLITY & GOVERNANCE	<ul style="list-style-type: none"> Should the CJI be part of the committee 'selecting the CEC'? 	06
		<ul style="list-style-type: none"> Supreme Court in Article 370 case 	08
		<ul style="list-style-type: none"> Tamil Nadu-Karnataka Cauvery Dispute 	08
		<ul style="list-style-type: none"> Drones to monitor MGNREGA worksites 	10
		<ul style="list-style-type: none"> Inheritance Rights in India 	10
		<ul style="list-style-type: none"> NavIC to link to Aadhaar enrolment devices 	11
		<ul style="list-style-type: none"> In TB detection, India far from meeting the 2025 goal 	12
		<ul style="list-style-type: none"> Parliament clears 28% GST on online gaming, casinos 	13
		<ul style="list-style-type: none"> Psychiatric cases in paramilitary rose up by 38% in 2 years: MHA 	13
		<ul style="list-style-type: none"> Child Trafficking increased in India: Study 	14
		<ul style="list-style-type: none"> Ensure 5% quota to specially-abled candidates in educational institutes: Delhi HC 	15
		<ul style="list-style-type: none"> SC asks Centre, six States to respond to plea on lynchings 	16
		<ul style="list-style-type: none"> United Naga Council seeks NRC in Manipur 	16
		<ul style="list-style-type: none"> President retains power to scrap Article 370: Supreme Court 	17
		<ul style="list-style-type: none"> Sikkim announced 1-year maternity leave 	18

GS II	POLITY & GOVERNANCE	• Draft National Deep Tech Startup Policy	18
		• FCRA guidelines for NGOs	19
		• Terror Financing and Safeguarding NPOs	20
		• Kerala as Keralam: How and Why?	21
		• Delhi Services Bill	22
		• Committees of Parliament	23
		• Referendum not an option under Constitution: SC	24
		• Privilege Motion in Parliament	25
		• Revamp of colonial-era laws	26
		• Mines and Minerals (Development and Regulation Amendment) Bill, 2023	28
		• Lok Sabha passes Jan Vishwas (Amendment of Provisions) Bill, 2023	29
		• Bill proposed for selection of 'President as a Visitor' to IIM Institutions	30
		• Rajya Sabha passes Multi-State Cooperative Bill 2023	31
		• Cinematograph (Amendment) Bill, 2023	32
		• Inter-Services Organisation (Command, Control & Discipline) Bill-2023	33
• Registration of Births and Deaths (Amendment) Bill, 2023	34		
GS III	ECONOMY	• India and the Northern Sea Route	35
		• El Niño and India's economic risk	35
		• RBI allows switch from 'floating to fixed rate' regime	36
		• Public Tech Platform for Frictionless Credit (PTPFC)	37
		• Smart & Youth-centric agriculture in India	37
		• India is becoming a young country but with an 'ageing workforce'	38
		• Committee to review Real estate issues	39
		• MSP hikes and Issues	40
		• Increasing Urea's Efficiency	41
		• Govt asked Pharma companies to adopt WHO standards	42
		• Resource Efficiency Circular economy coalition (RECEIC)	43
		• Extension of PLI scheme to chemicals industry	44

	ECONOMY	• Govt. unveils green hydrogen standards	44
		• Mineral exploration & the involvement in private sector	45
		• Import Ban on laptop, PC	47
		• India's sugar production & impact on groundwater	48
	ENVIRONMENT	• Extreme Heat in Mediterranean Sea	49
		• Protecting the biodiversity of the northeast	50
		• Ecosystem of hybrid EVs	51
		• Undisposed toxic waste at Bhopal disaster site	51
		• State of India's Birds' Report 2023	53
		• Brazil Amazon Summit	53
	SCIENCE & TECHNOLOGY	• National 'One Health' Mission	54
		• News media versus OpenAI's ChatGPT	55
		• Metagenome Sequencing	56
		• Room temperature superconductivity	57
		• Rules governing space junk	58
GS IV	ETHICS	• Tackling the ethical issue of eradicating energy poverty	59
		• Ethical use of AI	59
Section - B: ESSAY			
	Area of GS	Topics in News	Page No.
		• The Role and Impact of the G20 in Shaping Global Economic Governance	64
Section - C: PRELIMS CURRENT AFFAIRS			
	Area of GS	Topics in News	Page No.
GS I	GEOGRAPHY	• Cloudbursts	66
	ART & CULTURE	• Bharat Mandapam	66
		• Seethakali folk art	66
	HISTORY	• Archaeologists discover 'crystal quartz weighing unit'	67
		• Maharishi Dayanand Saraswati	68
		• Traditional medicines in India	68
		• Bharat NCAP (New Car Assessment Programme) Launched	69
		• National Curriculum Framework for school Education 2023	70
		• Geographical Indication (GI) Tags in 2023	71

GS II	INTERNATIONAL RELATIONS	• Staped visa and its applicability	74
		• UN Commission for Social Development (CSocD)	75
	POLITY AND GOVERNANCE	• EC publishes final report on 'Assam delimitation'	75
		• 14 States yet to join Centre's flagship education scheme	76
		• International Day of the World's Indigenous People 2023	76
		• Haryana plans dam at Hathnikund to curb Yamuna fury	77
		• Digital Health Incentives Scheme	78
		• Govt launches 'Study in India' portal	78
		• Formation of 19 new districts approved in Rajasthan	79
		• Amrit Bharat Station Scheme (ABSS)	80
		• CAG audit exposes multiple frauds in PMJAY	81
		• Akhil Bharatiya Shiksha Samagam and ULLAS Initiative	81
		• RCS-UDAN Scheme on ground level	82
		• The Vivad Se Vishwas II (Contractual Disputes) scheme	83
GS III	ECONOMY	• Lokniti-CSDS's survey	83
		• Infrastructure Debt Funds - Non-Banking Financial Companies (IDF-NBFCs)	85
		• China enters into 'Deflation'	86
		• 'STAR series' numbering system in Banknotes	86
		• Indian firms can now directly list on IFSC exchanges	86
	ENVIRONMENT	• Railways to install intrusion detection system in Odisha	87
		• World Water Week 2023	87
		• Fukushima nuclear disaster: Japan to release treated water	88
		• New Global Biodiversity Framework Fund (GBF-Fund) ratified	89
		• Kampala Declaration on climate change	89
		• India, ADB to set up climate change and health hub	89
		• 'Cleantech', for an inclusive green future in India	90
		• Himalayan vulture bred in captivity	90
		• 5% of birds in India are endemic: Report	92
		• Government Panel provides anti-air pollution measures	94

GS III	SCIENCE & TECHNOLOGY	• Iraq eliminates Trachoma	95
		• Havana Syndrome	95
		• Soft-landing on the Moon & the Challenges	96
		• ASTRA air-to-air missile	96

Section - D: SHORT NEWS

Area of GS	Topics in News	Page No.
	MYLARA CULT	99
	Yelagiri hut	99
	Monsoon Trough	100
	ASEAN-India Trade in Goods Agreement (AITIGA)	100
	Commonwealth Parliamentary Association (CPA)	100
	China releases new official map	101
	INTERPOL Global Academy Network	101
	Zayed Talwar Exercise	102
	Malabar Exercise	102
	Indira Rasois	102
	Indian Pharmacopoeia Commission (IPC)	103
	830 MEIs on scholarship portal are fake: Report	103
	Adivasi ooru	104
	Promotion of Research and Innovation in Pharma MedTech Sector (PRIP)	104
	ST status for Paharis and Paddaris	105
	National Handloom Day	106
	IMF Quotas	106
	Mi-17 V5 helicopters	107
	Japan's H-IIA rocket	107
	Defence Ministry inks deal with Hindustan Shipyard Limited (HSL), Visakhapatnam	108
	National Space Day	108
	Finger Minutiae Record – Finger Image Record (FMR-FIR) modality	109
	Xenotransplantation	110

INS Vindhyagiri	110
Pink bollworm (PBW) Attack	110
Matti Banana	111
Butterflies of India consortium	111
International Tiger Day	111
Indian eagle-owl	112
SPECIES IN NEWS	
WESTERN TRAGOPAN (TRAGOPAN-MELANOCEPHALUS)	112
TACHYMENOIDES HARRISONFORDI	113
KASHMIR STAG (CERVUS HANGLU HANGLU)	113
ECHIDNAS (TACHYGLOSSUS ACULEATUS)	114
RED SAND BOA (ERYX JOHNII)	114
IBERIAN WOLF	114
LOCATION IN NEWS	
BLACK SEA	115
DHALA STRUCTURE	115
COCOS ISLAND	115
KURIL ISLANDS	116
PALAU	116
PONG DAM	117
PERSONALITY IN NEWS	
ABANINDRANATH TAGORE (1871-1951)	117
BALLADEER GADDAR (1997-2023)	118
ALLADI RAMAKRISHNAN (1923-2008)	118
C.R. RAO (1920-2023)	119

Section A [MAINS]

- ☞ Struggle for Temple Entry in Tamil Nadu
- ☞ Atlantic Meridional Overturning Circulation (AMOC)
- ☞ India, Greece upgrade ties to 'strategic partnership'
- ☞ India's Space Prowess and Global South
- ☞ East Container Terminal (ECT) project
- ☞ Should the CJI be part of the committee 'selecting the CEC'?
- ☞ Supreme Court in Article 370 case
- ☞ Tamil Nadu-Karnataka Cauvery Dispute
- ☞ Drones to monitor MGNREGA worksites
- ☞ Inheritance Rights in India
- ☞ NavIC to link to Aadhaar enrolment devices
- ☞ In TB detection, India far from meeting the 2025 goal
- ☞ Parliament clears 28% GST on online gaming, casinos
- ☞ Psychiatric cases in paramilitary rose up by 38% in 2 years: MHA
- ☞ Child Trafficking increased in India: Study
- ☞ Ensure 5% quota to specially-abled candidates in educational institutes: Delhi HC
- ☞ SC asks Centre, six States to respond to plea on lynchings
- ☞ United Naga Council seeks NRC in Manipur
- ☞ President retains power to scrap Article 370: Supreme Court
- ☞ Sikkim announced 1-year maternity leave
- ☞ Draft National Deep Tech Startup Policy
- ☞ FCRA guidelines for NGOs
- ☞ Terror Financing and Safeguarding NPOs
- ☞ Kerala as Keralam: How and Why?
- ☞ Delhi Services Bill
- ☞ Committees of Parliament
- ☞ Referendum not an option under Constitution: SC
- ☞ Privilege Motion in Parliament
- ☞ Revamp of colonial-era laws
- ☞ Mines and Minerals (Development and Regulation Amendment) Bill, 2023
- ☞ Lok Sabha passes Jan Vishwas (Amendment of Provisions) Bill, 2023
- ☞ Bill proposed for selection of 'President as a Visitor' to IIM Institutions
- ☞ Rajya Sabha passes Multi-State Cooperative Bill 2023
- ☞ Cinematograph (Amendment) Bill, 2023
- ☞ Inter-Services Organisation (Command, Control & Discipline) Bill-2023
- ☞ Registration of Births and Deaths (Amendment) Bill, 2023
- ☞ India and the Northern Sea Route
- ☞ El Niño and India's economic risk
- ☞ RBI allows switch from 'floating to fixed rate' regime
- ☞ Public Tech Platform for Frictionless Credit (PTPFC)
- ☞ Smart & Youth-centric agriculture in India
- ☞ India is becoming a young country but with an 'ageing workforce'
- ☞ Committee to review Real estate issues
- ☞ MSP hikes and Issues
- ☞ Increasing Urea's Efficiency
- ☞ Govt asked Pharma companies to adopt WHO standards
- ☞ Resource Efficiency Circular economy coalition (RECEIC)
- ☞ Extension of PLI scheme to chemicals industry
- ☞ Govt. unveils green hydrogen standards
- ☞ Mineral exploration & the involvement in private sector
- ☞ Import Ban on laptop, PC
- ☞ India's sugar production & impact on groundwater
- ☞ Extreme Heat in Mediterranean Sea
- ☞ Protecting the biodiversity of the northeast
- ☞ Ecosystem of hybrid EVs
- ☞ Undisposed toxic waste at Bhopal disaster site
- ☞ State of India's Birds' Report 2023
- ☞ Brazil Amazon Summit
- ☞ National 'One Health' Mission
- ☞ News media versus OpenAI's ChatGPT
- ☞ Metagenome Sequencing
- ☞ Room temperature superconductivity
- ☞ Rules governing space junk
- ☞ Tackling the ethical issue of eradicating energy poverty
- ☞ Ethical use of AI

STRUGGLE FOR TEMPLE ENTRY IN TAMIL NADU

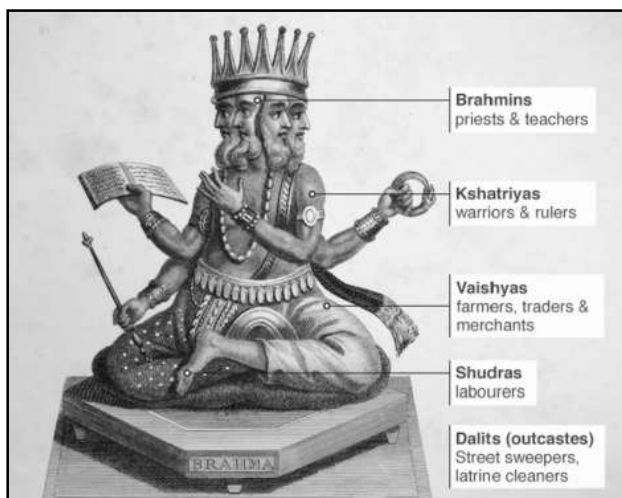
Context: In recent times, in several districts across Tamil Nadu, temple entry of Dalits has emerged as a fiery and contentious issue that has ignited significant tension between the Dalit communities and the dominant castes.

Background:

- ◆ Dalits have historically been denied entry into temples as they are considered "impure" by many conservative Hindus. Even today, most temples in India do not allow Dalits to enter.
- ◆ Dalits are among India's most downtrodden citizens because of an unforgiving **Hindu caste hierarchy** that condemns them to the bottom of the heap.
- ◆ Despite laws to protect them, discrimination remains a daily reality for the country's roughly 200 million Dalits.

The case of Tamil Nadu

- ◆ In the case of Tamil Nadu, most of the major temples became accessible to **Scheduled Castes** around Independence, the struggle for entry into several **smaller temples** in the State continues to date.



- ▶ The **Tamil Nadu Temple Entry Authorisation Act of 1947** allows all Hindu castes and classes to enter Hindu temples and worship.

- ◆ In a similar case, dalits of Eduthavainatham village in Kallakurichi district also entered **the Sri Varadaraja Perumal Temple** for the first time in this year.

Caste system in India:

- ◆ The Caste system which divides Hindus into rigid hierarchical groups based on their **karma (work)**

and **dharma** (the Hindi word for religion, but here it means **duty**) is generally accepted to be more than 3,000 years old.

- ◆ It divides Hindus into four main categories - **Brahmins, Kshatriyas, Vaishyas and the Shudras**. Many believe that the groups originated from Brahma, the Hindu God of creation.

Struggle against caste based discrimination in Temples:

- ◆ The struggle for castes considered "**avarnas**" (**SHUDRAS**) by the **Hindu orthodoxy** to enter temples, especially the ones maintained under **Agama traditions**, can be traced even back to the **7th-8th century AD** with the tribulations faced by **Nandanar**, a Dalit, in entering **Chidambaram Natarajar Temple**, as documented in the **Bhakti literature**.
- ◆ In modern history, one of the earliest documented **temple entry struggles** in present day **Tamil Nadu** were the attempts made by the **Nadar community** in the second half of 19th century in multiple places, especially in the southern region, where they faced severe discrimination despite making economic progress.

The Vaikom Satyagraha: (The Temple Entry Movement)

- ◆ The Vaikom Satyagraha in 1924-25 marked a significant milestone in the history of **India's struggle against caste discrimination**.
- ◆ The movement, led by **TK Madhavan, EVR Periyar, MK Gandhi, and Narayana Guru**, was launched to protest against the ban on the entry of **Scheduled Castes and backward castes** to the public roads surrounding the **Vaikom Shiva Temple in Kottayam**.
- ◆ The movement continued for almost two years, and ultimately, it led to the temple entry proclamation in **Travancore** in 1936, allowing all Hindus to enter temples irrespective of their caste.

ATLANTIC MERIDIONAL OVERTURNING CIRCULATION (AMOC)

Context: According to new findings published in *Nature Communications*, the Atlantic meridional overturning circulation (AMOC), could collapse within next few decades— driving European weather to even greater extremes.

Similar report

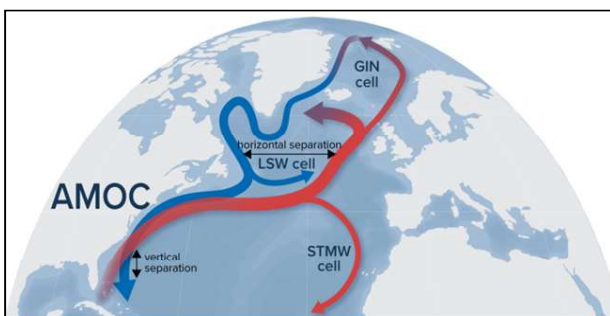
According to the latest report from the **International Panel on Climate Change (IPCC)**, the AMOC is “**very likely to weaken over the 21st century**” due to climate change.

What is Atlantic Meridional Overturning Circulation (AMOC)?

- ◆ AMOC stands for **Atlantic Meridional Overturning Circulation**. The AMOC circulates water from **north to south** and back in a long cycle **within the Atlantic Ocean**.
- ◆ This circulation brings **warmth to various parts of the globe** and also carries nutrients necessary to sustain ocean life.
- ◆ The circulation process begins as warm water near the surface moves **toward the poles** (such as the Gulf Stream in the North Atlantic), where it cools and **forms sea ice**. As this ice forms, **salt is left behind** in the ocean water.
- ◆ Due to the large amount of salt in the water, it becomes **denser, sinks down**, and is carried southwards in the depths below.
- ◆ Eventually, the water gets pulled back up towards the surface and **warms up in a process** called **upwelling**, completing the cycle.

Causes of the decline in AMOC:

- ◆ **Global Warming:** The study's authors attribute the potential AMOC collapse to global warming, which accelerates the melting of Greenland ice.
 - ▶ The influx of freshwater from melting ice weakens or disrupts the AMOC's **normal sinking of salty water**, possibly leading to its collapse.
- ◆ **Indian Ocean Influence:** A 2019 study suggested that the Indian Ocean may also be helping the slowing down of AMOC.
 - ▶ As the Indian Ocean warms faster, it generates **additional precipitation**.



- ▶ With so much precipitation in the Indian Ocean, there will be **less precipitation in the Atlantic**

Ocean, leading to **higher salinity in the waters** of the tropical portion of the Atlantic.

- ▶ This saltier water in the Atlantic, as it comes **north via AMOC**, will get **cold much quicker than usual and sink faster**.

How Europe's Climate depends on AMOC?

- ◆ The AMOC amounts to a system of currents in the Atlantic that bring warm water northwards where it then **cools and sinks**.
- ◆ It is a key reason why **Europe's climate** has been stable for thousands of years.
- ◆ AMOC is also only one part of the wider **Gulf Stream system**, much of which is driven by winds that will continue to blow even if the AMOC collapses.
- ◆ **Northern Europe** will experience successive severe winters as subsequently attributed to a brief slowdown of the AMOC.
- ◆ At the same time heat had built up in the tropics, fuelling an unusually active June-November hurricane season in 2010.

**INDIA, GREECE UPGRADE TIES TO 'STRATEGIC PARTNERSHIP'**

Context: Prime Minister Narendra Modi's recent visit to Greece, described as “**historic**” as he was the first Indian prime minister to visit the country after 40 years, carried a significant business agenda. Both nations upgraded their relations to a ‘**strategic partnership**’ and pledged to double their trade by 2030.

Highlights of the visit:

- ◆ **Upgraded status:** PM Modi's visit has upended this “comfortable” status quo by upgrading Indo-Greek ties to the level of a **strategic partnership** aiming to deepen cooperation in areas of trade, investments, security, defence, energy, migration, infrastructure, tourism, connectivity and agriculture.
- ◆ **Trade routes:** India discussed exploring alternative export routes post-Brexit, with a focus on **Piraeus**, Greece's largest port.
 - ▶ Athens is aiming to position itself as India's “gateway to the European Union”, connecting it with Europe, Asia, and Africa.
- ◆ **Trade:** During the meeting, Modi highlighted the goal of doubling bilateral trade by 2030 and announced an agreement in the field of agricultural production.

- ◆ From now, India and Greece will have an **institutional platform** for dialogue between their national security advisers.
- ◆ The two sides further decided to speedily finalize a **mobility and migration partnership agreement** to facilitate **skilled migration**.

What does upgrading 'strategic ties' mean?

- ◆ A '**strategic relationship**', as the term suggests, involves a shared understanding between the two or more states involved on the nature of threats in the environment and the place of their **collective power in helping mitigate the threats**.
- ◆ This does not amount to an 'alliance', meaning a deeper relationship in which the states are treaty bound to come to each other's assistance in case of materialisation of a threat against any member state.

India-Greece Relations:

- ◆ **Background:** India and Greece established **diplomatic relations in May 1950**. India opened its resident Embassy in **Athens in March 1978**.
- ◆ **On International lines:**
 - ▶ In modern times, the two countries have developed a warm relationship based on a common commitment to democracy, peace and development in the world and to a social system imbued with principles of justice and equality.

- ▶ India and Greece also share common approaches to many international issues, such as UN reforms and Cyprus.
- ▶ Greece has consistently supported India's core **foreign policy objectives**.
- ▶ Greece participated with India in the **Six-National Delhi Declaration** on Nuclear Disarmament in 1985.

- ◆ **Bilateral Trade relations:** The main items of Greece's exports to India are **cotton, scrap (mostly aluminium, ferrous, copper and lead), marble and granite, aluminium foils, calcium carbonate, kiwi fruits and greasywool**.
- ◆ **Indian Diaspora:** There are about **10,000 Indian nationals** living in Greece. Most of them are **farm, factory or construction workers or small entrepreneurs**.

Why Relations with Greece is significant for India?

- ◆ **Geopolitical Balance:** Both countries are strategically positioned at the crossroads of **Europe, Asia, and Africa**. Strengthening ties allows them to contribute to regional stability and balance in these regions.
- ◆ **Maritime Cooperation:** India's '**Act East**' policy aligns with Greece's focus on maritime connectivity through its Blue Growth strategy. Enhanced cooperation can boost **trade, investment, and connectivity along sea routes**.

Mediterranean region

- The Mediterranean region, where China maintains a strong security and economic presence, is strategically significant for energy-hungry India given its 112 trillion cubic feet of gas and 1.7 billion barrels of oil reserves.
- Greece's vital location in the **Eastern Mediterranean**, and its status as both an **EU and NATO** member, renders it a potential gateway for India into the EU, particularly for Indian companies seeking entry into Europe through the port of Piraeus—the region's largest port and a key hub for Asia-Europe connectivity.



- ◆ **Energy Security:** Greece's role in the **EastMed Gas Forum** aligns with India's energy security interests. Collaborating in the energy sector can provide India with reliable sources of hydrocarbons.
- ◆ **Cultural and Historical Ties:** Ancient civilizations and shared cultural heritage foster cultural exchanges, tourism, and **people-to-people** connections, strengthening diplomatic bonds.
- ◆ **Counterterrorism and Security:** Collaboration in counterterrorism and security matters is crucial to **combat transnational threats** and ensure regional stability.
- ◆ **Diplomatic Support:** Both countries often align in international forums, amplifying each other's voices on global issues like **climate change, multilateralism, and global governance.**
- ◆ **Trade and Investment:** Exploring trade diversification and investment opportunities can stimulate **economic growth in both countries.**
- ◆ **Defence Cooperation:** Military cooperation can enhance defence capabilities and exchange of expertise in areas like **naval technology and cybersecurity.**

INDIA'S SPACE PROWESS AND GLOBAL SOUTH

Context: India's inaugural lunar South Pole exploration by its Chandrayaan-3 mission yields vital space insights, cementing its position among leading nations with significant space exploration capabilities especially influencing geo-politics in Global South.

- ◆ Recently, the Indian government hosted an online meeting of developing countries called the **Voice of Global South Summit.**

India's space capabilities and Global Influence:

- ◆ **Global South Achievement:** Chandrayaan-3's lunar South Pole landing elevates India's global standing. Remarkable feat from a post-colonial nation inspires others, showcasing **Indian engineering and resilience.**
- ◆ **Leadership and Inspiration:** India's success encourages Global South nations to overcome colonial legacies, emphasizing self-reliance.
- ◆ **Soft Power and Research:** India's lunar research benefits developing countries, fostering international alliances. Cutting-edge studies on the **Moon advance science and technology** for broader progress.



How India's space strength will help developing nations of Global South?

- ◆ **Technological Influence in Global Order:** Nations excelling in AI, IT, and space research shape the global landscape.
 - ▶ Chandrayaan-3's success elevates India's standing, enriching Moon data, and potential life discoveries.
- ◆ **Enhanced Global Importance:** Chandrayaan-3 showcases India's unique role. Democratic values and cooperation **enhance soft power**, fostering deeper ISRO-NASA collaboration and potential life-related breakthroughs.

How Technology can become India's voice?

The technological prowess as well as economic scale is key to accelerate India's rise relative to its Western counterparts by using;

- ◆ **Economic Strength:** Technological innovation drives economic growth. Countries with strong technological sectors attract investments, enhance productivity, and gain economic influence, which in turn affects their geopolitical standing.
- ◆ **Regional Stability:** Technology can address regional issues, such as water scarcity or disaster management. Providing technological solutions fosters goodwill and diplomatic influence.
- ◆ **Diplomacy and Alliances:** Technological cooperation can strengthen diplomatic ties. Shared technological goals encourage alliances and partnerships between countries.
- ◆ **Soft Power:** Technological achievements enhance a nation's soft power, improving its global image and fostering international collaboration.
- ◆ **Global Governance:** Emerging technologies like AI and biotechnology raise ethical, legal, and regulatory questions. Nations participating in setting global norms and regulations gain influence over future governance frameworks.
- ◆ **Space and Communication:** Space technologies influence communication, surveillance, navigation, and scientific exploration. Countries with advanced space capabilities gain advantages in communication and intelligence.



EAST CONTAINER TERMINAL (ECT) PROJECT

Context: Around two years after Sri Lanka cancelled a joint India-Japan MoU for the East Container Terminal (ECT) project in Colombo, the three countries are now studying ways of restarting trilateral cooperation.

Background:

- ◆ In 2019, **India and Sri Lanka** signed a memorandum of understanding (MoU) for “**co-operation on economic projects**”.
- ◆ The development and operation of the **container terminal** was one of the projects in the MoU including:

About Eastern Container Terminal port:

- The ECT is located some 3 km away from the China-backed international financial city, known popularly as “**port city**”, being built on reclaimed land on Colombo’s sea front.
 - ▶ a Container Terminal in Colombo Port as a Joint Venture
 - ▶ Indian investments considering that majority of transshipment in Colombo Port is related to India
- ◆ The MoU did not mention the **Eastern Container Terminal**. However, India and Sri Lanka had already been in discussion for its development and operation.
- ◆ However, last year Sri Lanka withdrew from the agreement.
- ◆ But again all three countries are planning for the **revival of ECT project**.

Why Japan is joining the path with India and Sri Lanka?

Key Projects

- The **East Container Terminal (ECT)**
 - An **LNG Terminal/Floating Storage Regasification Unit (FSRU)** in **Kerawalapitiya/Colombo** with a piped gas distribution system along with retail outlets for CNG etc.
- ◆ There are two reasons that India had roped Japan into the projects:
 - ▶ Japan was also the biggest donor to Sri Lanka through the years of conflict.
 - ▶ The **Geoffrey Bawa-built Sri Lankan parliament**, which came up at the height of the conflict, was

funded by Japan. It continues to give Sri Lanka substantial financial support even now.

- ◆ However, the old relationship between Sri Lanka and Japan has undergone changes when China’s footprint over Colombo has grown.
- ◆ Late in 2020, the Rajapaksa government unilaterally cancelled a **Japanese project for a light rail transit (LRT) project in Colombo**.
- ◆ India and Japan share a vision of a **Free Open and Inclusive Indo-Pacific (FOIIP)**, which is of relevance to all countries in the region including Sri Lanka.

What are the terms of the agreement?

- ◆ The Sri Lanka Ports Authority (SLPA) would have **100% ownership** of the ECT.
- ◆ The **Terminal Operations Company (TOC)** conducting all ECT operations was to be jointly owned:
 - ▶ Sri Lanka retaining a 51% stake
 - ▶ the joint venture partners 49%
- ◆ A **40-year loan at an interest rate** of 0.1% from Japan was expected to fund the **development of the ECT**.
- ◆ The envisaged Japanese loan carries one of the best loan terms Sri Lanka has obtained.
- ◆ The **51% stake** is also one of the best in **SLPA joint ownership endeavors**.



SHOULD THE CJI BE PART OF THE COMMITTEE ‘SELECTING THE CEC’?

Context: Recently, the Union government introduced a Bill in the Rajya Sabha that proposed that the selection panel for appointing the Members of Election Commission (EC) will include a Cabinet Minister rather than Chief Justice of India (CJI).

Background

- ◆ The government recently tabled the **Chief Election Commissioner and Other Election Commissioners Bill, 2023**.
- ◆ The Bill proposes to not include the judiciary from the Election Commission selection panel.
- ◆ The Bill seeks to establish a **committee** for selecting members of the Election Commission of India (ECI).

- ▶ **Prime Minister**
- ▶ **Union Cabinet Minister** to be nominated by the Prime Minister
- ▶ **Leader of Opposition in the Lok Sabha.** Though the LoP has not been recognised as such, the leader of the single largest opposition party shall be deemed to be the LoP.
- ◆ **Current Procedure:** Currently, the **Law Minister** suggests a pool of **suitable candidates** to the **Prime Minister** for consideration.
 - ▶ The **President** makes the appointment on the **advice of the PM.**
- ◆ It raises the question "Should the CJI be part of the committee nominating the CEC?"

What is ECI?

- ◆ The Election Commission of India (ECI) is a **constitutional body** responsible for administering elections in India according to the rules and regulations mentioned in the Constitution of India.
- ◆ Its aim is to define and control the process for elections conducted at various levels: Parliament, State Legislatures, and the offices of the President and Vice President of India.
- ◆ The ECI implements norms **and the Model Code of Conduct (MCC) to ensure free and fair elections in the country.**

Process of selection of Members of EC:

- ◆ The **President of India** appoints the **Chief Election Commissioner (CEC)** and **Election Commissioners (ECs).**
- ◆ They have tenure of **six years**, or up to the **age of 65 years**, whichever is earlier.
- ◆ They enjoy the same status and receive salary and perks as available to **Judges of the Supreme Court of India.**

Constitutional Provisions

- **Article 324:** Superintendence, direction and control of elections to be vested in an Election Commission.
- **Article 325:** No person to be ineligible for inclusion in, or to claim to be included in a special electoral roll on the ground of religion, race, caste or sex.
- **Article 326:** Elections to the Lok Sabha and Legislative Assemblies of States to be on the basis of adult suffrage.
- **Article 327:** Power of Parliament to make provision with respect to elections to legislature.
- **Article 328:** Power of Legislature of a State to make provision with respect to elections to such Legislature.

- **Article 329:** Bar to interference by courts in electoral matters.

Can SC intervene in the selection process?

- ◆ The Supreme Court can intervene in the selection process of members of the election commission under certain circumstances.
- ◆ In India, the Election Commission is an **autonomous body** responsible for conducting elections and ensuring their fairness.
- ◆ While the process of appointing Election Commissioners is largely done by the executive branch of the government, the Supreme Court can intervene if there are **concerns about the fairness or legality of the process.**
- ◆ **The cases under which SC can intervene are:**
 - ▶ **Violation of Constitutional Provisions:** If the appointment process violates constitutional provisions or principles, such as those related to transparency, impartiality, or non-discrimination, the Supreme Court can intervene to ensure that the process is carried out in accordance with the Constitution.
 - ▶ **Malafide Actions:** If there are allegations of malafide or political interference in the selection process, and these allegations are supported by evidence, the Supreme Court can step in to investigate and possibly rectify the situation.
 - ▶ **Public Interest Litigation (PIL):** Citizens, civil society organizations, or other concerned parties can file PILs in the Supreme Court if they believe that the selection process was not conducted properly or fairly.
 - ▶ **Violation of Fundamental Rights:** If the selection process violates fundamental rights of citizens, such as the right to information or the right to equality, the Supreme Court can step in to protect these rights.

Concerns associated:

- ◆ **Hindering Separation of Powers:** As the constitution places the power to make any law on appointment of ECI in the **hands of Parliament**, SC ruling on this issue poses a question of Separation of Power.
 - ▶ However, SC has stated that this ruling will be subject to any law made by parliament, **which means parliament can bring a law to undo it.**
- ◆ Another view is that since there is no law made by parliament on this issue, the Court must step in to fill the "**constitutional vacuum.**"



SUPREME COURT IN ARTICLE 370 CASE

Context: The recent hearings by the Supreme Court (SC) on arguments by petitioners challenging the abrogation of Article 370 of the Constitution, is ended and now the government will have to answer those allegations and prove their ground.

What are the allegations against abrogation of Article 370?

- ◆ **Validity of Constitutional Order (CO) 272:**
 - ▶ Petitioners claimed Article 370's permanence, suggesting it's **not terminable by President**.
 - ▶ **Constituent Assembly's Role:** It was also argued that there is temporary reference of Article 370 related to Constituent Assembly's power for changes.
 - ▶ **J&K Constitution Impact:** Article 147 grants permanence after Constituent Assembly's dissolution, barring changes to Indian Constitution application.
 - ▶ **Limitations of Article 367:** Petitioners claimed CO 272 used **Article 367** interpretatively, exceeding its amendment scope defined by Article 368.
 - ▶ **No Abrogation via order 272:** Argued neither **J&K Assembly nor Parliament** could undo Article 370 using Constitutional order 272.
- ◆ **Validity of Order 273:**
 - ▶ President's proclamation confirmed **Article 370 abrogation**, linked to Governor's move.
 - ▶ Petitioners contended that Rajya Sabha couldn't assume Governor's powers under **Article 356 without Assembly authority**.
 - ▶ **Governor's Role under President's Rule:** Petitioners criticized 2018 events, where Governor dissolved Assembly **unlawfully without cabinet's aid and advice**.
 - ▶ The improper basis for Governor's actions, leads to **unlawful President's Rule proclamation** without government in place.
- ◆ **On Governor's Rule:**
 - ▶ While not disputing Governor's Rule or President's Rule, the argument was made to show Rajya Sabha's powers assumption during President's Rule as unlawful.
 - ▶ Petitioners' claimed it amounted to a "**fraud on the Constitution**," as Article 370 safeguards

couldn't be erased by **Article 356's imposition of President's Rule**.

What is government's stand to remove Article 370?

- ◆ The Government of India's stand on the abrogation of Article 370 is that it was a necessary step for the **integration and development** of the region of Jammu and Kashmir.
- ◆ The government asserts that the **special provisions under Article 370** were hindering the region's progress and preventing the extension of various central laws and benefits to the people of Jammu and Kashmir.
- ◆ The abrogation of Article 370 and the **reorganization of the state** into two union territories, **Jammu and Kashmir, and Ladakh**, are aimed at promoting socio-economic development, ensuring better governance, and addressing security concerns.
- ◆ The government believes that the move will lead to greater investment, job opportunities, and overall growth in the region.

Constitutional backing for government's move:

- ◆ **Under Article 370(3):** The constitutional basis for the Indian government to remove Article 370 was provided by **Article 370(3) itself**, which allowed the **President of India** to modify or cease the operation of Article 370 by a public notification, with the concurrence of the **Constituent Assembly of Jammu and Kashmir**.
- ◆ However, since the Constituent Assembly had already dissolved in 1957, the government argued that the provision was rendered inoperative, and the President's Order of **August 5, 2019**, effectively abrogated Article 370 and related provisions.
- ◆ This decision was supported by the Parliament's approval and the reorganization of the state into two union territories through the **Jammu and Kashmir Reorganization Act, 2019**.



TAMIL NADU-KARNATAKA CAUVERY DISPUTE

Context: According to a recent update, Chief Justice of India (CJI) has assured Tamil Nadu that he would constitute a Bench to hear the State's plea for the release of its allotment of Cauvery river water for the month of August.

Background:

- ◆ Tamil Nadu has moved the Supreme Court seeking a **direction to Karnataka** to release **24,000 cusecs** of Cauvery water forthwith from its **reservoirs at Billigundulu** starting from August 14.
- ◆ Tamil Nadu also asked the court to direct the **Cauvery Water Management Authority** to ensure that the **directions** issued to Karnataka to release water to them were “fully implemented and the stipulated monthly releases during the remaining period of the current water year are fully given effect to by the State of Karnataka”.

Cauvery River Water Dispute:

- ◆ The dispute involves **3 states** and **one Union Territory** i.e. **Tamil Nadu, Kerala, Karnataka and Puducherry**).
- ◆ The genesis of the dispute is **150 years old** and dates back to the two agreements of arbitration in 1892 and 1924 between the then **Madras presidency and Mysore**.
- ◆ It entailed the principle that the **upper riparian state** must obtain consent of **lower riparian state** for any construction activity viz. **reservoir on the river Cauvery**.
- ◆ To resolve the matter, the **CWDT (Cauvery Water Disputes Tribunal)** was established in 1990 which took **17 years to arrive at the final order (2007)** on how Cauvery water should be shared between the **4 riparian states in normal rainfall conditions**.
- ◆ CWDT was constituted by **the Central Government**, in exercise of the powers conferred by section 4 of the **Inter-State River Water Disputes Act, 1956**.

Cauvery River and its Tributaries:

- The Cauvery River (Kaveri) is designated as the ‘**Dakshi Bharat ki Ganga**’ or ‘**the Ganga of the South**’.
- **Origin:** The Cauvery River rises at an elevation of 1,341 m at Talakaveri on the Brahmagiri range near Cherangala village of Kodagu (Coorg) district of Karnataka.
- The total length of the river from origin to an outfall is 800 km.
- It flows in a south-easterly direction for 705 km through the states of Karnataka and Tamil Nadu and descends the **Eastern Ghats** in a series of great falls.
- Before emptying into the **Bay of Bengal** south of Cuddalore, Tamil Nadu the river breaks into a large number of distributaries forming a wide delta called the “garden of southern India”

- The Cauvery basin extends over states of Tamil Nadu, Karnataka, Kerala, and Union Territory of Puducherry draining an area of 81 thousand Sq.km.
- **Its Tributaries:**
 - ▶ **Left Bank:** the Harangi, the Hemavati, the Shimsha, and the Arkavati.
 - ▶ **Right Bank:** Lakshmantirtha, the Kabbani, the Suvarnavati, the Bhavani, the Noyil, and the Amaravati join from the right.
- The river descends from the **South Karnataka Plateau** to the Tamil Nadu Plains through the **Sivasamudram waterfalls** (101 m high).

Role of Cauvery Water Management Authority (CMA):

- ◆ It has been created as per the **Cauvery Management Scheme** earlier framed by Centre and approved by Supreme Court.
- ◆ The CMA will be to secure **implementation and compliance of the Supreme Court's order** in relation to “storage, apportionment, regulation and control of Cauvery waters”.
- ◆ CMA will also advise the **states to take suitable measures** to improve water use efficiency.
- ◆ It will do so by **promoting use of micro-irrigation, change in cropping patterns, improved farm practices** and development of command areas.
- ◆ The CMA will also prepare **an annual report** covering its activities during the preceding year.

Constitutional Provisions:

- ◆ **Article 131:** This article grants the **original jurisdiction to the Supreme Court of India** in disputes between **two or more states** or between the **Government of India and one or more states**.
 - ▶ Such disputes can pertain to **legal, constitutional, or any other matter**.
 - ▶ The disputes brought under this article bypass the jurisdiction of any other court.
- ◆ **Article 262:** This article deals with disputes related to water resources between states or between the Government of India and states.
 - ▶ It empowers **Parliament to enact laws** for the adjudication of disputes related to **waters of inter-state rivers or river valleys**.
 - ▶ However, if a state requests, the dispute can be referred to a **tribunal** for adjudication.
- ◆ **Interstate Council (Article 263):** Although not directly dealing with disputes, Article 263 provides for the establishment of an Interstate Council to promote coordination and cooperation among states.

- ▶ The President can establish such a council if it appears that a subject of common interest has arisen or is likely to arise in two or more states.

DRONES TO MONITOR MGNREGA WORKSITES

Context: Recently, the Ministry of Rural Development has released a standard operating procedure (SOP) to increase its surveillance of worksites under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme.

Background:

- ◆ There were several complaints about corruption in MGNREGS works.
- ◆ These vary from machines being used in place of the workers, many receiving wages without doing work, or works beyond the approved list being undertaken, and so on.
- ◆ The idea to deploy drones will be especially helpful in such cases for real-time monitoring and for garnering evidence.

About the SOP:

- ◆ According to the draft, now the drones will be used for **four types of monitoring**:
 - ▶ Surveying the on-going works
 - ▶ Inspecting the completed works
 - ▶ Impact assessment
 - ▶ Special inspection in case of complaints
- ◆ **Administered by:** The SOP stipulates that the drones will be used by the ombudsperson.
 - ▶ According to the MGNREG Act which governs the scheme, there should **one ombudsperson per district** that is responsible for registering *suo moto* complaints and disposing of them within 30 days.
- ◆ **Role of Ombudsperson:**
 - ▶ For efficient monitoring and **redressal of grievances**, it is decided by the Ministry that the ombudsperson may use drone technology facilities for **verification of the works virtually**.
 - ▶ It has directed **State governments** to provide the facility to ombudspersons.
- ◆ **Fund allocation:**
 - ▶ The States will not be provided with any **extra funds** to deploy these drones.

- ▶ According to the guidelines, State governments are expected to draw the necessary funds from the administrative head, which is roughly **10% of a State's MGNREGA budget**.

- ◆ **Data management:** The Ministry also proposes to form a **centralized dashboard to store the videos and photos collected from the drones**, for data analysis and reporting purposes.

Government steps taking MGNREGA towards digitisation

- ◆ **Mandatory Attendance:** In May 2022, the Union government made it mandatory to capture attendance at all worksites on the **National Mobile Monitoring Software (NMMS) App**.
- ◆ **Aadhaar-Based Payment System (ABPS):** In January this year, the **Ministry of Rural Development (MoRD)** also told state governments that all payments to MGNREGA workers would be mandatorily made through the **Aadhaar-Based Payment System (ABPS)** alone.

INHERITANCE RIGHTS IN INDIA

Context: Recently, the Supreme Court (SC) reserved its judgment on whether children born out of invalid, void and voidable Hindu marriages can inherit their parents' ancestral property.

About the Judgement:

- ◆ Chief Justice of India (CJI) has agreed that children from void and voidable marriages had rights over the property, whether **self-acquired or ancestral**, of their parents.
- ◆ The **birth of a child** in such a relationship has to be viewed independently of the relationship of the parents.
- ◆ A child born in such a relationship is **innocent** and is entitled to all the rights which are given to other children **born in valid marriage**.
- ◆ This is the crux of the **amendment in Section 16(3)**, the Division Bench of Justices (retired) G.S. Singhvi and **A.K. Ganguly** had written in their 2011 judgment in the **Revanasidappa v Mallikarjun case**.
- ◆ The Division Bench had held that such children would have a right to any property that belonged to their parents.
- ◆ The Bench had however clarified that the **children's claims** would be limited to the property of their parents and **no other relation**.

Provisions related to Inheritance in India:

- ◆ **Section 16(3) of the Hindu Marriage Act, 1956** deals with the inheritance laws in India:
- ◆ **Rights of Natural born Children:** The children, both **son and daughter**, under the Succession Act have equal rights over the **father's property** to be shared with the **mother and grandmother**.
 - ▶ Even a **posthumously born child**, if born alive, has rights to the father's property.
 - ▶ The child's rights come after the **father's demise in the grandfather's self-acquired property**.
- ◆ **Rights of Legally Adopted child:** In the case of a legally adopted child, the child has the same rights as a natural child as per inheritance laws in India.
 - ▶ From the moment of adoption, the child ceases to belong to the biological parents and becomes a part of the new family.
 - ▶ But if a share of property or asset has been vested on the child before adoption from, say, the biological family, the property belongs to the child even after adoption.

enrolment devices will enhance **navigation accuracy and provide better disaster management capabilities**.

◆ Significance:

- ▶ NavIC's integration will enhance the accuracy and reliability of these devices.

Navigation with Indian Constellation or (NavIC):

- NavIC or the **Indian Regional Navigation Satellite System (IRNSS)** is designed with a constellation of 7 satellites and a network of ground stations **operating 24x7**.
- There are a total of **eight satellites** however only seven remain active.
- Three satellites in **geostationary orbit** and four satellites in **geosynchronous orbit**.
- The constellations' **first satellite (IRNSS-1A)** was launched on 1st July 2013 and the eighth satellite IRNSS-1I was launched in April 2018.
- It is fully under the control of the Government of India.



NAVIC TO LINK TO AADHAAR ENROLMENT DEVICES

Context: The Department of Space (DoS) has told the Parliamentary Committee of Science and Technology that the Navigation with Indian Constellation or (NavIC) is going to be integrated into Aadhaar enrolment devices.

About the merger:

- ◆ **Need:** Currently the Aadhaar enrolment kits that are used to **collect and verify personal details** are linked to **Global Positioning system (GPS)**.



- ◆ The DoS has conducted successful field trials and is providing technical expertise for the finalisation of procurement specifications for the devices.
- ◆ Overall, the integration of NavIC into Aadhaar

Aadhaar authentication process:

- ◆ The **Unique Identification Authority of India (UIDAI)** has been created, with the mandate of providing a **Unique Identity (Aadhaar)** to all Indian residents.
- ◆ The UIDAI provides **online authentication** using **demographic and biometric data**.
- ◆ Aadhaar authentication is the process involves **Aadhaar Number**, along with other attributes, including biometrics, is submitted online to the **Aadhaar system for its verification** on the basis of information or data or documents available with it.
- ◆ During the authentication transaction, the resident's record is first selected using the Aadhaar Number and then the **demographic/biometric inputs** are matched against the stored data which was provided by the resident during **enrolment/update process**.

How NavIC will ensure data protection?

- ◆ **NavIC offers two services:**
 - ▶ Standard Position Service (SPS) for **civilian users**
 - ▶ Restricted Service (RS) for **strategic users**
- ◆ These two services are provided in both **L5 (1176.45 MHz)** and **S band (2498.028 MHz)**.
- ◆ NavIC coverage area includes India and a region up to **1,500 km** beyond the Indian boundary.
- ◆ Newer satellites will have an **additional band called L1** that will be compatible with civilian use.

Present NavIC uses:

- ◆ The **National Disaster Management Agency (NDMA)** was already utilising NavIC as an alert dissemination system for major natural disasters like **landslips, earthquakes, floods, and avalanches**.
- ◆ The **Indian National Centre for Ocean Information System (INCOIS)** relies on NavIC to broadcast **cyclones, high waves, and tsunamis** alert messages to fishermen venturing into the deep sea.

Organizations working with NavIC data:

- ◆ NavIC standards were set by the Bureau of Indian Standards (BIS), Telecom Standards Development Society, India (TSDSI), Telecom Engineering Centre (TEC), Third Generation Partnership Project (3GPP), and Radio Technical Commission for Maritime Services (RTCM), International Electrotechnical Committee (IEC), and International Standards Organisation (ISO).

Concerns with GPS or other global systems:

- ◆ **Threat to data security and sovereignty:** System like GPS and GLONASS are operated by **defence agencies** of the respective nations.
- ◆ **Breach of personal information:** It is possible that the civilian service can be degraded or denied.



Context: Three years after the launch of the revised **National Strategic Plan 2020-2025 to end TB, India is nowhere near meeting this target.**

Status of TB in India:**About TB:**

- TB is caused by a bacterium called **Mycobacterium tuberculosis**, belonging to the Mycobacteriaceae family consisting of about 200 members.
- TB is a **treatable and curable disease**.
- **World TB Day** is observed on March 24.



- ◆ India's TB incidence rate stands at **196 per 1,00,000 population**, instead of the 210 estimated by the WHO, and the estimated deaths from the communicable disease stand at 3.20 lakh, instead of the 4.94 lakh that was projected in 2021.
- ◆ However, due to factors such as **poverty, uneven healthcare access, stigma and low health-seeking behaviour**, TB remains a significant problem in the country, with India contributing more than 20% of the global infection burden.
- ◆ **Tribal communities** in India are particularly affected, accounting for 10.4% of all TB cases.
- ◆ The Health Ministry noted that as per this data, the global TB reduction numbers stand at 11% while the reduction in TB cases in India is 18%.

Major challenges faced by India in controlling TB	Required measures to address the issue.
<ul style="list-style-type: none"> • Lack of Awareness and Stigma • Delay in diagnosis and care seeking • Delay in sputum sample collection and transportation hinders timely diagnosis. • Poor Healthcare Infrastructure • Poverty and Malnutrition • Drug-Resistant TB • Co-Infection with HIV 	<ul style="list-style-type: none"> • Point-of-care testing • TB prevention measures • TB vaccine rollout • Collaborative effort involving community action • Technological innovations (AI) • Multisectoral partnerships

National and international initiatives:

- ◆ National TB Elimination Programme (NTEP)
- ◆ National Strategic Plan (NSP) for Tuberculosis

Elimination (2017-2025)

- ◆ The Nikshay Ecosystem (National TB information system)

- ◆ Nikshay Poshan Yojana (NPY- financial support)
- ◆ TB Harega Desh Jeetega Campaign
- ◆ TB Free India Campaign
- ◆ Tribal TB Initiative



PARLIAMENT CLEARS 28% GST ON ONLINE GAMING, CASINOS

Context: Parliament approved amendments to the Central and Integrated GST laws to levy 28 per cent tax on the full face value of bets in online gaming, casinos and horse race clubs.

Background:

- ◆ In July this year, the GST Council recently cleared changes in **Central GST (IGST) and IGST laws** to levy **28 per cent tax** on full face value of bets in **online gaming, casinos, and horse race clubs**.
- ◆ It also decided that GST will be levied at face value of entry level bets placed in gaming platforms and casinos.



Key-highlights:

- ◆ The **Central GST (Amendment) Bill, 2023, and the Integrated GST (Amendment) Bill, 2023** make **registration mandatory** for **offshore e-gaming companies** operating in India.

Currently, online gaming industry are paying GST at the rate of **18 per cent** on platform fees/commission. Such commission varies from **5 to 20 per cent** of the full face value of bets.

- ▶ Non-compliant offshore gaming platforms or websites will be blocked.
- ◆ With the amendment to GST law, horse racing, casinos, online money gaming will be treated as actionable claim similar to lottery, betting, and gambling.

- ◆ The amendment in IGST Act gives **powers to the Government** to notify such goods, so that in case of import of such goods IGST can be levied and collected as regular **inter-State supply** under provisions of IGST Act.

Important Terms:

- **Online Gaming:** The CGST amendment bill defines 'online gaming' as a game on the internet or an electronic network.
- **Online money gaming:** 'Online money gaming' means online gaming in which players pay or deposit money, including **virtual digital assets (VDAs)**, in the expectation of winning money or VDAs, in any event including game, scheme, competition or any other activity, whether or not its outcome or performance is based on skill, chance or both.

India's online gaming industry:

Online gaming is a **State Subject** under **Schedule 7**.

- ◆ The online gaming industry grew by 28 per cent in 2021 to reach USD 1.9 billion, as per **NITI Aayog estimates**.
- ◆ Internet gaming has grown in popularity in India, with millions playing games like PUBG, Free Fire, and Call of Duty.

Key drivers of Gaming Industry in India:

- ◆ Smartphone penetration
- ◆ Affordable internet
- ◆ Young demography of India
- ◆ Introduction of new games with a shorter learning curve



PSYCHIATRIC CASES IN PARAMILITARY ROSE UP BY 38% IN 2 YEARS: MHA

Context: The Ministry of Home Affairs (MHA) informed the Rajya Sabha that the total number of psychiatric patients in the Central Armed Police Forces (CAPFs) has increased by almost 38 per cent in reported psychiatric cases.

Key-highlights

- ◆ Around **3,864 cases** were reported in **CAPFs in 2021**.
- ◆ There were a total of **1,470 psychiatric patients** in CRPF in **2020, 1,506 in 2021 and 1,882 in 2022**.

What are the reasons for the prevalence of Mental Health issues in the Paramilitary Forces?

- ◆ **Tightly Structured Hierarchy:** A command-and-control hierarchy system tends to become inhuman, especially to those who cannot communicate their personal issues in an appropriate forum.
- ◆ **Unaddressed stress:** Uniformed forces showing signs of mental stress are not given enough attention.
- ◆ **Less Recognition for their Achievements:** They mostly remain in the background of the organisation with less recognition for their achievements and more frequent persecution for failure.
- ◆ **Tend towards Alcoholism:** To cope with the difficulty of the types of setups, personnel often resort to alcoholism and drug abuse.

What can be the impact of the Rising Mental Health issues among the forces?

- ◆ **Discourage Younger Generation:** Despite the good image that the armed forces have, and the fact that it is a very respectable job, rising mental health issues among the forces can discourage the younger generations from joining.
- ◆ **Demoralize the Forces:** Increasing mental health issues among the forces can discourage them and negatively impact their daily operations.
- ◆ **Rising cases of Suicides:** Suicides, fratricides and untoward incidents are causing more Army personnel to lose their lives than any enemy or terrorist activities, according to the findings of a study by **United Service Institution of India (USI)**.



CHILD TRAFFICKING INCREASED IN INDIA: STUDY

Context: To mark the “World Day against Trafficking in Persons” on July 30, a report, titled ‘Child Trafficking in India: Insights from Situational Data Analysis and the Need for Tech-driven Intervention Strategies’ has been released.

Highlights of the Report:

- ◆ **Based on Number of Trafficked children:** Jaipur has emerged as the **most prominent destination** for trafficked children in the country in the last six years.
- ◆ **Based on Average per year Trafficked children:**
 - ▶ **Uttar Pradesh** saw the maximum number of

children trafficked on an ‘average per year – 267’ in the **pre-COVID phase (2016-19)** and **1,214 in post-COVID phase (2021-22)**, or an increase of over **350 per cent** with the year 2021 reporting 2,055 cases.

- ▶ UP was followed by **Bihar and Andhra Pradesh**, together making up the **top three states** from where the **maximum numbers of children** were trafficked on an **average per year**.
- ▶ **Karnataka** showed a staggering increase in the number of children trafficked on an average per year, from six cases before COVID to 110 after it — **an 18-fold increase**.

Constitutional Provisions:

- **Article 23:** prohibits human trafficking and beggar (forced labour without payment).
- **Article 24:** forbids the employment of children below the **age of 14 years** in dangerous jobs like factories and mines.

Child Trafficking in India:

- ◆ According to the **NCRB Report of 2021**, 2877 children were trafficked in India.
- ◆ Approximately **eight children were trafficked daily**, and the reports account for only those cases that **Anti-Human Trafficking Units** have registered; the unregistered traffic figure is enormous compared to this.
- ◆ The report also shows that trafficking increased in India by **28 per cent in 2021 compared to 2020** and **44 per cent of these victims are children**.



Laws related to prohibiting Human Traffic:

- ◆ **Immoral Traffic Prevention Act, 1986:** The purpose of this Act is to give effect to the **Trafficking Convention and to prohibit immoral human trafficking**.
 - ▶ It constitutes authorities at **the centre and state level to combat trafficking**. However, it does not

elaborate on the role, function, and composition of these authorities.

- ◆ **Criminal Law (Amendment) Act 2013:** It has come into force wherein **Section 370 of the Indian Penal Code** has been substituted with **Section 370 and 370A IPC** which provide for comprehensive measures to counter the menace of human trafficking.
- ◆ **Protection of Children from Sexual offences (POCSO) Act, 2012,** is a special law to protect children from sexual abuse and exploitation.

ENSURE 5% QUOTA TO SPECIALLY-ABLED CANDIDATES IN EDUCATIONAL INSTITUTES: DELHI HC

Context: The Delhi High Court (HC) has asked the Delhi Government to ensure that the mandate of the Rights of Persons with Disabilities Act, 2016 (RPwD) must be followed by allotting 5% reservation for disabled candidates in all educational institutions.

- ◆ Now, the universities are providing **3% quota to the candidates** instead of the **mandated 5%**.

About the Order:

- ◆ The universities, as well as the **State Government**, are directed to ensure that in all educational institutions, the statutory provisions governing the field under the **RPWD Act** are followed and **5 per cent reservation** is provided to specially-abled persons.
- ◆ The order came on a **public interest litigation (PIL)** plea by **non-governmental organization** Justice for All, which alleged that the university was not providing **5% reservation** following the provisions of the Act.

What are the major issues faced by them?

- ◆ **Health:** A large number of disabilities are preventable, including those arising from medical issues during birth, maternal conditions, malnutrition, as well as accidents and injuries.
 - ▶ Healthcare facilities and poorly trained health-workers in rehabilitation centres is another concern.
- ◆ **Education:** There are various issues such as availability **special schools, access to schools, trained teachers, and availability of educational materials for the disabled.**

- ▶ Further, reservation for the disabled in higher educational institutions has not been fulfilled in many instances.

- ◆ **Employment:** Even though many disabled adults are capable of productive work, disabled adults have far lower employment rates than the general population.
 - ▶ The situation is even worse in the private sector, where much less disabled are employed.
- ◆ **Accessibility:** Physical accessibility in buildings, transportation, access to services etc still remains a major challenge.
- ◆ **Discrimination/Social Exclusion:** Negative attitudes held by the families of the disabled, and often the disabled themselves, hinder disabled persons from taking an active part in the family, community or workforce.
- ◆ **Inadequate data and statistics:** The lack of rigorous and comparable data and statics further hinders inclusion of persons with disabilities.

Present data (Inaccuracy in numbers):

- Globally, 15% of the world's population has a disability, as per the 2011 World Report on Disability from WHO
- **Census 2011:** Out of the total population of 121 crore, **about 2.68 Cr persons are 'Disabled' (2.21% of the total population).**
- **National Sample Survey Report 2018:** It showed 2.3% for rural and 2% for urban.
- **NFHS-5:** The question of disability was included for the first time in NFHS-5 (2019-2021) and it was observed that the disability prevalence was only 1% for rural areas and 0.9% for urban areas.

What is the issue with NHFS data for PwD?

The difference between the estimates can be traced to the different approaches of the surveys.

- **NFHS-5:** The NFHS 5 focuses on the '**de jure**' **definition of disability**, focusing on counting only people with benchmark disabilities under **five broad categories**.
- **Census 2011:** In contrast, Census 2011 had a **broader definition of disability focusing on self-identification**.
- **NSSO 2018:** While the **76th round of NSS (2018)**, which was about counting those with disabilities, covered all disabilities under the **Rights of Persons with Disabilities Act, 2016 including rare disabilities**.

Programmes and initiatives for PwD in India:

- Accessible India Campaign (Suganya Bharat Abhiyan)
- National Fellowship for Students with Disabilities (RGMF)
- DeenDayal Disabled Rehabilitation Scheme
- Assistance to Disabled Persons for Purchase / fitting of Aids and Appliances (ADIP)


SC ASKS CENTRE, SIX STATES TO RESPOND TO PLEA ON LYNCHINGS

Context: The Supreme Court asked the Centre and at least six States to respond to a plea about lynchings and mob violence refusing to stop.

What is Mob Lynching?

◆ **It is** a form of violence in which a mob, under the

pretext of administering justice without trial, executes a presumed offender, often after inflicting torture and corporal mutilation.

◆ The term *lynch law* refers to a self-constituted court that imposes sentence on a person without due process of law.

Lynching laws in India:

◆ There is no national law made on mob lynching. Mob lynching is not defined in IPC, CrPC, and nor defined in the constitution.

◆ Though there are certain provisions in the IPC, for example-

- ▶ **Section 223 (a) of the Code of Criminal Procedure (CrPC), 1973** states that persons or a mob involved in the same offence in the same act can be tried together.
- ▶ **Sections 302** (murder)
- ▶ **Section 304** (culpable homicide not amounting to murder)
- ▶ **Section 307** (attempt to murder)

Impact of mob lynching	Required measures
<ul style="list-style-type: none"> • Threat to law: This act of people taking the law into their hands poses a serious threat to the Rule of Law and principles of Natural Justice. • Threat to minority groups in the country. • Suppressing basic rights of minorities • It normalise such heinous crimes. • Economic loss • Health impacts: Lynching incidents are an issue of public health. In the short-term, lynching leads to death and injury for the victims whereas in the long-term it can lead to psychological and physiological effects on present and future generations. 	<ul style="list-style-type: none"> • Strong measures: States must take strong measures, including appointing nodal officers at district level, to curb such instances of violence in the name of cow protection. • Proactive measures: States should be far more vigilant and proactive in flagging rumours using social media and other platforms. Some states are doing it, others need to emulate these examples. • More campaigns and awareness among people • Control on the spread of fake news


UNITED NAGA COUNCIL SEEKS NRC IN MANIPUR

Context: The United Naga Council, an apex body of Nagas in Manipur, has asked the State government to immediately start the exercise to update the National Register of Citizens (NRC) in the State.

About the Naga council's ask:

◆ According to the council, in the wake of the **increasing influx of illegal immigrants**, the NRC is the only feasible mechanism to curb the **unwarranted population invasion in Manipur**.

◆ Manipur is inhabited by **three major communities** — the Meiteis, the Nagas and the Kuki-Zomis.

The **Meitei and Naga** communities are **considered indigenous**, while most of the **Kuki-Zomi people** are said to have **settled from Myanmar**.

◆ The State is affected from **Narco-terrorism** which can be addressed by **stopping illegal migration**.

The National Register of Citizens (NRC):

◆ **National Register of Citizens, 1951** is a register prepared after the **conduct of the Census of 1951** in respect of each village, showing the **houses or holdings in a serial order** and indicating against each house or holding the **number and names of persons staying therein**.

- ◆ The NRC was published only **once in 1951** and since then, it has **not been updated until recently**.

NRC and updating exercises in India:

- ◆ Nagaland attempted a similar exercise called **RIIN (Register of Indigenous Inhabitants of Nagaland)** in June 2019 to primarily sift the **indigenous Nagas from the non-indigenous Nagas**.
- ◆ More recently, the **Manipur Assembly** has resolved to implement the **National Register of Citizens (NRC)** and establish a **State Population Commission (SPC)**.

It has been **updated in Assam** only for now and the government plans to update it nationally as well.

What an updated National Register of Citizens (NRC) will do?

- ◆ **Tracking migration:** An updated NRC is likely to put an end to speculations about the actual number of illegal migrants in Assam in particular and the country in general.
- ◆ **Verified data:** It will provide a verified dataset to carry out meaningful debates and implement calibrated policy measures.
- ◆ **Deterrence:** Publication of an updated NRC is expected to deter future migrants from Bangladesh from entering Assam illegally.
- ◆ **Putting an end to suspicion:** Inclusion of actual names in the NRC will provide respite to all those Bengali speaking people in Assam who have been, hitherto, suspected as being Bangladeshis.



PRESIDENT RETAINS POWER TO SCRAP ARTICLE 370: SUPREME COURT

Context: Recently, the **Supreme Court (SC)** raised the question whether the **President's power to declare 'inoperative' Article 370 of the Constitution, will not continue to hold the field after the dissolution of the erstwhile State's Constituent Assembly on January 26, 1957.**

What are the Powers of President under Article 370?

- ◆ **Clause (3) of Article 370** gave the **President Power to notify** the Article 'inoperative' or 'modify it'.
- ◆ But a proviso had made it "necessary" that such

a move would have to be recommended by the **Jammu and Kashmir (J&K) Constituent Assembly**.

Supreme Courts' views on Clause (3):

- ◆ According to the apex court, a Constituent Assembly is not a **permanent body** like the Parliament and the Supreme Court.
- ◆ The **J&K Constituent Assembly** was constituted for a specific purpose — to **draft the Constitution of J&K**.

"**Functus officio**" is a Latin term meaning having performed his or her office. With regard to **an officer or official body**, it means without further authority or legal competence because the duties and functions of the original commission have been **fully accomplished**.

- ◆ It became **functus officio** once the J&K Constitution was framed.
- ◆ This proviso making the Constituent Assembly's 'recommendation' necessary before abrogation has no application.
- ◆ If the proviso ceased to operate, surely the **substantive part of Clause 3 in Article 370** will remain.

Constitutional Provisions in support of the SC's argument:

- ◆ Article 370 was mentioned in the Constitution only as a **"temporary" provision**.
- ◆ However, it became permanently engrafted into the Constitution **after 1957** with the **dissolution of the Constituent Assembly**.
- ◆ Article mentions a **Constituent Assembly for J&K**. However, the Constituent Assembly was not convened until December 1951.
- ◆ It was then left to the people of J&K, through their Constituent Assembly, to decide if **Article 370** ought to be abrogated at all.
- ◆ Article 370 was called '**temporary**' because the Constitution always wanted the J&K people to decide their future.
- ◆ Article 370 could have been abrogated **only by a vote of confidence** in the Constituent Assembly.

What are the Legislative Powers of the President?

There are four legislative powers of President, as per the Constitution:

- ◆ He can send messages to either House of the Parliament.

- ◆ He **summons and prorogues** the Houses.
- ◆ He can dissolve the Lok Sabha and order fresh elections.
- ◆ He nominates **12 members** to the Rajya Sabha.

SIKKIM ANNOUNCED 1-YEAR MATERNITY LEAVE

Context: Recently, the Sikkim government has announced a decision to provide 12-month maternity leave and one-month paternity leave to its employees.

What are the present rules for maternity leave in States?

- ◆ **Maternity Benefit Act of 1961:** Under the Maternity Benefit Act of 1961, female employees were only entitled to 12 weeks of maternity leave.
 - ▶ The act is applicable to all establishments employing 10 or more.
- ◆ **Maternity Benefits Act of 2017:** The Maternity Benefits Act of 2017 increased the period to 26 weeks. Furthermore, noncompliance with the laws and regulations carries a penalty.

Important Government Interventions for Maternity benefits

- **Janani Suraksha Yojana** under the **National Health Mission** to link cash assistance to institutional deliveries.
- **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)** provides a fixed day for assured, comprehensive and quality antenatal care free of cost to pregnant women on 9th of every month.
- **Pradhan Mantri Matru Vandana Yojana**
- **Poshan Abhiyan**
- LaQshya Guidelines

- ◆ **DPSP:** The Directive Principle of State Policy (DPSP) states that "the State shall make provision for securing just and humane conditions of work and for maternity relief."
- ◆ **Employees' State Insurance Act, 1948 (ESIA) and the Central Civil Services Rules, 1972:** Under the following scheme all non-season factories which run on power with the capacity of more than 10 employees are covered.
- ◆ **International convention:** Members of **International Labour Organization (ILO)** adopted a resolution in an **international convention on economic and social rights** in 2004 adopted a resolution providing equal opportunity for women.

- ▶ At this conference, a resolution was passed to give **14 weeks of maternity leave** to women.
- ▶ India is a member of the ILO.

Key-details of Sikkim's Policy:

- ◆ Himalayan state – **Sikkim** – has the **lowest population in India**, around 6.32 lakh.
- ◆ Thus, in order to **boost the population of indigenous communities in Sikkim**, the state government, through a notification, decided to provide **advance and additional increments** to its employees having **two or three children** with retrospective effect from 1 January, 2023.
- ◆ The notification mentioned **Department of Personnel** of the state government employees possessing **Sikkim Subject Certificate/Certificate of Identification** shall get one advanced increment for having **two surviving children**.

Significance of the policy:

- ◆ The scheme will help in **conservation of Indigenous Tribal population**.
 - ▶ **Major Tribes: Bhutia, Lepcha, Limbu**
- ◆ **Furthermore, it would lead to the conservation of culture and ethnicity:** Sikkim's cultural life, though showing strong **Tibetan influences**, retains a character derived from the various tribes of **Sikkim and their pre-Buddhist customs**.
- ◆ Many monasteries are repositories of wall paintings, **thang-kas (religious paintings mounted on brocade), bronze images, and other artworks**

DRAFT NATIONAL DEEP TECH STARTUP POLICY

Context: The Principal Scientific Adviser to the Government of India has put out a draft National Deep Tech Startup Policy (NDTSP) for public comment.

Highlights of the draft:

- ◆ **Objective:** The policy seeks to "ensure India's position in the global deep tech value chain," in areas such as **semiconductors, Artificial Intelligence (AI) and space tech**.
- ◆ The policy also includes **resource-intensive policy** approaches to attract global talent, such as offering networking opportunities to international **deep tech startups and experts interested** in relocating and contributing to the local ecosystem.

- ◆ The policy seeks to **bolster research and development** in deep tech start-ups, which work on fundamental and technical problems, unlike firms that monetize technology with distinguished business models.



- ◆ The policy also seeks to find approaches to provide financing to **deep tech start-ups at critical moments**, such as before they go to market with their products or ideas.
- ◆ The policy seeks to simplify the **intellectual property regime** for such start-ups, ease regulatory requirements, and proposes a slew of measures to promote these firms.

What is Deep Tech?

- ◆ **Deep tech or deep technology** refers to a class of **startup businesses** that develop new offerings based on **tangible engineering innovation or scientific discoveries and advances**.
- ◆ Usually, such startups operate on, but are not limited to, **agriculture, life sciences, chemistry, aerospace and green energy**.
- ◆ Deep tech fields like **Artificial Intelligence, advanced materials, blockchain, biotechnology, robotics, drones, photonics, and quantum computing** are moving more and more quickly from early research to market applications.

State of India's Deep Tech Startups:

- ◆ India had over **3,000 deep-tech start-ups**, dabbling in new-age technologies like **Artificial Intelligence, Machine Learning (ML), Internet of Things, Big Data, quantum computing, robotics, etc.**, at the end of 2021.
- ◆ **According to NASSCOM**, deep-tech start-ups in India raised **USD 2.7 billion** in venture funding in 2021, and now account for **over 12% of the country's** overall startup ecosystem.
- ◆ In the last decade India's deep tech ecosystem has grown **53%** and is at par with that in developed markets like **the US, China, Israel, and Europe**.

- ◆ Bengaluru accounts for **25-30% of India's deep-tech start-ups**, followed by **Delhi-NCR (15-20%)** and **Mumbai (10-12%)**.
- ◆ **Deep-tech start-ups** are making their presence felt across sectors like **drone delivery** and **cold chain management to climate action and clean energy**.

FCRA GUIDELINES FOR NGOS

Context: The Ministry of Home Affairs (MHA) has withdrawn the permit under the Foreign Contribution Regulation Act (FCRA) for U.K.-based NGO 'Save the Children (Bal Raksha Bharat)'.

What is FCRA License?

- ◆ The FCRA registration is a **mandatory requirement** for receiving foreign funds.
- ◆ The License is granted by the Union home ministry grants FCRA licences for a five-year period.
- ◆ FCRA registration is valid for **5 years**, and **NGOs are expected to apply for renewal within six months** of the **date of expiry of registration**.
- ◆ The government can also **cancel the FCRA registration of any NGO if it finds that the NGO is in violation of the Act**, if it has not been engaged in any reasonable activity in its chosen field for the benefit of society for **two consecutive years**, or if it **has become defunct**.
- ◆ Once the registration of an NGO is cancelled, it is **not eligible for re-registration for three years**.

What is Foreign Contribution Regulation Act (FCRA)?

- ◆ FCRA was enacted during the **Emergency in 1976** amid apprehensions that foreign powers were interfering in India's affairs by pumping money into the country through independent organisations.

What is NGO?

- A Non-Governmental Organisation (NGO) is a **non-profitable charitable organisation**.
- In India, NGOs established under **Section 8 of the Companies Act** are governed by the provisions of the **Companies Act, 2013**, while the NGOs established as a trust or society are governed by the state governments.

- ◆ **Objective:** The law sought to regulate **foreign donations to individuals and associations** so that they functioned in a manner consistent with the values of a sovereign democratic republic.

- ◆ **Criteria to seek FCRA registration:** The FCRA requires **every person or NGO** seeking to receive foreign donations to be:
 - ▶ registered under the Act
 - ▶ to open a bank account for the receipt of the foreign funds in **State Bank of India**, Delhi
 - ▶ to utilize those funds only for the purpose for which they have been received and as stipulated in the Act
 - ▶ FCRA registrations are granted to individuals or associations that have definite **cultural, economic, educational, religious, and social programmes**.
- ◆ **Exceptions:**
 - ▶ Under the FCRA, the applicant should **not be fictitious** and should not have been **prosecuted or convicted** for indulging in activities aimed at conversion through inducement or force, either directly or indirectly, from one religious faith to another.
 - ▶ The applicant should also not have been **prosecuted for or convicted** of creating communal tension or disharmony.
 - ▶ Also, should not be engaged or likely to be engaged in the **propagation of sedition**.
 - ▶ The Act prohibits the **receipt of foreign funds** by candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of legislature and political parties or their office-bearers, and organisations of a political nature.

NGO DARPAN Portal

- In India, the government has put efforts into encouraging NGO financing.
- The government created an online portal, NGO DARPAN, to promote and create a healthy partnership between NGOs and the Government of India and speed up the financing process.
- The NGO DARPAN portal serves as an interface between NGOs and other government departments.

TERROR FINANCING AND SAFEGUARDING NPOS

Context: The Financial Action Task Force (FATF) is going to revise its current recommendations aimed at safeguarding non-profit organisations (NPOs) from being abused for terrorist financing.

FATF:

The **Financial Action Task Force (FATF)** is an independent **inter-governmental body** that develops and promotes policies to protect the **global financial system** against money laundering, terrorist financing and the financing of proliferation of weapons of mass destruction.

- ◆ The FATF Recommendations are recognized as the global **anti-money laundering (AML)** and **counter-terrorist financing (CFT) standards**.



About the update:

- ◆ The FATF will take up proposals to revise the **FATF Standards' Recommendation 8** on non-profits, its interpretive note, and also adopt an updated **best practices paper**.
- ◆ As per the FATF's draft proposal, countries should develop an understanding of the different **degrees of terrorist-financing risk** posed to non-profit organizations and the corresponding levels of mitigating measures they require.
- ◆ **Considering negative impact on NPOs:** The revisions also seek to address the problem of over-application of preventive measures to the NPO sector in some countries.

FATF's 'Special recommendation 8':

- ◆ The objective of Recommendation 8 is to ensure that NPOs are **not misused by terrorist organisations** including:
 - ▶ To pose as legitimate entities;
 - ▶ To exploit legitimate entities as conduits for terrorist financing, including for the purpose of escaping asset freezing measures; or
 - ▶ To conceal or obscure the clandestine diversion of funds intended for legitimate purposes, but diverted for terrorist purposes.

- ◆ FATF gave a variety of legal forms that NPOs can have, depending on the country, the FATF has adopted a **functional definition of NPO**.
- ◆ This definition is based on those activities and characteristics of an organisation which put it at risk of terrorist abuse, rather than on the simple fact that it is operating on a **non-profit basis**.
- ◆ **Recommendation 8** only applies to those NPOs which fall within the **FATF definition of a non-profit organisation**.
- ◆ Countries should take a targeted approach to implementing the measures called for in Recommendation 8, including oversight and regulatory mechanisms, based on an understanding of the diversity of the NPO sector and the terrorism risks faced by **the domestic NPO sector**.

FATF definition of a 'Non-profit organization':

- ◆ A legal person or arrangement or organisation that primarily engages in raising or disbursing funds for purposes such as **charitable, religious, cultural, educational, social or fraternal purposes**, or for the carrying out of other types of **"good works"**.
- ◆ The term **NPO** refers only to those NPOs falling within the FATF definition.

Need of the initiative:

- ◆ **To tackle the linkage with Terror financing:** One of the ways in which terrorist organisations raise and transfer funds, are by using **non-profit organisations (NPOs)**.
 - ▶ In many important ways however, the work of NPOs deal with the conditions conducive to the spread of terrorism, so it is essential that in trying to address one aspect of the terrorist threat.
- ◆ **Self-regulation must be ensured:** Moreover the sector's own stake in being "clean" and being so regarded by others should be acknowledged, thus making them an indispensable partner in drawing up such policies.

India's Steps against Terror financing:

- ◆ **International steps:** India along with other **BRICS members** underlined their resolve to make the **international financial system** entirely hostile to terrorist financing.
- ◆ **Domestic steps:** Strengthening the provisions in the **Unlawful Activities (Prevention) Act, 1967** to combat terror financing by criminalizing the production or smuggling or circulation of high quality counterfeit Indian currency as a terrorist act and enlarge the scope of proceeds of terrorism to include any property intended to be used for terrorism.

- ◆ A **Terror Funding and Fake Currency (TFFC) Cell** has been constituted in National Investigation Agency (NIA) to conduct focused investigation of terror funding and fake currency cases.
- ◆ **Fake Indian Currency Notes (FICN) network** is one of the channels of terror financing in India.
 - ▶ **FICN Coordination Group (FCORD)** has been formed by the **Ministry of Home Affairs** to share intelligence/information among the security agencies of the states/centre to counter the problem of circulation of fake currency notes.



KERALA AS KERALAM: HOW AND WHY?

Context: Recently, the Kerala Assembly has passed a resolution urging the Centre to rename the state as "Keralam" in the Constitution and all office records.

Key-Points in Resolution:

- ◆ The resolution presented by Kerala government mentioned that, the name of the state in Malayalam is **Keralam**.
- ◆ States were formed on the **basis of language** on November 1, 1956. That day is also observed as **Kerala formation day**.
- ◆ The demand for a united Kerala for all **Malayalam-speaking communities** has been strongly raised right from the days of the freedom struggle.
- ◆ However, the name of our state in the **first Schedule of the Constitution** has been written as Kerala.
- ◆ Thus the Assembly is unanimously requesting the Union Government to take immediate steps under **Article 3 of the Constitution** to change the name of the state to **Keralam**.

Historical Backings to the name Keralam:

- ◆ The earliest epigraphic record that **mentions Kerala** is Emperor **Asoka's Rock Edict II** of 257 BC.
- ◆ The inscription refers to the local ruler as **Keralaputra** (Sanskrit for "son of Kerala"), and also "son of Chera" referring to the **Chera dynasty**.
- ◆ About 'Keralam', scholars believe it could have originated from '**Cheram**'.

Why demands for states on linguistic basis emerged in Kerala?

- ◆ The merger and integration of princely states was a major step towards the formation of the state of Kerala after Independence.

- On 1 July, 1949, the **two states of Travancore and Kochi** were integrated, heralding the birth of the Travancore-Cochin State.



- When it was decided to **reorganise states on a linguistic basis**, the **State Reorganisation Commission** of the Union Government recommended creation of the **state of Kerala**.
- The Commission under **Syed Fazl Ali** recommended the inclusion of the **district of Malabar and the taluk of Kasargod to the Malayalam-speaking people's state**.
- It also recommended the exclusion of the four Southern taluks of Travancore viz **Tovala, Agastheeswaram, Kalkulam and Vilayankode** together with some parts of Shenkottai (all these taluks now part of Tamil Nadu).
- The state of Kerala came into being on November 1, 1956.
- In Malayalam, the state was referred to as **Keralam**, while in English it was **Kerala**.

How states can be renamed in India?

- To change the name of a state, approval from the Centre's **Ministry of Home Affairs (MHA)** is required.
- The proposal has to first come from **the state government**.
- A **Constitutional amendment** becomes necessary to affect this change.
- The Union Ministry of Home Affairs (MHA) then takes over and **gives its consent** after it receives **No Objection Certificates (NOCs)** from several agencies such as the Ministry of Railways, Intelligence Bureau, Department of Posts, Survey of India and Registrar General of India.
- If the **proposal is accepted**, the resolution, introduced as a **Bill in the Parliament**, becomes a law and the **name of the state is changed thereafter**.

Constitutional Provisions:

- Article 3 of the Constitution**; explicitly lays down a procedure to alter the **area, boundaries, or name of a state**.

- When the name of the State is changed or a new State is created, the Constitution of India is required to be amended by Parliament by a **Simple majority** as under **Articles 107 & 108 of Constitution**.
- The Parliament has the power to change the name of a state. The **Constitution of India** gives the parliament power to alter the name of a state under **Article 3**.



DELHI SERVICES BILL

Context: The Delhi Services Bill, formally called Government of National Capital Territory of Delhi (Amendment) Bill 2023 has been passed in Rajya Sabha. The Bill has been already passed in the Lok Sabha.

What is the new bill all about?

- Aim:** The aim of this bill is to make a corruption-free administration in Delhi.
- The Central government will be the **rule-making authority**.



- The Delhi Services Bill states that the **inquiries and suspensions of the officials of the national capital** will be under the Centre's control.
- LG's decision to be final:** The **Lieutenant Governor** will be empowered to exercise his **sole discretion** on various matters, which will include the:
 - National Capital Civil Services Authority's recommendations**
 - the prorogation, summoning, and dissolution of the Delhi Legislative Assembly
- National Capital Civil Services Authority (Composition):** The Bill provides for the formation of a National Capital Civil Service Authority.
 - The Delhi Chief Minister-** the *ex-officio* Chairperson

- ▶ **The Chief Secretary** – an *ex-officio* member of this body
- ▶ **The Principal Home Secretary of the Delhi government** - the *ex-officio* Member Secretary of the Authority.
 - All matters before the Authority will be decided by voting of the members.

How is the Bill different from the Delhi Services Ordinance?

- ◆ **Section 45D** of the Bill deals with the power to **appoint authorities, boards, commissions and statutory bodies.**
- ◆ While in the Ordinance, all such powers lay with the **President**, the Bill has added a **sub-clause (b)** to the provision to allow the **Authority (headed by the Chief Minister)** to “recommend a panel of suitable persons for constitution or appointment or nomination by the **Lieutenant Governor.**”
- ◆ Therefore, the power of the Delhi government in this arena has been **limited to only making recommendations.**

Impact of the Bill

- ◆ **Centre’s primacy:** The Central government is set to have primacy over appointments, transfers and postings of officers in the national capital.
- ◆ **Reversal of SC’s verdict:** Essentially, the law will reverse the effect of the Supreme Court verdict that had given the Delhi government power over administrative services in Delhi.

SC’s Verdict

- In May this year, the Supreme Court of India took the decision in favour of the government of Delhi, giving it complete command over most services in the capital, leaving out **public order, land, and police.**

Can Parliament enact such laws?

- ◆ The **Indian Constitution** empowered Parliament to **enact laws for the NCT of Delhi.**
- ◆ The Supreme Court had affirmed the same in **paras 6, 95, 163(f) of its judgment** that had **restored the services to the Delhi government. (May 2023 Judgment)**
 - ▶ The relevant paras in the Supreme Court verdict refer to the difference of opinion of the judges of a Division Bench in their split verdicts on the interpretation of **Article 239AA**, which deals with special provisions pertaining to Delhi.

- ▶ The judges had differed on whether “services” were excluded in view of **Article 239AA(3)(a)** from the legislative and executive domain of **the Government of National Capital Territory of Delhi (GNCTD).**
- ▶ The Supreme Court had observed that if **Parliament enacts a law granting executive power over any subject which is within the domain of NCT Delhi**, the executive power of the Lieutenant Governor shall be modified to that extent, as provided in that law.

STRUGGLE FOR TEACOMMITTEES OF PARLIAMENTPLE ENTRY IN TAMIL NADU

Context: Recently, four MPs have complained, that their names had been included in a proposed **Select Committee for the Delhi Services Bill** without their consent in the House.

- ◆ So, let us look at the **role of committees** formed in Parliament and their structure.

About Parliamentary Committees:

- ◆ India’s Parliament has several types of committees which discharge different functions.
- ◆ There are broadly **two types of committees** in the Parliament namely;
 - ▶ There are **12 Standing Committees** that are **permanent** in nature, with their **members nominated** from time to time by **the Chairman.**
 - ▶ **Standing Committees can be classified into the following six categories:**
 - Financial Committees
 - Departmental Standing Committees
 - Committees to Enquire
 - Committees to Scrutinise and Control
 - Committees Relating to the **Day-to-Day Business** of the House
 - House-Keeping Committees or Service Committees
 - ▶ Then there are **ad hoc or temporary committees**, which are set up for a specific purpose, such as examining a particular Bill, and are dissolved once that purpose has been served.
 - They are further subdivided into **Inquiry Committees and Advisory Committees.**

- The **principal Ad hoc Committees** are the **Select and Joint Committees** on Bills.

Constitutional Provisions:

Parliamentary Committees draw their authority from **Article 105 and Article 118**.

- **Article 105** deals with the privileges of MPs.
- **Article 118** gives Parliament authority to make rules to regulate its procedure and conduct of business.

What is a Select Committee?

- ◆ A **Select Committee** belongs to temporary committee. However, the procedure it requires to follow is laid down in the **Rules of Procedure**.
- ◆ Under **Rule 125** of the Rajya Sabha **Rules and Procedures**, any member may move an **amendment** that a Bill be referred to a **Select Committee**.
- ◆ According to the Rajya Sabha rules, **The Select/Joint Committees on Bills** are constituted by the House(s) on specific motion moved by the **Minister in-charge of the Bill** or any member and adopted by the House to consider and report on Bills as referred to them from time to time.
- ◆ **Functions:** The Committee's role is to go through the text of the Bill, clause by clause, in order to see that the Bill "**reflects clearly the intention behind the measure and the object proposed to be achieved is adequately brought out**".
- ◆ A Joint Committee within the select committee has members from both **Lok Sabha and Rajya Sabha**.
- ◆ The motion to refer a Bill to a **Select Committee** can either be moved by the member in-charge of the Bill, or by any other MP.

How are a Select Committee's members selected?

- ◆ According to the Rajya Sabha rules, Bills are from time to time referred to **Select Committees**, the members on which are specifically named in the motion.
- ◆ The members of the Select Committee on a Bill are **appointed by the House** when the motion that the Bill be referred to a Select Committee is made.

No member is appointed to a Select Committee if he is **not willing to serve** on the Committee.

- ◆ The mover has to ascertain whether the member proposed by him is willing to serve on the Committee.
- ◆ The **actual number of membership** of the Select Committee is not fixed; it varies from Committee to Committee.

- ◆ If it is a **Joint Committee**, the proportion of members from the **Rajya Sabha and the Lok Sabha is 1:2**.
- ◆ The Chairman of the Committee is appointed by the Chairman of the Rajya Sabha from among the members of the Committee.
- ◆ The **member or Minister in-charge of the Bill** is generally included as a **member of the Committee**.



REFERENDUM NOT AN OPTION UNDER CONSTITUTION: SC

Context: Recently, the Supreme Court (SC) has mentioned that, **seeking public opinion in a constitutional democracy like India has to be through established institutions or Democratic tools and there is 'no question of referendum' under the country's Constitution.**

What does a 'Referendum' mean?

- ◆ A referendum is an instrument of **direct democracy** through which **people can vote directly on a particular issue**.
- ◆ It is a form of direct democracy in which citizens are allowed to vote on a specific issue or question, typically proposed by a **government or other official body**.
- ◆ The results of a referendum are then used to determine the **course of action** that will be taken by the government or other decision-making bodies.

Scope of Referendums:

Referendums have been used to decide on a wide range of issues, including:

- ◆ Constitutional amendments
- ◆ Secessionist movements
- ◆ Major political decisions e.g. Brexit
- ◆ Controversial social issues such as same-sex marriage etc.

Types of Referendums:

- ◆ **Mandatory Referendum:** It is a form of a referendum that must be voted on if specific criteria are satisfied.
- ◆ **Optional Referendum:** A form of referendum is held in response to demand.

Referendum in India:

- ◆ There is **no provision for a referendum** in the Indian Constitution.

- ◆ However, the referendum is neither **unlawful nor forbidden in India**.
- ◆ **Referendums have been used in India in the past;**
 - ▶ Sikkim conducted a referendum to remove the monarchy on April 14, 1975. With **97.55 percent** of the vote, the state was declared an Indian state.
 - ▶ The Goa Opinion Poll, held on January 16, 1967, in the Indian state of Goa, determined the future of the **Union Territory of Goa, Daman, and Diu within the Indian Union**.
- ◆ The **right to raise a question of privilege** is based on satisfying **two conditions**, namely:
 - ▶ The question shall be restricted to a **specific matter of recent occurrence**
 - ▶ The matter **requires the intervention of the Council**
- ◆ The **Speaker** has the power to make such decisions.
- ◆ The **Speaker/RS chairperson** is the **first level of scrutiny** of a privilege motion.
- ◆ Therefore, the **Speaker/Chair** can decide on the privilege motion him or herself or refer it to the privileges committee of Parliament.



PRIVILEGE MOTION IN PARLIAMENT

Context: Recently, **Rajya Sabha Chairman referred complaints related to the privilege of the House against Derek O'Brien and Raghav Chadha to the privileges committee.**

What is Privilege Motion?

- ◆ Parliamentary privileges are certain rights conferred to the **Members of Parliament** for conducting **the business of the Parliament**.
- ◆ There is **no codified list** of the exact privileges, but it includes the **right of free expression** in the course of Parliamentary debates and **Members of Parliament** will not be liable for court proceedings for this.
- ◆ If there is a belief that such a privilege has been breached, a motion can be **raised by any member**.
- ◆ It can be admitted by the Chairman.
 - ▶ Then, they can then refer it to the **Privileges Committee**.

Provisions related to Privileges

- **Rule No 222** in Chapter 20 of the **Lok Sabha Rule Book** and correspondingly **Rule 187** in **Chapter 16** of the **Rajya Sabha rulebook govern privilege**.
- Rules say that a member may, with the consent of the **Speaker or the Chairperson**, raise a question involving a **breach of privilege** either of a member or of the House or a committee thereof.

How Privilege committee be formed?

- ◆ The Chairman of Rajya Sabha can, from time to time, nominate such a Committee, consisting of **ten members**.
- ◆ It will also have a Chairman appointed by the **Rajya Sabha Chairman**.

What is the role of Privilege committee?

- ◆ The mandate of the committee is to examine such cases and "make such recommendations as it may deem fit".
- ◆ It can call the relevant people as part of **its examination and look at related documents**.
- ◆ It has to then **make a report** and if the Council has not fixed any time for its presentation, the report shall be presented within **one month of the date** on which reference to the Committee was made.
- ◆ A motion has to be passed for the **consideration of the report and amendments** can be suggested.
- ◆ The Chairman or any member of the Committee or any other member can move that the **Council agrees, disagrees, or agrees with amendments**, with the recommendations contained in the report.

Parliamentary privileges:

- These are **special rights, immunities and exemptions** enjoyed by the **two Houses of Parliament**, their committees and their members.
- The Constitution also extends the parliamentary privileges to those persons who are entitled to speak and take part in the proceedings of a **House of Parliament or any of its committees**.
- These include the **Attorney General of India and Union ministers**.

Privilege motion often rejected in Parliament:

- ◆ Most of the cases of the privilege motion passed in the Parliament in the past have been rejected. Penal actions have been recommended only in a few, so far.
- ◆ **Some significant privilege motion cases:**
 - ▶ In 1978, privilege motion was moved against **Indira Gandhi** and was expelled from the House.
 - ▶ In 1976, **BJP MP Subramanian Swamy** was expelled from **the Rajya Sabha**.

REVAMP OF COLONIAL-ERA LAWS

Context: India's government moved three bills in the lower house of parliament aimed at overhauling some colonial-era criminal laws, ranging from the controversial sedition law to strengthening laws that protect women and minors.

About the proposed Bills:

◆ The bills are going to repeal and replace the

Indian Penal Code (IPC), the Code of Criminal Procedure (CrPC), and the Indian Evidence Act, which were implemented by the British before the country's independence in 1947 as under;



Previous Act/ Code	Proposed Code	Major Changes
Indian Penal Code, 1860	Bharatiya Nyaya Sanhita Bill, 2023	It will have 356 sections instead of the earlier 511 sections, 175 sections have been amended, 8 new sections have been added and 22 sections have been repealed.
Criminal Procedure Code, 1898	Bharatiya Nagarik Suraksha Sanhita Bill, 2023	With 533 sections, 160 sections have been changed, & 9 new sections have been added and 9 sections have been repealed.
Indian Evidence Act, 1872	Bharatiya Sakshya Bill, 2023,	It will now have 170 sections instead of the earlier 167, 23 sections have been changed, 1 new section has been added and 5 repealed.

- ◆ The bill seeks to replace the **colonial-era sedition law** which was mainly used against Indian political leaders seeking independence from British rule.
- ◆ Also, the **state-of-the-art technologies** have been incorporated in these laws.
- ◆ The objective of these laws will not be to punish anyone but **give justice** and in this process punishment will be given where it is required to create a sense of prevention of crime.

Major changes from IPC to BNS Bill

- ◆ The BNS Bill contains 356 provisions as compared to 511 sections in the IPC. Here are the major changes it proposes.

Sedition

- ◆ The legislation proposed also seeks to **replace the sedition law**, which came into force in 1860.
- ◆ The British used the provision to punish Indian leaders seeking independence during the 19th and early 20th century.
- ◆ **IPC Section 124-A** deals with offence of sedition, prescribing sentence of life imprisonment or

imprisonment which may extend to three years, to which fine may be added.

- ◆ Meanwhile, the BNS Bill's provision 150 under the chapter pertaining to offences against the State **covers acts endangering sovereignty, unity and integrity of India.**

▶ The section says, "Whoever, purposely or knowingly, by words, either spoken or written, or by signs, or by visible representation, or by electronic communication or by use of financial mean, or otherwise, excites or attempts to excite, secession or armed rebellion or subversive activities, or encourages feelings of separatist activities or endangers sovereignty or unity and integrity of India; or indulges in or commits any such act shall be punished with imprisonment for life or with imprisonment which may extend to seven years and shall also be liable to fine."

Murder

- ◆ The offence of murder covered under section 302 of the IPC, is covered under provision 101 of the BNS Bill.
- ◆ The punishment, life term or death sentence, remains unchanged.

- ▶ **Provision 101 (2) of the BNS Bill** says, "when a group of five or more persons acting in concert commits murder on the ground of race, caste or community, sex, place of birth, language, personal belief or any other ground each member of such group shall be punished with death or with imprisonment for life or imprisonment for a term which shall not be less than seven years, and shall also be liable to fine."

Snatching

- ◆ Another change is a new provision on "snatching" under section 302 of the BNS Bill.
- ◆ It says, "Theft is 'snatching' if, in order to commit theft, the offender suddenly or quickly or forcibly seizes or secures or grabs or takes away from any person or from his possession any moveable property."
- ◆ It proposes imprisonment of up to three years, and liability to fine for whoever commits snatching.

Terrorism

- ◆ In a first, the BNS Bill defines terrorism, which was not done in the IPC.
- ◆ **Provision 111** of the BNS Bill mentions, "A person is said to have committed a terrorist act if he commits any act in India or in any foreign country with the intention to threaten the unity, integrity and security of India, to intimidate the general public or a segment thereof, or to disturb public order by doing an act."

Defamation

- ◆ IPC directs a punishment of simple imprisonment of up to two years, or with fine, or with both for the offence of defamation.
- ◆ The BNS Bill adds community service to the punishment, proposing a simple imprisonment of up to two years, or with fine, or with both or with community service.

Suicide

- ◆ From a sentence of up to one year or with fine or both under **Section 309 of IPC, Section 224** of the BNS Bill covers suicide proposing, "whoever attempts to commit suicide with the intent to compel or restrain any public servant from discharging his official duty shall be punished with simple imprisonment for a term which may extend to one year or with fine or with both or with community service."

Marrying a woman, having sexual intercourse with a woman using "deceitful means"

- ◆ **Section 69**, dealing with sexual offences against women and children, of the BNS Bill says "Whoever,

by deceitful means or making by promise to marry to a woman without any intention of fulfilling the same, and has sexual intercourse with her, such sexual intercourse not amounting to the offence of rape, shall be punished with imprisonment of either description for a term which may extend to ten years and shall also be liable to fine."

- ◆ "**Deceitful means**" is explained to include the false promise of employment or promotion, inducement or marrying after suppressing identity.

Other proposed changes

- ◆ **Capital punishment for mob lynching:** The proposed bills also contain provisions allowing capital punishment for perpetrators of mob lynchings. They also prescribe minimum sentences of 20 years for gang rape.
- ◆ **Community Service provision:** The bills also introduce community service provisions for petty crimes rather than custodial sentences.
- ◆ **Fixed Timelines:** And fixed timelines would be imposed for trials and criminal investigations.

Need for such a legislation:

- ◆ From 1860 to 2023, the criminal justice system of India continued to be operated on the basis of the laws made by the **British Parliament**, but now these three laws will be replaced with new laws imbuing the Indian soul, which will bring a big change in our **criminal justice system**.

Significance:

- ◆ The definition of documents has been expanded to include **electronic or digital records, e-mails, server logs, computers, smart phones, laptops, SMS, websites, locational evidence, mails and messages available on devices**, which can be used in courts, which will give reduce the burden of officials.
- ◆ These laws will digitize the entire process from **FIR to case diary**, case diary to charge sheet and from charge sheet to judgement.

Criminal Justice System in India:

- ◆ Criminal Justice System refers to the agencies of government charged with enforcing law, adjudicating crime, and correcting criminal conduct.

Objective:

- ▶ To prevent the occurrence of crime
- ▶ To punish the transgressors and the criminals
- ▶ To rehabilitate the transgressors and the criminals
- ▶ To compensate the victims as far as possible

- ▶ To maintain law and order in society
- ▶ To deter offenders from committing any criminal act in the future

Why there is a need for reforms?

- ◆ **Colonial Legacy:** The criminal justice system- both substantive and procedural- are replica of the British colonial jurisprudence, which were designed with the purpose of ruling the nation.
 - ▶ Therefore, the relevance of these **19th century laws** is debatable in the 21st century.
- ◆ **Ineffective Justice Delivery:** The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but nowadays the system has become a tool of harassment of common people.
- ◆ **Pendency of Cases:** According to **Economic Survey 2018-19**, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualization of the maxim Justice delayed is justice denied."
- ◆ **Huge Undertrials:** India has one of the world's largest numbers of under-trial prisoners.
 - ▶ According to National Crime Records Bureau (NCRB)-Prison Statistics India, 67.2% of our total prison population comprises of under trial prisoners.
- ◆ **Police Issue:** Police are being a front line of the criminal judiciary system, which played a vital role in the administration of justice. Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.

Draft Rules of Criminal Practice, 2020: The Draft Rules recommends reforms in investigation and trial, including proposals to employ separate teams of lawyers to help the police during the probe and for the trial; details to be covered while drafting spot panchamas and even corrections in body sketches.

MINES AND MINERALS (DEVELOPMENT AND REGULATION AMENDMENT) BILL, 2023

Context: The Rajya Sabha approved the **Mines and Minerals (Development and Regulation Amendment) Bill, 2023** which seeks larger participation of the private sector in mineral exploration and production, including that for sought-after lithium.

Key-highlights of the Bill:

- ◆ The Bill amends the **Mines and Minerals (Development and Regulation) Act, 1957**. The Act regulates the mining sector.
- ◆ **Out of restrictions:** The **reform initiative** in the Bill brings lithium out from the **list of restrictive atomic minerals** where permission to mine could only be granted by the Centre to government companies.

India's Mining Industry:

- Mining industry plays a crucial role in the country's economy, serving as the backbone for manufacturing and infrastructure sectors.
- According to the **Ministry of Mines**, the total value of mineral production (excluding atomic and fuel minerals) during 2021-22 amounted to Rs 2,11,857 crore, indicating an impressive increase of approximately 31.96 percent compared to the year before.

- ◆ **Welcomed private players:** The change would allow auction of this critical mineral, used extensively for making batteries for electric vehicles, by the private sector.
- ◆ **Forestry clearance process:** The amendment Bill will also dispense with the **cumbersome forestry clearance process** for mine reconnaissance and prospecting operations, making it easier for the private sector to participate in exploration of the country's mineral resources.
- ◆ **Auction power:** The Bill empowers the central government to exclusively auction mining lease and composite exploration licence for certain critical high value minerals such as gold, silver, platinum and copper.

Reconnaissance operations are defined as operations undertaken for preliminary prospecting and include: (i) aerial surveys, (ii) geophysical, and (iii) geochemical surveys. It also includes geological mapping.

- ◆ **Exploration licence:** One of the major reforms proposed in the Bill is to introduce exploration licence for deep-seated and critical minerals. The exploration licence granted through auction will allow the licence from private sectors to undertake "**reconnaissance**" and **prospecting operations** for critical and deep-seated minerals.
- ◆ **Composite mineral licence:** The reform proposals in the amendment legislation also include allowing states to grant composite mineral licence without having to get central nod.
- ◆ **Fixing mineral-wise maximum area:** It will also raise and fix mineral-wise maximum area limits for mineral concessions to provide larger and economically viable mines to investors.

- ▶ For prime minerals such as **iron ore**, the maximum area for prospecting licence and mining lease has been doubled to 50 sq. km and 20 sq. km respectively.
- ▶ This would allow private entries to get same land area for mining as was earlier being given to government companies and that also by the state governments itself without any need for central approval.

Critical and strategic minerals:

- The amendment has now proposed to bring 8 of 12 atomic minerals, into a new category called critical and strategic minerals, including
 - ▶ lithium bearing minerals
 - ▶ zirconium bearing minerals
 - ▶ beach sand minerals
 - ▶ titanium bearing minerals
 - ▶ minerals of rare earth group containing uranium and thorium

What are Critical Minerals?

- ◆ Critical minerals are elements that are the building blocks of essential modern-day technologies, and are at risk of supply chain disruptions.
- ◆ These minerals are now used everywhere from **making mobile phones, computers to batteries, electric vehicles and green technologies like solar panels and wind turbines.**
- ◆ Based on their individual needs and strategic considerations, different countries create their own lists.

Though India has **6% of the world's rare earth reserves**, it only produces 1% of global output, and meets most of its requirements of such minerals from China.

ELEMENTAL CLASSIFICATION:

- Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.

Recent government interventions:

- ◆ **Mineral Security Partnership (MSP):** India joined **Mineral Security Partnership (MSP)**, a US-led collaboration that aims to catalyse public and private investment in critical mineral supply chains globally.

- ▶ The MSP includes **Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, UK, the European Commission, Italy, and now India.**

- ◆ **Identification of critical minerals:** Recently, the Centre has identified '**30 critical minerals**', which are essential for the country's economic development and national security.

LOK SABHA PASSES JAN VISHWAS (AMENDMENT OF PROVISIONS) BILL, 2023

Context: Rajya Sabha passed the Jan Vishwas (Amendment of Provisions) Bill, 2023 introduced by Minister of Union and Commerce which aims at giving further boost to Ease of Living and Ease of Doing Business.

Background:

- ◆ Bill was first introduced in Lok Sabha in December 2022. Later, it was referred to the **Joint Committee of the Parliament.**
- ◆ Subsequently, the committee finally adopted its Report.
- ◆ All the ministries and departments concerned accepted the **six recommendations** out of seven made by the committee and it was tabled and passed on 27 July, 2023.

Key-Features of the Bill:

- ◆ **Decriminalization:** The Bill seeks to give a boost to the business ecosystem in the country by **decriminalizing many minor offences** and replacing them with monetary penalties under **42 Central Acts** overseen by 19 Ministries.
 - ▶ These are administered by different Union ministries, including finance, agriculture, commerce, environment, road transport and highways, food production and distribution, and electronics and IT.
- ◆ Decriminalization is proposed to be achieved in the following manner: -
 - ▶ Both Imprisonment and/or Fine are proposed to be removed in some provisions.
 - ▶ Imprisonment is proposed to be removed and fine retained in few provisions.
 - ▶ Imprisonment is proposed to be removed and Fine enhanced in few provisions.
 - ▶ Imprisonment and Fine are proposed to be converted to Penalty in some provisions.

- ▶ Compounding of offences is proposed to be introduced in few provisions.
- ◆ **Removal of penalties:** The Bill removes all offences and penalties under the **Indian Post Office Act, 1898**.
- ◆ **Periodic revision of fine:** A distinctive feature of the proposed law is an increase of 10% of the minimum amount of fine and penalty levied after the expiry of every three years.
- ◆ **Changes in grievance redressal mechanisms:** There have been changes in **grievance redressal mechanisms** and the appointment of one or more Adjudicating Officers for accessing penalties.
- ◆ **Reducing burden on judiciary:** Decrease the number of pending cases and contribute to a more effective and efficient administration of justice.

As per the **National Judicial Data Grid**, as of July 2023, out of a total of 4.4 crore pending cases, 3.3 crore cases are criminal proceedings.

- ◆ **Reduced cost:** It will reduce time and costs for both government and businesses.

BILL PROPOSED FOR SELECTION OF 'PRESIDENT AS A VISITOR' TO IIM INSTITUTIONS

Context: Recently, the Centre introduced a bill to make amendments in the **Indian Institute of Management (IIM) Act 2017** in the Parliament, to make the 'President the Visitor' of all IIMs.

Who is a Visitor?

- The Visitor may, from time to time, appoint one or more persons to review the **work and progress** of the University, including **Colleges and Institutions** maintained by it, and to submit a report thereon; and upon receipt of that report, the Visitor may, after obtaining the views of the Executive Council.

Background:

- ◆ The move could potentially curb the autonomy granted to **all Indian Institutes of Management (IIMs)** in 2017, regarding the **one-year executive course** offered for MBA.
- ◆ In July 2020, the **Education Ministry** has also given directions against the one-year executive MBA degree, saying it is "**not in accordance with the UGC Regulations**".
- ◆ However, the IIMs defended their decision and continued to run the programme.

About the proposed amendment:

- ◆ The Bill proposes to appoint the **President of India as the "Visitor"** of every IIM through an insertion of a **new section, (10 A)**, in the principal 2017 Act.
- ◆ The amendment is going to restrict the **IIM Board** of the power to **select and appoint chairpersons and directors to the institutes**.
- ◆ Under the amendments, the **Visitor** will have the **power to appoint the Chairperson** to the **Board of Governors (BoGs)** of the institute, and **nominate an**

What is the need for such a law?

- ◆ **Essential for economic growth:** Micro, small, and medium-scale businesses significantly contribute to India's GDP and play a crucial role in the economy. Effective and efficient business regulations are essential to facilitate their transition to the formal sector, create jobs, and boost income.
- ◆ **Burden of excessive compliance:** Currently, there are 1,536 laws which translate into around 70,000 compliances that govern doing business in India. The burden of excessive compliances is particularly challenging for MSMEs.
- ◆ **Challenging imprisonment clause:** Out of the 69,233 unique compliances, 26,134 have imprisonment clauses as penalties for non-compliance, which adds to the challenges faced by businesses.
- ◆ **Constant barriers:** Cumulative legislation, rules, and regulations have created barriers to the flow of ideas, organization, entrepreneurship, and economic growth.
- ◆ **Additional cost:** An average manufacturing enterprise with over 150 employees deals with 500-900 compliances annually, incurring substantial costs of Rs 12-18 lakh per year.
- ◆ The Jan Vishwas Bill envisages decluttering the system and shedding the baggage of archaic and obsolete laws.

Advantages of such laws

- ◆ **Promote ease of living:** The Bill aims to reduce compliance burden and promote ease of living and doing business in the country.
- ◆ **Freedom to work:** People, companies, and government agencies can work without being concerned of being imprisoned for small-scale, procedural or technical errors.
 - ▶ Ensuring adherence to law by businesses and citizens, without losing the rigor of the law.

individual to the search-cum-selection committee for the positions of Director.

- ◆ As per the Bill, **the Visitor** will also have the **power to appoint the Chairperson** to the Coordination Forum of the institute.
- ◆ The amended bill has done away with **Section 17 of the IIM Act 2017** that gave powers to the board to initiate an **inquiry in the functioning of an IIM**, if required.
- ◆ While the **central government** does not have any power at present to order the IIMs on any matter, the amendments make it so that any directive from the **Ministry of Education** would have to be implemented by the institute.

What is the present system of IIMs?

- ◆ The **BoG**, is the principal **executive body** of the IIMs, regulates the functioning of the institutes.
- ◆ Besides the chairperson, it comprises **one nominee of the central government** and **one nominee of the respective state governments**, among others.
- ◆ Under the **IIM Act, 2017**, the BoG had the power to appoint the chairman, chosen from among eminent persons distinguished in the field of industry or education or science or technology or management or public administration or such other field.
- ◆ A retired **high court judge** was to conduct the **inquiry in the functioning of an IIM**, based on which the board would take the decision.

Powers of President as a Visitor:

- ◆ The **President of India** shall be the **Visitor of the University**.
- ◆ **Functions:**
 - ▶ The Visitor may, from time to time, appoint one or more persons to review the work and progress of the University, including Colleges and Institutions managed by it.
 - ▶ It also submits a report thereon; and upon receipt of that report after obtaining the views of the **Executive Council** through the **Vice-Chancellor**, takes such action and issues such directions as he considers necessary in respect of any of the matters dealt with in the report and the University shall be bound to comply with such directions.
- ◆ **Powers:**
 - ▶ The Visitor shall have the **right to cause an inspection** to be made by such person or persons as he may direct, of the University, its **buildings, laboratories and equipment**, and of any College or Institution maintained by the University or admitted to its privileges; and

also of **the examinations, teaching and other work conducted** or done by the University and to **cause an inquiry** to be made in like manner in respect of **any matter connected with the administration or finances of the University, Colleges or Institutions**.

Concerns associated:

- ◆ **Transfer of Autonomy:** The **search and selection committee**, headed by the chairman of the BoG, will still be there. But in the amended bill, the director will be appointed by the BoG with prior approval of the Visitor.
- ◆ **Changing essence of the Board:** The amendments are certainly a change from the original philosophy of the bill, which called for accountability of the board and gave it autonomy. Though internationally the concept of a board has worked, there have been a few instances in IIMs which were concerning.

Indian Institute of Management (IIMs) in India:

- The Indian Institutes of Management (IIMs) located at **Ahmedabad, Kolkata, Bangalore, Lucknow, Indore, Kozhikode and Shillong** are institutions of excellence, established with the objectives of imparting high quality management education and training, conducting research and providing consultancy services in the field of management to various sectors of the Indian economy.
- During the **Eleventh Five Year Plan**, six new IIMs have been set up at **Rohtak (Haryana), Raipur (Chhattisgarh), Ranchi (Jharkhand), Tiruchirappalli (Tamil Nadu), Kashipur (Uttarakhand) and Udaipur (Rajasthan)**.
- These Institutions are recognized as **premier management institutions**, comparable to the best in the World for teaching, research and interaction with industries.
- All the IIMs are **registered Societies** governed by their **respective Board of Governors**.



RAJYA SABHA PASSES MULTI-STATE COOPERATIVE BILL 2023

Context: Parliament passed the **Multi-State Cooperative Societies (Amendment) Bill, 2023**.

Highlights of the Bill:

- ◆ **Objective:** The Bill seeks to establish a '**Cooperative Election Authority**' with a view to introducing electoral reforms in the cooperative sector.

- ◆ **Need of the Bill:** There are about **8.6 lakh cooperatives in the country**, out of which active **Primary Agricultural Cooperatives (PACs)** are around 63,000 which needs regulations.
- ◆ The Bill amends the **Multi-State Co-operative Societies Act (MCSA), 2002**. It establishes the Co-operative Election Authority to conduct and supervise elections to the **boards of multi-state co-operative societies**.
- ◆ A multi-state co-operative society will require prior permission of government authorities before the redemption of their shareholding.
- ◆ A **Co-operative Rehabilitation, Reconstruction and Development Fund** will be established for the revival of sick multi-state co-operative societies. The Fund will be financed through contributions by profitable multi-state co-operative societies.
- ◆ The Bill allows state co-operative societies to merge into an existing multi-state co-operative society, subject to the respective state laws.

What are Multi-state Cooperative societies?

- ◆ They are societies that have operations in more than one State, for instance, a farmer producers Organisation that procures grains from farmers from multiple states.

At present, India has more than **1,500 multi-State cooperative societies**, with the highest number being in Maharashtra.

- ◆ The **MCSA Act 2002** was passed to govern such cooperatives whose members and areas of operation are spread across more than one state.

Why multistate cooperative societies are significant?

- ◆ The mission of the multi-state society is to facilitate the voluntary formation and democratic functioning of cooperatives as peoples institutions based on **self-help and mutual aid** and enable them to promote their economic and social betterment and to provide functional autonomy.
- ◆ Cooperative Society provides **financial assistance to its members**. The members are responsible for raising capital to help those in need.
- ◆ It mainly protects the weaker sections within **rural communities from exploitation by wealthy individuals and companies**.

Laws governing Cooperative societies in India:

- ◆ As per the Constitution, states regulate the

incorporation, regulation, and winding up of state co-operative societies.

- ◆ **Parliament** can legislate on matters related to **incorporation, regulation, and winding up** of multi-state co-operatives.
- ◆ The **Multi-State Co-operative Societies Act, 2002** provides for the formation and functioning of multi-state co-operatives.
- ◆ In 2011, the Constitution was amended (adding Part IXB) to specify guidelines for running co-operative societies.
- ◆ **These guidelines provide for:** (i) composition of the boards of co-operatives, (ii) election of members of the board, (iii) audit of accounts of co-operative societies, and (iv) supersession of the board.

The Supreme Court, in July 2021, held that **Part IXB** will only be applicable to multi-state co-operative societies, as states have the jurisdiction to legislate over state co-operative societies.

What are the present concerns in management of Cooperatives?

- ◆ Inadequacies in governance
- ◆ Politicisation and excessive role of the government
- ◆ Inability to ensure active membership
- ◆ Lack of efforts for capital formation
- ◆ Inability to attract and retain competent professionals



CINEMATOGRAPH (AMENDMENT) BILL, 2023

Context: Recently, the Parliament has passed the **Cinematograph (Amendment) Bill, 2023**.

About Cinematograph (Amendment) Bill, 2023:

- ◆ **Objective:** The bill expands the scope of the law from censorship to also **cover copyright and introduces stringent anti-piracy provisions**.
- ◆ The bill aims to amend the existing **Cinematograph Act of 1952**.

Key highlights:

- ◆ **Anti-Piracy Provisions:** The bill aims to deter piracy of films by **imposing strict penalties** on individuals involved in unauthorized audio-visual recording and distribution of copyrighted content. The provisions include:

- ▶ **Jail Term: Imprisonment from 3 months to 3 years.**
 - ▶ **Fine:** From Rs.3 lakhs to **5% of the audited gross production cost.**
 - ◆ **Expansion of Copyright Coverage:** It aims to extend the coverage of the Cinematograph Act, 1952, which was **primarily focused on censorship, to now encompass copyright protection.**
 - ◆ This move aligns with the evolving landscape of film distribution and aims to **safeguard the intellectual property rights of filmmakers** and content creators.
 - ◆ **Government's Limited Powers over CBFC:** It emphasizes the **autonomy of the Central Board of Film Certification (CBFC).**
 - ▶ The Government may no longer have **revisional powers over the CBFC's decisions**, based on the Supreme Court's judgment in the case of **K.M. Shankarappa vs. Union of India (2000).**
 - ◆ **Age Ratings:** The amendment bill introduces a new age rating system for films that require adult supervision. The current U/A rating, which covers a broad age range, will be split into three distinct categories:
 - ▶ **U/A 7+:** Films suitable for children above the age of 7 with parental guidance.
 - ▶ **U/A 13+:** Films suitable for children above the age of 13 with parental guidance.
 - ▶ **U/A 16+:** Films suitable for children above the age of 16 with parental guidance.
 - ◆ This new classification system aligns with the **graded-age classifications** implemented for streaming platforms under the **IT Rules, 2021 and Shyam Benegal Committee** recommendations (2017).
 - ◆ **Recertification for TV and Other Media:** Historically, films rated for adults have been prohibited on television since a 2004 Bombay High Court order.
 - ▶ As a result, broadcasters often voluntarily make cuts to films and seek re-certification from the CBFC for a U/A rating.
 - The bill formalizes this practice, allowing films to be **recertified for television and "other media."**
 - ◆ **Perpetual Validity of Certificates:** The Act has been amended to **remove the 10-year validity restriction on CBFC certificates**, thereby granting them perpetual validity.
- ◆ It lays down the principles of guidance for certifying films, such as the interest of **sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality**, or involves defamation or contempt of court.
- ◆ **Section 3 of the Act** provides for the establishment of Central Board of Film **Certification (CBFC, popularly known as the censor board).**
- ▶ CBFC is a statutory body under the **Ministry of Information and Broadcasting**, that regulates the public exhibition of films under the provisions of the Cinematograph Act 1952.
- ◆ It also provides for the constitution of an **Appellate Tribunal** to hear appeals against the decisions of the Board.

INTER-SERVICES ORGANISATION (COMMAND, CONTROL & DISCIPLINE) BILL-2023

Context: Recently, the **Inter-Services Organisation (Command, Control & Discipline) Bill-2023** was passed by the **Rajya Sabha.**

About the Bill:

- ◆ The Inter-services Organisations (Command, Control and Discipline) Bill, 2023, was introduced in Lok Sabha on March 15, 2023.
- ◆ The Bill seeks to empower the **commander-in-chief or the officer-in-command** of inter-services organisations in respect of service personnel who are subject to;
 - ▶ The Air Force Act, 1950
 - ▶ The Army Act, 1950
 - ▶ The Navy Act, 1957, and are serving under or attached to his command for the maintenance of discipline and proper discharge of their duties.

Need of such a Bill:

- ◆ Currently, the commander-in-chief or the officer-in-command of inter-services organisations is not empowered to exercise disciplinary or administrative powers over personnel belonging to other services.
- ◆ Only officers of the **respective services** are empowered to exercise disciplinary powers over the service personnel under their respective **Service Acts.**

The Cinematograph Act of 1952:

- ◆ The **Cinematograph Act, 1952** was enacted by the Parliament to ensure that films are exhibited in accordance with the limits of tolerance of Indian society.

Highlights of the Bill:

- ◆ **Inter-services Organisation:** Existing Inter-services Organisations will be deemed to have been constituted under the Bill. These include the **Andaman and Nicobar Command, the Defence Space Agency, and the National Defence Academy.**
 - ▶ The central government may constitute an Inter-services Organisation which has personnel belonging to **at least two of the three services:** the army, the navy, and the air force.
 - ▶ These may be placed under the command of an Officer-in-Command.
 - ▶ These organisations may also include a **Joint Services Command**, which may be placed under the command of a Commander-in-Chief.
- ◆ **Control of Inter-services Organisations:** The Bill empowers the Commander-in-Chief or the Officer-in-Command of an Inter-services Organisation to exercise command and control over the personnel serving in or attached to it.
 - ▶ He would be responsible for **maintaining discipline and ensuring proper discharge** of duties by the service personnel.
- ◆ The **superintendence of an Inter-services Organisation** will be vested in the **central government.**
 - ▶ The government may also issue directions to such organisations on grounds of national security, general administration, or public interest.
- ◆ **Other forces under central government:** The central government may notify any force raised and maintained in India to which the Bill will apply. This would be in addition to **army, navy, and air force personnel.**

Who are eligible to get appointed as chief of Inter-services?

Commander-in-Chief:

- ◆ The officers eligible to be appointed as the Commander-in-Chief or Officer-in-Command are:
 - ▶ A General Officer of the regular Army (above the rank of Brigadier)
 - ▶ A Flag Officer of the Navy (rank of Admiral of the Fleet, Admiral, Vice-Admiral, or Rear-Admiral)
 - ▶ An Air Officer of the Air Force (above the rank of group captain)
- ◆ He will be empowered to exercise all disciplinary and administrative powers vested in:
 - ▶ General Officer Commanding the Army
 - ▶ Flag Officer Commanding-in-Chief of a Naval Command

- ▶ Air Officer Commanding-in-Chief of an Air Command
- ▶ Any other officer/authority specified in the service Acts, and (v) any other officer/authority notified by the government

Commanding Officer:

- ◆ The Bill provides for a Commanding Officer who will be in command of a unit, ship, or establishment. The officer will also perform duties assigned by the Commander-in-Chief or Officer-in-Command of the Inter-services Organisation.
- ◆ The Commanding Officer will be empowered to initiate all disciplinary or administrative actions over the personnel appointed, deputed, posted, or attached to that Inter-services Organisation.

REGISTRATION OF BIRTHS AND DEATHS (AMENDMENT) BILL, 2023

Context Parliament passed the Registration of Births and Deaths (Amendment) Bill, 2023.

Key-highlights of the Bill

- ◆ The Bill seeks to amend the **Registration of Births and Deaths Act, of 1969** which provides for the regulation and registration of births and deaths.
- ◆ **Registrar General:** The Act provides for the appointment of a **Registrar-General, India** who may issue directions for registration of births and deaths.
 - ▶ The Registrar General will maintain a national database of registered births and deaths.
- ◆ **Applicability:** The Bill allows the use of a **birth certificate** as a single document for
 - ▶ admission to an educational institution
 - ▶ issuance of a driving licence, preparation of voter list, Aadhaar number
 - ▶ registration of marriage
 - ▶ appointment to a government job
- ◆ The Birth and Death certificates can be received within seven days.

Significance of the legislation:

- ◆ **National and state-level database:** The legislation will help create a national and state-level database of registered births and deaths.
- ◆ **Transparency:** It will eventually would ensure efficient and transparent delivery of public services and social benefits and digital registration.

- ◆ **Better schemes and their delivery:** The data received will help in making social schemes for the benefit of the people.

INDIA AND THE NORTHERN SEA ROUTE

Context: As per recent information, Murmansk port, popularly called the capital of the Arctic region and the beginning point of the Northern Sea Route (NSR), is witnessing the rising trend of Indian involvement in cargo traffic. India has been showing greater interest regarding the NSR for a variety of reasons.

What is Northern Sea Route (NSR)?

- ◆ The Northern Sea Route (NSR) is the **shortest shipping route for freight transportation** between Europe and countries of the Asia-Pacific region.
- ◆ It straddles **four seas of the Arctic Ocean**.
- ◆ Running to 5,600 km, the Route begins at the boundary **between the Barents and the Kara seas** (Kara Strait) and ends in the **Bering Strait**.

Why NSR is most preferred?

- ◆ As per researches the distance savings along the NSR can be as **high as 50%** compared to the currently used shipping lanes via **Suez or Panama**.
- ◆ The 2021 **blockage of the Suez Canal**, which forms part of the widely-used **maritime route** involving Europe and Asia, has led to greater attention on the NSR.

Driving factors for India towards NSR:

- ◆ **NSR Cargo Growth:** Northern Sea Route (NSR) sees robust cargo traffic growth, benefitting India's energy imports from Russia, driven by its reliability and **safety as a transport route**.
- ◆ **Strategic Transit Route:** Given India's sea-trade dependence, NSR's transit role gains significance, aligning with India's geographical position and trade patterns, enhancing connectivity options.
- ◆ **Development of Chennai-Vladivostok Corridor:** Proposed corridor through NSR, part of **India-Russia collaboration**, shortens transport time significantly, facilitating efficient trade of **coking coal, crude oil, LNG, and fertilizers between the nations**.

Benefits:

- ◆ **Cost effective:** Fuel savings due to reduced distance
- ◆ **Lesser distance:** The shorter distance reduces the **cost of staff labor** and chartering vessels
- ◆ The Northern Sea Route does not charge payments for the passage (unlike, for example, the Suez Canal)
- ◆ **Less cargo traffic:** There are no queues (unlike, for example, the Suez Canal)

EL NIÑO AND INDIA'S ECONOMIC RISK

Context: This year's August remained the driest ever, which indicates strengthening El Niño and its related serious food inflation challenge.

El Nino and Impact on India:

- ◆ El Niño is characterized by the **warming of sea surface temperatures** in the **central and eastern Pacific Ocean**.
- ◆ El Niño tends to **weaken the Indian monsoon**, which is crucial for **India's agriculture and water supply**.
- ◆ During El Niño events, the normally **moisture-laden winds** that bring the monsoon rains to India are weakened, leading to **reduced rainfall** and sometimes drought conditions in various parts of the country.
- ◆ This can lead to **heatwaves, water shortages, crop failures**, and impacts **on water resources for both agriculture and daily consumption**.
- ◆ Crop yields can be affected, leading to **food price inflation** and economic losses for farmers.

Its counterpart, **La Niña**, involves cooler-than-average sea surface temperatures and can have opposite effects, potentially leading to increased rainfall and flooding in certain regions of India. Additionally, other local and regional climate drivers can interact with El Niño, further shaping the overall climate outcomes in the country.

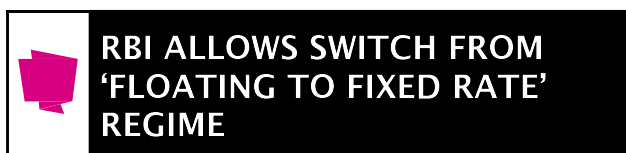
Why such intense effects are seen this year?

- ◆ The **Oceanic Niño Index (ONI)** – which measures the **average sea surface temperature** deviation from the normal in the **east-central equatorial Pacific region** – touched **1 degree Celsius**.
 - ▶ This was twice the **El Niño threshold of 0.5 degrees**.

- ◆ The **US National Oceanic and Atmospheric Administration** have predicted a 66% probability of the ONI exceeding **1.5 degrees Celsius** during **October-December** and a 75% chance of it remaining **above 1** degree in January-March 2024.
- ◆ El Niño is, thus, projected to not only persist, but strengthen through the 2023-24 winter.

What are the implications?

- ◆ **Lack of Monsoon rains leads to kharif crop losses:** The southwest monsoon rain is crucial for not just the kharif season crops, mostly sown in June-July and harvested over September-October.
- ◆ **Shortage of Crops:** As the rice and wheat stocks in government warehouses at **65.5 million tonnes (mt)**, a six-year-low.
- ◆ **Increasing Retail inflation:** The retail food inflation in July at 11.5% year-on-year, which is a cause for worry.
- ◆ **Rising prices of commodities:** Due to shortage of supplies, there is an automated rise in prices for Tomatoes, Onion and Rice too.
- ◆ **Hindering Exports:** The recent export ban on basmati rice by India seems to be one of the effects of increasing food prices and shortage.



Context: The Reserve Bank of India (RBI) asked all regulated entities (REs), including banks and NBFCs, to give personal loan borrowers an option to switch over from a floating rate to a fixed rate regime at the time of resetting interest rates.

Changes made by RBI:

The RBI asked banks to implement the following regulations:

- ◆ **For Regulated entities (RE) :**
 - ▶ At the time of sanction, REs will have to clearly communicate to the borrowers about the possible impact of a change in **benchmark interest rate** on the loan leading to changes in **EMI and/or tenor** or both.
 - ▶ Any increase in the **EMI/ tenor or both will have to be communicated** to the borrower immediately through **appropriate channels**.

- ▶ At the **time of reset of interest rates**, REs will have to give the option to borrowers to switch over to a fixed rate as per their board-approved policy.
- ▶ The policy will also specify the number of times a borrower will be allowed to switch during the tenor of the loan.
- ▶ REs will have to **disclose all applicable charges** for switching loans from **floating to fixed rate** and any other service charges/ administrative costs in the sanction letter and also at the time of revision of charges or costs from time to time.
- ◆ **For EMI or Elongation of tenor:**
 - ▶ The borrowers will also be given the **choice to opt for enhancement in EMI or elongation of tenor** or for a **combination of both options**, and to prepay, either in part or in full, at any point during the tenor of the loan, with foreclosure charges.
 - ▶ The RBI said REs will have to ensure that these instructions are extended to the existing as well as new loans by December 31, 2023.

What is floating exchange rate?

- A floating exchange rate is a regime where the currency price of a nation is set by the forex market based on **supply and demand relative** to other currencies.
- This is in contrast to a **fixed exchange rate**, in which the government entirely or predominantly determines the rate.

About Fixed Exchange rate regime:

- A fixed exchange rate is a regime **applied by a government or central bank** that ties the country's official currency exchange rate to another country's currency or the price of gold.
- The purpose of a **fixed exchange rate system** is to keep a currency's value within a narrow band.

Why has RBI issued new regulations?

- ◆ **RBI's Supervisory Reviews:** The Reserve Bank of India (RBI) has conducted supervisory reviews and received feedback from the public.
- ◆ **Unreasonable Tenor Elongation:** Instances of banks significantly extending tenors of floating rate loans without proper borrower consent and communication have been identified.
- ◆ **Interest Rate Changes:** Banks can alter interest rates by adjusting the internal benchmark rate and spread during the loan term, potentially harming borrowers' interests and monetary transmission.

- ◆ **Arbitrary EMI Resets:** Borrowers complain of banks arbitrarily resetting Equated Monthly Installments (EMIs) and extending tenors without adequate notification.
- ◆ **Hidden Foreclosure Charges:** Borrowers are often unaware of foreclosure charges, adding to borrower dissatisfaction.
- ◆ **Stress Concealment:** RBI notes that prolonged tenor elongation may obscure underlying stress in banks' financial health.
- ◆ **Refinancing Challenges:** While theoretically possible, refinancing floating rate loans across different banks with distinct internal benchmarks is complex due to varying benchmark adjustment methods.
- ◆ **Limited Borrower Options:** Borrowers might feel compelled to stay with their original bank, paying higher charges, as refinancing is often impractical due to benchmark disparities.
- ◆ It will allow other financial institutions to readily adopt it into their systems. Instead of having discrete information systems, the **centralisation of borrower information** can make it much easier for new loan applicants to avail credit facility.
- ◆ It is expected to linkage with services like **Aadhar e-KYC**, Aadhar e-signings, land records from on-boarded state governments (Madhya Pradesh, Tamil Nadu, Karnataka, Uttar Pradesh and Maharashtra), satellite data, PAN validation, and transliteration, account aggregation by account aggregators (AAs), milk pouring data from select dairy co-operatives, and house/property search data.
- ◆ **Significance of the Programme:**
 - ▶ It ensures that **credit or other financial instruments** are extended to a larger set of borrowers with good credit history.
 - ▶ It would provide a **basis for improved credit risk and overall credit portfolio management.**

PUBLIC TECH PLATFORM FOR FRICTIONLESS CREDIT (PTPFC)

Context: The Reserve Bank of India (RBI) has announced a pilot programme for 'Public Tech Platform for Frictionless Credit' which would strive to deliver frictionless credit by facilitating seamless flow of required digital information to lenders.

About Public Tech Platform for frictionless credit (PTPFC):

- ◆ The Public Tech Platform for frictionless credit is an **end-to-end digital platform** that has been developed by the Reserve Bank Innovation Hub, a wholly-owned subsidiary of the central bank.
- ◆ **Developed by:** The public platform will be developed by the **Reserve Bank Innovation Hub (RBIH)**.
- ◆ The newly launched Public Tech Credit platform will help in seamless **disbursal of non-collateral** based loans for **Micro, Small and Medium Enterprises (MSMEs), Kisan Credit Card loans** up to Rs 1.6 lakh, dairy loans, personal loans, and home loans.
- ◆ **Objective:** The aim of the pilot project is to connect borrowers and lenders, which will make credit more accessible to millions of individuals looking for small loans.

How will it work?

- ◆ The platform has been designed to have **open application programming interface (API) standards.**

SMART & YOUTH-CENTRIC AGRICULTURE IN INDIA

Context: With the increasing challenges posed by climate change, population growth and evolving market dynamics, the need for sustainable, smart, yet localised agricultural practices has become more pressing than ever before.

What is Smart and Youth-centric Agriculture?

- ◆ "Smart Youth-Centric Agriculture" refers to the **integration of modern technologies, innovative practices, and youth engagement** to transform and enhance the agricultural sector.



- ◆ It focuses on leveraging the potential of young people in agriculture by equipping them with knowledge,

skills, and tools to address challenges and capitalize on opportunities in the agricultural domain.

- ◆ This approach aims to make agriculture more **attractive, sustainable, and productive** while catering to the **needs and aspirations of the younger generation**.

Smart farming is a management concept focused on providing the **agricultural industry** with the **infrastructure to leverage advanced technology** – including big data, the cloud and the internet of things (IoT) – for **tracking, monitoring, automating and analyzing operations**.

How it can be beneficial?

- ◆ **For a sustainable future:** The convergence of traditional wisdom and technology in smart agriculture can open the gateway to a prosperous future for Northeast India's farmers and communities.
- ◆ **Adaptations to changing environment:** It will likely empower them to adapt to changing conditions, preserve their cultural heritage and build a stronger and self-reliant agricultural sector.
- ◆ **Inspire young minds towards agriculture:** It will lead to further innovations. As we have witnessed the IT revolution, which was led by young minds who saw a dream and believed in it.
- ◆ **Making agriculture aspirational:** A new approach to smart farming became possible with an effort to engage with children and youth at the school level, making community spaces into science and agriculture laboratories where children can connect with nature, science and technology while learning more about their agricultural and food histories.

Government Initiatives on similar lines:

- ◆ **Digital Agriculture Mission (DAM):** It includes India Digital Ecosystem of Agriculture (IDEA), Farmers Database, Unified Farmers Service Interface (UFSI), and Funding to the States on the new Technology (NeGPA), **Revamping Mahalanobis National Crop Forecast Centre (MNCFC)**, Soil Health, Fertility and profile mapping.
- ◆ **eNAM (National Agriculture Market):** It is an electronic trading portal which creates networks between the existing Agricultural Produce Market Committee (APMC) mandis for the farmers.
- ◆ **Farmer FIRST (Farm, Innovations, Resources, Science and Technology) initiative:** It was launched by ICAR to enhance farmers-scientists interface to move beyond production and productivity.

INDIA IS BECOMING A YOUNG COUNTRY BUT WITH AN 'AGEING WORKFORCE'

Context: As per an analysis from CMIE's Economic Outlook data, shows that while India may be the country with the most youthful population, its workforce is rapidly ageing.

What does the ageing population means to India?

- ◆ An **ageing workforce** basically means that if one looks at all the employed people in India, the share of **young people is going down** while the share of those **closer to 60 years of age is going up**.

Table 1: Composition of the workforce by age group (%)

Year	Share of >15 and <30 in workforce (in %)	Share of 30 to <45 in workforce (in %)	Share of 45 years and more in workforce (in %)
2016-17	25	38	37
2017-18	23	38	39
2018-19	22	38	40
2019-20	21	37	42
2020-21	18	36	45
2021-22	18	35	47
2022-23	17	33	49

Source: CMIE's Economic Outlook and Indian Express Research

- ◆ In CMIE's data, youth is defined as those **belonging to ages above 15 years and below 25 years**.
- ◆ However, since the PM has talked about those **under 30 years** as the youth.
- ◆ The report has divided the workforce into **three groups**:
 - ▶ Those aged 15 years or more but less than 30 years,
 - ▶ Those aged 30 years or more but less than 45 years, and
 - ▶ Those aged 45 years and older.
- ◆ The data shows that the **oldest age category** however has grown its share **from 37% to 49%**.
- ◆ In other words, just in the **past seven years**, the workforce has aged so much that the share of people **45 years and older** has gone from **one-third to almost one-half**.

Why is India's workforce ageing?

- ◆ Simply put, even though its numbers are swelling up, the youth is getting driven out of the job market.
- ◆ A good way to track this is from "**Employment Rate**".

The **Employment Rate (ER)** for any population or age group tells us what proportion of that age group or population is employed.

◆ So, if there are **100 people** in the **ages 15 to 29** and only **10 are employed** then the **ER would be 10%**.

IMPACTS OF AGEING POPULATION

Economic Challenges	Healthcare and Social Services	Policy and Planning
<ul style="list-style-type: none"> Labor Force Decline Increased Healthcare Costs Pension and Social Security Pressures 	<ul style="list-style-type: none"> Higher Healthcare Demand Long-Term Care Needs Caregiver Stress 	<ul style="list-style-type: none"> Healthcare Infrastructure Pension and Social Programs Labor Market Policies



COMMITTEE TO REVIEW REAL ESTATE ISSUES

Context: As per the information, the **Amitabh Kant committee**, which was tasked by the Government with suggesting ways to revive stalled real estate projects, acknowledged the financial stress of real estate developers but recommended no direct support.

Background:

- ◆ The government has formed a committee in March this year to look into **stalled real estate projects** and suggest ways to complete them.
- ◆ The decision to form a committee had been taken by the **Central Advisory Council (CAC)** formed under the **Real Estate (Regulation and Development) Act, 2016 (RERA)** on April 12 last year.

About the Committee:

- ◆ It was a **14-member committee**, and chaired by former **NITI Aayog CEO Amitabh Kant**.
- ◆ **Objective:** According to the order, the panel is supposed to deliberate on the **issues of legacy** of the **stalled projects** and recommend ways to complete their **hand over to homebuyers** in a time-bound manner.
- ◆ It submitted its report to **Housing and Urban Affairs Minister**.

Key observations of the committee:

- ◆ It **cited the IBA's estimation that;**
 - ▶ 4.12 lakh dwelling units of Rs.4.08 lakh crore **were stressed**
 - About **2.40 lakh (44%)** of these were in the National Capital Region

- Another **21% of the units** were in the Mumbai Metropolitan Region
- ◆ The report has essentially suggested that all stakeholders — **developers, financiers and land authorities** have to make the **stalled projects financially viable**.
- ◆ The report provides a **generalised framework**.

What are the recommendations of the committee?

- ◆ **Mandatory registration-** All projects with the following criteria must be registered with State Real Estate Regulatory Authority (RERA).
 - ▶ Where the land is over 500 square meters or
 - ▶ The number of apartments to be constructed are more than 8
- ◆ **De-link registration-** The committee advocated to de-link the grant of registration or sub-lease by the land authorities to the homebuyers from the recovery of dues from developers.
 - ▶ This would benefit about 1 lakh homebuyers for the immediate registration and execution of subleases in favour of homebuyers.
- ◆ **Granting certificates-** RERAs should identify projects where no-objection and completion certificates have not been issued.
 - ▶ It should accelerate the process to **grant certificates**, irrespective of the developers paying their dues to the authorities.
- ◆ **Rehabilitation package-** It is the role of the State governments to set up a rehabilitation package to get the stalled projects run again.
- ◆ **Conditions;**
 - ▶ The developers should commit to complete the projects in 3 years.
 - ▶ It includes Zero Period for 2 years starting with the onset of COVID pandemic.
 - ▶ Developers would be allowed to get a co-developer on board to complete the work.

- ◆ **Partial surrender policy**- The developers can give back some of the unused lands to the authority in exchange for a waiver on the dues for that land.
- ◆ **Outstanding payments**- The RERA can directly collect these outstanding payments from homebuyers, bypassing the builders.
- ◆ **Occupancy**- It suggests that occupancy or possession of substantially completed projects should be granted within the **next 30 days**.
- ◆ **Financial support**-
 - ▶ Bring stalled projects under the purview of priority sector financing.
 - ▶ Ministry of Housing and Urban Affairs should formulate a scheme.
 - ▶ The government should consider offering subsidized interest rates or a guarantee scheme similar to those available in the MSME sector.
 - ▶ Improve the Internal Rate of Return of the projects in order to attract funding.
- ◆ **Last resort**- Judicial interventions, like the use of the Insolvency and Bankruptcy Code, should be the last resort.
- ◆ **Project viability**- All the stakeholders (developers, financiers, land authorities etc.,) would have to take a haircut or accept less than what is due to them.

Real Estate Regulatory Authority Act, 2016:

- **Aim**- To protect the interests of homebuyers & boost investment in the real estate sector.
- To bring transparency & efficiency in sale/purchase of real estate by establishing RERA in each state to regulate real estate sector.
 - ▶ Establishment of bodies
 - ▶ Regulatory Authorities
 - ▶ Adjudicating Officers and Appellate Tribunals

MSP HIKES AND ISSUES

Context: Recently, as on meeting WTO obligations and suggestions to address labour shortages and rising wages, key Central government ministries and departments had conveyed apprehensions to the Union Ministry of Agriculture and Farmers' Welfare on its proposal to hike the minimum support price (MSP) for kharif crops in the 2023-24 season.

About:

- ◆ In June 2023, the Cabinet chaired by Prime Minister approved the increase in MSP ranging from **6 per cent to 10 per cent**.
- ◆ The recommendations of the **Commission for Agricultural Cost & Prices (CACP)**, the Department of Expenditure in the **Ministry of Finance**, the **NITI Aayog**, and the **Department of Commerce** has opposed this move saying an increase in MSP would make it difficult to keep **inflation in check**.

What is Minimum Support price (MSP)?

- ◆ The MSP is the rate at which the government purchases crops from farmers, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.
- ◆ MSP is a "minimum price" for any crop that the government considers as remunerative for farmers and hence deserving of "support".

Objectives of MSP:

- ◆ **Agricultural Price Stabilization:** MSP acts as a floor price, preventing extreme price fluctuations and providing stability to farmers' income.
- ◆ **Crop Diversity:** It encourages farmers to cultivate a diverse range of crops by assuring fair prices for various produce.

Crops under MSP:

- ◆ The **Commission for Agricultural Costs & Prices (CACP)** recommends MSPs for **22 mandated crops** and **fair and remunerative price (FRP)** for sugarcane.
- ◆ CACP is an attached office of the **Ministry of Agriculture and Farmers Welfare**.
- ◆ The mandated crops include 14 crops of the kharif season, 6 Rabi crops and 2 other commercial crops.
- ◆ In addition, the MSPs of **toria and de-husked coconut** are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.

MSP and effects on Economy:

- ◆ **Farmers' Income and Livelihood:** MSP provides a safety net for farmers, ensuring a reasonable income even during market downturns.
- ◆ **Income Redistribution:** Increased income for farmers can lead to improved rural purchasing power and reduced income inequality.
- ◆ **Food Security:** MSP ensures a steady supply of essential commodities, contributing to food security and stability in prices for consumers.

- ◆ **Inflationary Pressure:** Higher MSP can contribute to inflation, as increased procurement costs may lead to higher consumer prices.
- ◆ **Fiscal Burden:** Government procurement at MSP requires substantial financial resources, affecting fiscal deficit targets.
- ◆ **Trade Balance and Exports:** Higher MSP might increase domestic prices, affecting export competitiveness and trade balances.
- ◆ **Distorted Crop Choice:** Farmers might prioritize crops with MSP, leading to overproduction of certain crops and neglecting others.
- ◆ **Supply Chain Efficiency:** MSP-led procurement can strain storage and distribution systems, leading to wastage and inefficiencies.
- ◆ **Market Distortions:** High reliance on MSP could discourage private investment in agriculture due to market uncertainties.
- ◆ **Policies and Regulations:** MSP necessitates government intervention, potentially impacting free market dynamics.
- ◆ **Rural-Urban Linkages:** MSP's impact on rural income affects rural-urban migration patterns and urban development.
- ◆ Developed by the state-owned **Rashtriya Chemicals and Fertilizers Ltd (RCF)**, it is basically urea fortified with sulphur.
- ◆ Normal urea contains 46% of a single plant nutrient: Nitrogen or N.
- ◆ Urea Gold has 37% N plus 17% sulphur or S and aims at two things.
- ◆ **Deliver S along with N:** The first is to deliver S along with N. Indian soils are deficient in S, which oilseeds and pulses – the country is significantly import-dependent in both – particularly require.
- ◆ **Improve the nitrogen use efficiency (NUE):** The second is to improve the nitrogen use efficiency (NUE) of urea. Coating of S over urea ensures a more gradual release of N. By prolonging the urea action, the plants stay greener for a longer time. Farmers tend to apply urea when they notice the leaves turning yellowish. If the crop retains greenness for an extended period, they would reduce the frequency of application and use, say, only two bags, as against three, for an acre of paddy or wheat.

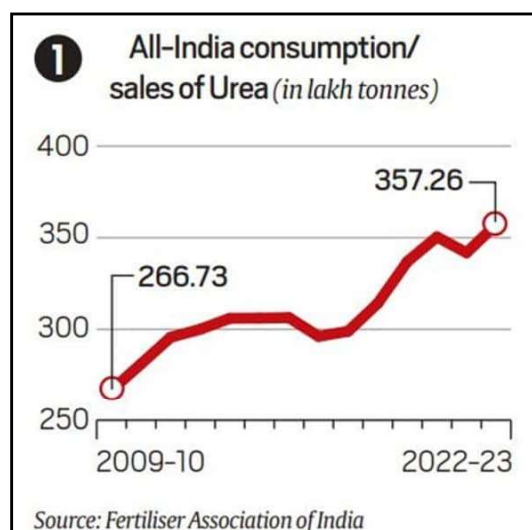
Commission for Agricultural Cost & Prices (CACP):

- It is a **statutory panel** under the **Ministry of Agriculture & Farmers' Welfare**, Government of India.
- The CACP is an expert body that recommends the MSPs of the notified Kharif and Rabi crops to the Cabinet Committee on Economic Affairs (CCEA).
- **The objective of the Commission:** The Commission was established to recommend Minimum Support Prices (MSPs), to motivate cultivators and farmers to adopt the latest technology in order to optimize the use of resources and increase productivity.
- However, its suggestions are **not binding on the Government**.

- Fertilisers are essentially food for crops. They, like humans, need nutrients – primary (**N, P, K**), secondary (S, calcium, magnesium) and micro (**iron, zinc, copper, manganese, boron, molybdenum**) – for plant growth and grain yield.

What are the concerns?

- ◆ Urea is India's most widely used fertiliser, with its consumption/sales rising from 26.7 million tonnes (mt) to 35.7 mt between 2009-10 and 2022-23.



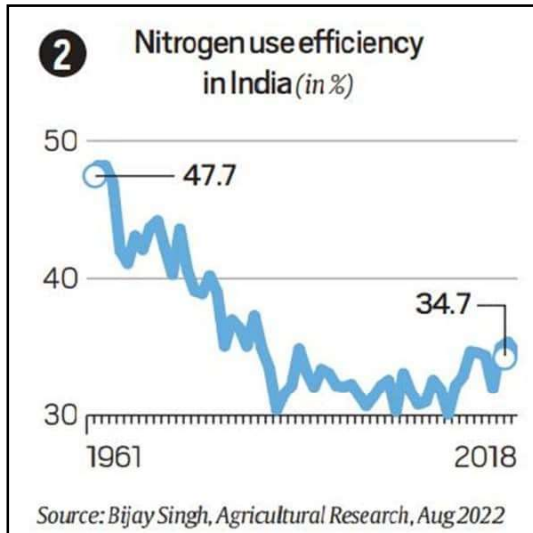
INCREASING UREA'S EFFICIENCY

Context: In order to boost the crop yields and maximise the use efficiency of imported nutrients, fortification of urea with micronutrients is a positive step.

Urea Gold Fertiliser

- ◆ The government recently launched 'Urea Gold' fertiliser.
- ◆ There are two concerns over rising urea consumption.
 - ▶ **Imported natural gas in production:** The first is imports, which accounted for 7.6 mt out of the total 35.7 mt sold last fiscal. Even with regard to

domestically-manufactured urea, the feedstock used – natural gas – is mostly imported. India's nearly 36-mt annual consumption of urea is today next only to China's 51 mt, with the latter's production largely coal-based.



- ◆ **Declining NUE:** The second concern is NUE. Barely 35% of the N applied through urea in India is actually utilised by crops to produce harvested yields. The balance 65% N is unavailable to the plants, much of it "lost" through release into the atmosphere as ammonia gas or leaching below the ground after conversion into nitrate. Declining NUE, from an estimated 48% in the early 1960s, has resulted in farmers applying more and more fertiliser for the same yield.

GOVT ASKED PHARMA COMPANIES TO ADOPT WHO STANDARDS

Context: To overcome the deaths allegedly linked to "contaminated" India-manufactured drugs, the government has set a deadline for mandatory implementation of the Good Manufacturing Practices (GMP), and bringing them on par with World Health Organisation (WHO) standards.

Key-highlights

- ◆ According to **Health Ministry**, the Companies with a turnover of over **Rs.250 crore** will have to implement the **revised GMP** within **six months**, while **medium and small-scale enterprises** with turnover of less than Rs 250 crore will have to implement it **within a year**.

- ◆ **Need:** In India, only **2,000 of the 10,500 manufacturing units** were found to be compliant with the global WHO-GMP standards.
- ◆ The **GMP-WHO rule combination for Indian Pharmaceuticals** will lead to **at least 11 specific changes** in the manufacturing process on the ground, including introduction of a **pharmaceutical quality system, quality risk management, product quality review, and validation of equipment**.
- ◆ The companies will also have to introduce a **GMP-related computerized system**.
- ◆ These computer programmes will be designed to automatically record all the steps followed and checks done, which will ensure all the processes are followed.
- ◆ The companies will also have to carry out **stability studies** as per the climate conditions which includes that, they will have to **keep the drugs in a stability chamber**, set the proper **temperature and humidity**, and carry out an **accelerated stability test** as well.

Accelerated stability test:

- Accelerated stability testing increases the **rate of chemical degradation** and **physical change of a drug** by using **exaggerated storage conditions** as part of the formal stability testing program.

Significance of the Step:

- ▶ It will ensure that all the **manufacturing units are at par with global standards**, reducing the need for repeated inspections by different regulators.
- ▶ It will also make **India a quality pharmaceutical hub**, and ensure that our citizens receive export-quality medicines too.

What is Good Manufacturing Practices (GMP)?

- ◆ Good manufacturing practice (GMP) is a system for **ensuring that products are consistently produced and controlled according to quality standards**.
- ◆ Most countries will **only accept import and sale of medicines** that have been manufactured to internationally recognized GMP.
- ◆ Governments seeking to promote their countries' export of pharmaceuticals can do so by making GMP mandatory for all pharmaceutical production and by training their inspectors in GMP requirements.

WHO's GMP guidelines:

- ◆ WHO's Good manufacturing practice (GMP) is that part of a **quality management system** to ensure that products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the marketing authorization.

- ◆ GMP is aimed primarily at diminishing the risks inherent in any pharmaceutical production; which may broadly be categorized into **two groups**:
 - ▶ cross-contamination/mix (ups and
 - ▶ False labelling.
- ◆ Manufacturers must not place patients at risk due to inadequate safety, quality or efficacy.
- ◆ For this reason, risk assessment has come to play an important role in WHO quality assurance guidelines.

India's GMP rules:

- ◆ India follows the guidelines by the **International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH)**.
 - ▶ ICH is an **international non-profit association** that brings regulatory authorities and pharmaceutical industry together to harmonize scientific and technical aspects of drug registration.
 - ▶ ICH brings together the medicines regulatory authorities and pharmaceutical industry around the world.
 - ▶ ICH was founded in **1990** which brings together the regulatory and pharma industry authorities. Together they create the ICH guidelines.

Recent Development

- The World Health Organization (WHO) and the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) collaborate to enhance the registry and sharing of regulatory information on medical products worldwide.

RESOURCE EFFICIENCY CIRCULAR ECONOMY COALITION (RECEIC)

Context: The government recently launched the **Resource Efficiency Circular Economy Industry Coalition**.

About Resource Efficiency Circular economy coalition (RECEIC):

- ◆ RECEIC is a first-of-its kind initiative for creating a **global coalition** to encourage resource efficiency and circular economy by **uniting nations, industries, and experts**.
- ◆ As many as **39 multinational corporations (MNCs)** from sectors such as **steel, FMCG, electronics** came

together to pledge to adopt **resource efficiency and circular economy principles**.

Circular economy is an **economic model** that aims to **minimize waste and maximize resource efficiency** by keeping **products, materials, and resources in use** for as long as possible.

- ◆ **Aim:** To address environmental challenges rising from waste, including **plastics, microplastics, e-waste, and chemical waste**.



- ◆ The launch of RECEIC, involved signing of the **foundational charter** and **unveiling of the logo** which was attended by Ministers of seven countries such as **Mauritius, Denmark, Italy, Canada, UAE, France, and the European Union**.

Present challenges:

- ◆ Limited Infrastructure and Technology
- ◆ Complex Supply Chains
- ◆ Policy and Regulatory Hurdles
- ◆ Consumer Mindset and Behavior

Government recent initiative to promote circular economy and sustainable growth:

The Union Budget 2023-24 has put the focus on sustainable development and a circular economy:

- ◆ **GOBARdhan:** The scheme aims to promote a circular economy by setting up 500 "waste-to-wealth" plants across the country, including 200 compressed biogas (CBG) plants and 300 community-based plants. The goal is to convert waste into valuable resources, reducing the country's carbon footprint and promoting sustainability.
- ◆ **Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI):** MISHTI aims to preserve and restore the mangrove ecosystem and provide livelihood opportunities for local communities.

- ◆ **Promoting Conservation Values (Amrit Dharohar):** It aims to promote the conservation of wetlands in the country.
- ◆ **Plastic Waste Management (Second Amendment) Rules, 2022:** They mandate to increase in the thickness of plastic carry bags to over 120 microns, and the phase-out of some single-use plastic products.



EXTENSION OF PLI SCHEME TO CHEMICALS INDUSTRY

Context: The Finance Ministry has mentioned that the government is going to introduce a production-linked incentive (PLI) scheme for investments in the chemicals and petrochemicals sectors.

Key-highlights of the Information:

- ◆ As per the ministry, industries in India are urged to reduce its **reliance on imports of chemicals** that can be made in India.
- ◆ They also emphasized the need to step up their **adoption of newer technologies**, with sustainability and circularity, for any benefits to accrue from potential partnerships with global player.

What is Production-linked incentive (PLI)?

- ◆ Production Linked Incentive (PLI) is a scheme that aims to give companies incentives on incremental sales from **products manufactured in domestic units**.
- ◆ The scheme invites **foreign companies** to set up units in India, however, it also aims to encourage local companies to set up or expand **existing manufacturing units** and also to generate more employment and cut down the **country's reliance on imports** from other countries.

PLI schemes in India:

- ◆ **Initial Targeted Industries:**
 - ▶ Mobile and allied Component Manufacturing, Electrical Component Manufacturing, and Medical Devices.
 - ▶ Now expanded to Automobile and auto components, Electronics and IT hardware, Telecom, Pharmaceuticals, Solar modules, Metals and mining, Textiles and apparel, White goods, Drones, Advanced chemistry cell batteries, and other sectors as well.

- ◆ **Incentives:** Calculated based on incremental sales. Range **from 1% to 20%** depending on the industry.
- ◆ **Additional Incentives:** In some sectors such as advanced **chemistry cell batteries, textile products, and the drone industry**, the incentive is based on **sales, performance, and local value** addition achieved over a period of **five years**.

Chemical industry in India:

- ◆ India's chemical industry is extremely diversified and can be broadly classified into **bulk chemicals, specialty chemicals, agrochemicals, petrochemicals, polymers and fertilisers**.
- ◆ Globally, India is the fourth-largest producer of agrochemicals after the United States, Japan and China.
- ◆ India is the **sixth-largest producer of chemicals** in the world.
- ◆ India is the second-largest manufacturer and **exporter of dyes and accounts** for about 16% of the world's production.
- ◆ The country's chemicals industry is **de-licensed, except for few hazardous chemicals**.
- ◆ The **Chemicals & Petrochemicals** demand in India is expected to nearly triple and reach **USD 1 trillion** by 2040.
- ◆ About **80% of India's petrochemicals capacity** is integrated with petroleum refineries. This gives India an edge in terms of petrochemical feedstock certainty.



GOVT. UNVEILS GREEN HYDROGEN STANDARDS

Context: In a significant move for the progress of the National Green Hydrogen Mission, the Ministry of New and Renewable Energy has notified the 'Green Hydrogen Standard for India'.

Key-highlights:

- ◆ The standards issued by the ministry outline the **emission thresholds** that must be met in order for hydrogen produced to be classified as **'Green'**, i.e., from renewable sources.
- ◆ India became one of the few countries to have a **definition for green hydrogen**.

What is Green Hydrogen?

- ◆ Green Hydrogen is produced using electrolysis of water with electricity generated by renewable energy.

- ◆ The **carbon intensity** ultimately depends on the **carbon neutrality** of the source of electricity (i.e., the more renewable energy there is in the electricity fuel mix, the "greener" the hydrogen produced).

About the notified standards for Green Hydrogen:

- ◆ **Definition:** The ministry has decided to define green hydrogen as having a well-to-gate emission of not more than **two kg carbon dioxide (CO₂) equivalent per kg hydrogen (H₂)**.
 - ▶ The scope of the definition encompasses both **electrolysis-based and biomass-based hydrogen production methods**.
- ◆ **Methodology:** The notification specifies that a detailed methodology for measurement, reporting, monitoring, on-site verification and certification of green hydrogen and its derivatives will be specified by the ministry of new and renewable energy.
- ◆ **Nodal Authority:** It also specifies that the **Bureau of Energy Efficiency (BEE)** under the **Ministry of Power** will be the nodal authority for accreditation of agencies for the monitoring, verification and certification for green hydrogen production projects.
- ◆ The government launched **National Green Hydrogen Mission** early this year with an aim to produce 5 million metric tonnes (MMT) green hydrogen per annum with an associated renewable energy capacity of about 125 giga watt (GW) by 2030.
- ◆ The **Strategic Interventions for Green Hydrogen Transition (SIGHT) programme** is a major financial measure under the mission with an outlay of Rs 17,490 crore.
- ◆ The programme proposes two distinct financial incentive mechanisms to support domestic production of **electrolysers and production of green hydrogen**.
- ◆ These incentives are aimed at enabling rapid scale-up, technology development and cost reduction.
- ◆ The definition of green hydrogen brings a lot of clarity to the mission of making India a global green hydrogen hub.

MINERAL EXPLORATION & THE INVOLVEMENT IN PRIVATE SECTOR

Context Parliament passed a 2023 Bill allowing private sector involvement in exploring critical minerals like lithium, previously restricted to government entities.

Key-highlights of the Mines and Minerals Bill 2023:

- ◆ The Bill amends **Mines and Minerals (Development and Regulation) Act, 1957**.
- ◆ **Allowing commercial mining:** The Bill omits at least six previously mentioned atomic minerals from a list of 12 which cannot be commercially mined.
 - ▶ Being on the atomic minerals list, the exploration and mining of these six- **lithium, beryllium, niobium, titanium, tantalum, and zirconium**, was previously reserved for government entities.
- ◆ **Empowering central govt:** It empowers Central Government to exclusively auction mineral concessions for certain critical minerals.
- ◆ **Exploration licence (EL):** The Bill also proposes a new type of license to encourage reconnaissance-level and or prospective stage exploration by the private sector.
 - ▶ This license will be issued for 29 minerals specified in the **Seventh Schedule** of the amended Act, which would include **critical, strategic, and deep-seated minerals**.

What is the share of critical and deep-seated minerals that India imports?

- ◆ **Cobalt mines:** China has majority ownership of cobalt mines in the Democratic Republic of Congo, where 70% of the world's cobalt is mined.
- ◆ **Rare Earth Elements (REEs):** China also has by far the largest amount of reserves of Rare Earth Elements (REEs) of any country in the world, followed by Vietnam, Brazil and Russia; it produces of 65% of the world's REEs.

Rare Earth Elements (REEs):

- There are **17 Rare Earth Elements (REEs)** are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).
- REEs are classified as light **RE elements (LREE)** and heavy **RE elements (HREE)**.
 - ▶ Some REEs are available in India — such as **Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc.**
 - ▶ Others such as **Dysprosium, Terbium, and Europium**, which are classified as HREEs, are not available in Indian deposits in extractable quantities.

India's position on Critical minerals:

- ◆ **REEs:** Though India has **6% of the world's rare earth reserves**, it only **produces 1% of global output**, and meets most of its requirements of such minerals from China.
 - ▶ In 2018-19, for instance, 92% of rare earth metal imports by value and 97% by quantity were sourced from China.
- ◆ **Deep-seated minerals:** Also for deep-seated minerals like **gold, silver, copper, zinc, lead, nickel, cobalt, platinum group elements (PGEs) and diamonds**, India depends largely on imports.

- **Indian Rare Earths Ltd (IREL)** which is a Government of India Undertaking, and **KMML**, a Kerala State Government Undertaking are actively engaged in mining and processing of beach sand minerals from placer deposits.
- In India, **monazite and thorium** is the principal source of rare earths.

What India is doing to strengthen its position?

- ◆ **30 critical minerals:** The **Ministry of Mines**, in June this year, came out with a list of 30 minerals critical to the country's economic development and national security.

- Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.

- ▶ However, India is **highly dependent** on imports for a majority of minerals on this list.
 - India is **100% import-dependent** on countries including China, Russia, Australia, South Africa, and the U.S. for the supply of critical minerals like **lithium, cobalt, nickel, niobium, beryllium, and tantalum**.

- ◆ **India-Australia Critical Minerals Investment Partnership:** India and Australia recently decided to strengthen their partnership in the field of projects and supply chains for critical minerals. Australia will commit 5.8 million dollars to the **three-year India-Australia Critical Minerals Investment Partnership**.

Why India needs minerals?

- ◆ **Electric Vehicles:** India has an ambitious plan to convert a large percentage of its transport to electric and this would require these minerals.

- ▶ 80 percent of the country's two- and three-wheeler fleet, 40 percent of buses, and 30 to 70 per cent of cars will be EVs by 2030.
- ◆ **Clean energy:** They are critical for developing clean energy which is the need of the hour today.
- ◆ **Industrial use:** Traditional uses like Cerium for glass polishing and lanthanum for car catalysts or optical lenses.
- ◆ **Manufacturing of magnets:** neodymium, praseodymium and dysprosium, are crucial to the manufacture of magnets which are used in industries and also in wind turbines and Drones.

Why is private sector participation needed in the case of India?

- ◆ **Budget constraints:** India has explored just 10% of its **Obvious Geological Potential (OGP)**, less than 2% of which is mined and the country spends less than 1% of the global mineral exploration budget.
- ◆ **Breaking barriers:** As of now, the exploration projects are carried out by **Geological Survey of India** and other PSUs like **Mineral Exploration Corporation Limited (MECL)**, with very little private sector participation.
- ◆ **Involvement of private agencies in exploration would bring**
 - ▶ advanced technology
 - ▶ finance
- ◆ **Expertise in exploration:** The proposed exploration licence regime is foreseen to create an enabling mechanism where in the exploration agencies will bring in expertise from across the world in geological data acquisition, processing and interpretation value chain and leverage the risk-taking ability for discovery of mineral deposits through adoption of expertise and technologies.

Learnings

- In Australia, private mining firms engage in risk-taking by putting their expertise and limited financials into explorations to find potential mines.
- Once discovered, these private companies can sell these to bigger mining companies who then develop and run these mines.
- This helps **multiply exploration projects and accelerate the pace of exploration** owing to private participation.

Recent international initiatives

- ◆ **Mineral Security Partnership (MSP):** It aims to focus on the supply chains of minerals such as Cobalt,

Nickel, Lithium and also the 17 REEs. India is a party to MSP.

- ◆ **List:** Countries like the U.S., Australia, Japan, and the EU bloc have also created lists of critical minerals based on their specific economic needs and the supply risk of the minerals.

IMPORT BAN ON LAPTOP, PC

Context: The Directorate General of Foreign Trade (DGFT) has delayed notification restricting imports of laptops, PCs, tablets and servers to India with immediate effect to November 1, 2023.

Directorate General of Foreign Trade (DGFT):

- It is responsible for **formulating and implementing the Foreign Trade Policy** with the main objective of promoting India's exports.
- The DGFT also **issues scrips/authorization to exporters** and monitors their corresponding obligations through a network of 24 regional offices.

Key-highlights of the move:

- ◆ The Union government has **restricted imports of personal computers, laptops, palmtops, automatic data processing machines, microcomputer/processors and large/ mainframe computers** with immediate effect.



- ◆ Under this move, seven categories of **HSN Code 8471** (HSN is the **Harmonised System of Nomenclature**, a globally accepted method of naming goods) were restricted.
- ◆ **Valid licence:** However their import would be allowed **against a valid licence** for restricted imports.
- ◆ **Re-imports:** Also, the licence for restricted imports shall not be required for the **repair and return of re-import** of goods repaired abroad, as per the **Foreign Trade Policy**.

Exemptions given:

- ◆ The import of **one laptop, tablet, all-in-one personal computer or ultra-small form factor computer** including those purchased from **e-commerce portals** through post or courier, has been exempted from **licensing requirement**. It will attract payment of **duty as applicable**.

Current regulations permit companies to **import laptops without any restrictions**.

- ◆ Imports up to 20 items per consignment for R&D, testing, benchmarking, and evaluation repair and re-export, and product development purposes, have also been exempted from import licence.
- ◆ The government has also exempted laptops, tablets, all-in-one personal computers, and ultra-small form factor computers from import licensing requirements if they are essential part of capital goods.

What is the need of the move?

- ◆ **Increase in imports:** India has seen an increase in **imports of electronic goods and laptops/computers** over the last few years.
 - ▶ During **April-June 2023**, the import of electronic goods increased with a share of **4-7 per cent** in overall imports.
- ◆ **Increasing presence of China:** Majority of these imports were coming from **China**.

How would it benefit?

- ◆ **Promoting domestic manufacturing:** The move is aimed at promoting **domestic manufacturing**.
- ◆ **Restricting China:** It probably targets China since more than **75 per cent** of India's total imports of laptops and personal computers in 2022-23 were from the neighboring country.
- ◆ **Inviting foreign companies:** The fresh restrictions could impact companies such as **Apple, Samsung and Acer**, forcing them to step up **manufacturing and assembly** in India.

What India is doing to boost domestic production?

- ◆ **Import Regulation:** The Government of India, from time to time, takes appropriate measures to regulate import of goods including those related to national interest.

India and China are both members of the WTO and **any trade restriction imposed** must be **WTO compliant**.

◆ **Atmanirbhar Bharat policy:** To support and expand domestic capacities, Government has implemented policies to promote domestic manufacturing like the **production linked incentive (PLI) schemes** in line with **Atmanirbhar Bharat policy**.

- ▶ Recently, to encourage domestic production of **lithium-ion cells** for batteries used in electric vehicles (EVs), the government has removed **customs duty on the import** of capital goods and machinery used in the manufacturing of lithium-ion cells.
 - The reduction in **basic customs duty** reduces input costs and it is expected to deepen value addition, promote export competitiveness and boost domestic manufacturing.

INDIA'S SUGAR PRODUCTION & IMPACT ON GROUNDWATER

Context: In 2021-2022, India surpassed Brazil to become the largest sugar producer in the world, producing 359 lakh tonnes. Being a Cash Crop, excess sugarcane production has led to chronic ground water table depletion.

Why India's Sugarcane production is so high?

- ◆ **Huge demand:** India is the world's largest producer and consumer of sugar. Being on the top, it is required to produce enough to meet its huge domestic demand.
- ◆ **Heavy Subsidies:**
 - ▶ The Central government offers a **fair and remunerative price (FRP) scheme**, which mandates a minimum price that **sugar mills** have to pay to sugarcane farmers, ensuring that farmers always get **fair profits for their crop**.
 - ▶ State governments also offer **heavy subsidies to incentivize sugarcane cultivation**.
- ◆ The resulting sugar surplus has led to **higher exports**, with a record 110 lakh tonnes exported in 2021-2022.

Impact on India's WTO image:

- **Brazil, Australia, and Guatemala** filed a complaint with the **World Trade Organization** against India for violating international trade rules by offering excessive **export subsidies** and domestic support to farmers to outcompete other countries in the **global sugar market**.
- The Organization ruled **against India** and India also **lost its appeal**.

Steps taken to overcome problem of excess cultivation:

- ◆ **Diversion towards ethanol:** To deal with the **sugar surplus**, the Indian government considered diverting it to the production of ethanol, an organic compound made by **fermenting sugarcane molasses or sugar**.
 - ▶ Ethanol is the active ingredient in **alcoholic beverages** and is also used in the **chemicals and cosmetics** industries.
 - ▶ In the **transport sector**, the use of **ethanol-blended petrol (EBP)** significantly reduces harmful emissions, such as of **carbon monoxide and various hydrocarbons, from vehicles**.
 - ▶ The government also reduced the **Goods and Services Tax on ethanol** from **18% to 5%** in 2021.

How does excessive sugarcane cultivation impact groundwater?

- ◆ **Sugarcane is a highly resource-intensive cash crop:** It needs a large amount of land and water for its cultivation.
 - ▶ Normally, 100 kg of sugar is produced from **one tonne of sugarcane**, which consumes around **2 lakh litres of groundwater for irrigation** alone.
- ◆ **Regional concentration:** India's top sugarcane-growing states are Maharashtra, Uttar Pradesh, Karnataka, Gujarat, and Tamil Nadu. The first three account for **85-90%** of the sugar produced in the country.
 - ▶ The top sugarcane growing states are already **drought-prone** as well as **groundwater-stressed**.
 - ▶ Sugarcane requires around **3,000 mm** of rainfall a year to be irrigated. But these three states receive around **1,000-1,200 mm** a year.
 - ▶ The remaining water requirement is met by **groundwater**.
- ◆ **Ground water is a Limited resource:** Most of this groundwater resides in confined aquifers, i.e. the water is trapped between two impermeable layers of rock.
 - ▶ It can only be extracted by drilling a borewell through the upper layer. Such groundwater can't be recharged by rainfall, so it is a **limited resource**.

In a 2022 report, the **Central Ground Water Board (CGWB)** noted that a third of all its groundwater assessment units in **Maharashtra, Uttar Pradesh, and Karnataka** were '**semi-critical**', '**critical**' or '**over-exploited**'.

Impact of groundwater extraction on the environment:

- ◆ **Weather in anomalies:** The shift in the Earth's axis could affect the distribution of heat around the planet, which could lead to changes in weather patterns.
- ◆ **Sea level rise:** The study's findings suggest that groundwater extraction is a significant contributor to global sea level rise. This is because when groundwater is extracted, it is replaced by seawater, which has a higher density and therefore contributes to the rising of the sea level.
- ◆ **Depletion of Aquifers:** The excessive extraction of groundwater has resulted in the depletion of aquifers, causing irreversible damage to the underground water storage. Once aquifers are depleted, it becomes challenging to replenish them, leading to long-term water scarcity. **Example:** Zero water day in Cape Town (2018).
- ◆ **Land Subsidence:** Over-extraction of groundwater can cause the land above the aquifers to sink, leading to land subsidence. This phenomenon damages infrastructure, disrupts ecosystems, and increases the vulnerability of coastal regions to flooding.
- ◆ **Contamination of Water:** As water tables decline, the concentration of contaminants in groundwater increases, leading to water quality issues. Contaminants such as fluoride, arsenic, and nitrates can have severe health implications for the population relying on groundwater for drinking water. **Example** Purulia district in West Bengal (**Uranium contamination**)
- ◆ **Agricultural Crisis:** The depletion of groundwater adversely affects agriculture, which heavily relies on irrigation. Declining water availability hampers crop yields, reduces agricultural productivity, and threatens food security in the country.



EXTREME HEAT IN MEDITERRANEAN SEA

Context: Extreme heat has plagued the Mediterranean for weeks ending with wildfires across nine countries in the region from Algeria to Greece. This increasing heat has impacted the marine life as well.

What is the phenomenon behind heat trap in oceans?

- ◆ **Ocean Heat Content (OHC):** It is the amount of energy absorbed by and stored in the oceans. It is measured in joules.

- ◆ When sunlight reaches the earth, oceans absorb this energy and store it as heat.
- ◆ While the heat is first absorbed at the surface of the water body, some of it is eventually disbursed throughout.
- ◆ Water has a higher **heat capacity than air**, which means that it can store much larger amounts of heat.
- ◆ **GHG emissions** - These gases trap heat in a blanket around the earth, not allowing it to escape, thus raising the temperature of the earth's surface and leading to global warming.

Why are high sea temperatures a problem?

- ◆ **Lesser dissolution of gases:** Gases like oxygen and carbon dioxide dissolve better at colder temperatures, so that means the warmer the water; the less oxygen is available to breathe.
- ◆ **Higher rate of respiration in marine organism:** Higher temperatures also cause an increase in metabolism, which in turn means animals have to breathe even more than usual.
 - ▶ The rise in temperature accelerates metabolism, and the organisms need more food to maintain this metabolic rate.
- ◆ **More Algal blooms:** They are more common in hotter waters. Such blooms can further **deplete oxygen levels and produce toxins harmful for fish**, marine mammals and birds.

What species and ecosystems are worst hit by marine heat waves?

- ◆ High water temperatures are most harmful for animals living at the **bottom of oceans, lakes or rivers**.
- ◆ These benthic species include **corals, mussels, sponges, starfish** and plants like **sea grasses**, and are often attached to rock or solid ground.
- ◆ Scientists observed **mass deaths of benthic species** along thousands of kilometers of Mediterranean coastline **between 2015 and 2019**.

What does extreme heat in the Mediterranean mean for people?

- ◆ **Affecting fishing activities in the area:** Fishermen are catching fewer familiar species and instead are finding more invasive fish which they have difficulty selling.
- ◆ **Increase in invasive fishes:** Some are even poisonous, like the **puffer fish** migration is seen in the region.
- ◆ **Habitat loss:** It could also lead to an overall decline in fish populations, while disappearing seagrass.

PROTECTING THE BIODIVERSITY OF THE NORTHEAST

Context: The recent case of “Re: Cleanliness of Umiam Lake versus State of Meghalaya (2023)” heard by the Meghalaya High Court raises concerns about the environmental impact of construction and tourism on the entire Northeast's biodiversity.

Biodiversity of the Northeast

- ◆ Northeast India is a green belt region due to its abundant natural resources such as oil, natural gas, minerals and fresh water.
- ◆ The **Garo-Khasi-Jaintia hills** and the **Brahmaputra valley** are some of the most important biodiversity hotspots.



How climate change is threatening the North-East?

- ◆ **Changed rainfall pattern:** Rainfall patterns over the region in the last century have considerably changed, resulting in its overall drying up.
- ◆ **Variation in temperature:** From rice to tea, crop cultivation across the board has been affected by variations in temperature and rainfall, causing distress to agricultural workers.
- ◆ **Fluctuations in water flow and erratic flooding** have exacerbated riverine erosion, which hinders the lives and livelihoods of communities residing near the Brahmaputra and its tributaries.
- ◆ **Desertification:** Six states in northeastern India were among the top 10 places in the country with the highest rates of desertification between 2003 and 2018. These are **Mizoram, Arunachal Pradesh, Assam, Tripura, Nagaland and Meghalaya.**

Climate refugees:

A large fraction of settlements on forest reserve areas and grazing lands are communities that have been previously displaced by riverbank erosion. These communities fall within the category of climate refugees, a term coined to describe the increasing number of people displaced due to environmental disruptions.

Major threats to the environment

- ◆ Though the northeast is industrially backward, deforestation, floods, and existing industries are causing serious problems to the environment in the region.
- ◆ An environmental assessment of the **North East Rural Livelihood Project** undertaken by the **Ministry of Development of the North-eastern Region** lays out that “Northeast India lies within ecologically fragile, biologically rich region, highly prone to climatic changes, located in trans boundary river basins. Both flora and fauna of the areas are under threat due to deforestation, mining, quarrying, shifting cultivation.”

Environmental Laws

- ◆ **Development of Environmental Laws and Offences:** During the 1980s, India established numerous environmental laws and policies. Offences against the environment were framed under Sections 268 to 290 of the Indian Penal Code, classifying them as “public nuisance.”
- ◆ **Challenges with Autonomy and District Councils:** The Sixth Schedule of the Constitution grants autonomy to District Councils. This autonomy limits State authority, including land use, within the jurisdiction of District Councils.
 - ▶ In cases like **Umiam Lake**, District Councils often lack regulations for land preservation, especially near water bodies.
- ◆ **Environmental Litigation and PILs: Articles 32 and 226** of the Constitution fostered public interest litigation (PILs) and judicial activism. Environmental litigation surged, with instances like the National Green Tribunal imposing fines on state governments.
 - ▶ In 2019, Meghalaya faced a Rs.100 crore fine for failing to curb illegal mining.
 - ▶ Manipur encountered a Rs.200 crore fine for improper waste management in 2022.
- ◆ **Role of Judicial and Quasi-Judicial Organs:** Judicial and quasi-judicial bodies, like the National Green Tribunal, play a vital role. Stringent guidelines and heavy penalties imposed by these bodies protect ecologically sensitive flora and fauna.



ECOSYSTEM OF HYBRID EVS

Context: As India is looking forward to increase its renewable energy dependence and following sustainable path of clean energy, the fraction of renewable sources in the power generation mix, and availability of fast-charging infrastructure are still less than ideal.

- ◆ The **hybrid EVs** offers a way to begin the transition instead of waiting.

What are Hybrid Electric Vehicles (EVs)?

- ◆ Any vehicle propelled by an electric drivetrain, taking electric power from a portable, electrical energy source, is called an **Electric vehicle (EV)**.
- ◆ In a hybrid EV, an **internal combustion engine (ICE)** is used to produce electricity with an electrical generator.

In an **internal combustion engine (ICE)**, the ignition and combustion of the fuel occurs within the engine itself. The engine then partially **converts the energy from the combustion to work**.

- ◆ A small battery, typically **1-5kWh**, is used in a **hybrid EV as an energy buffer** to store the electricity.
- ◆ The battery can't be charged from the grid.

What are the net emissions of hybrid EVs?

- ◆ Apart from fuel economy, an important metric is the net emissions of a vehicle.
- ◆ **Well-to-wheel emissions** include both **tailpipe emissions and emissions due to fuel production** – electricity or fossil fuels.
- ◆ The **life-cycle emissions** are a more comprehensive index that includes well-to-wheel emissions and emissions due to vehicle and **battery production, maintenance, and end-of-life recycling**.
- ◆ The grids of different countries are decarbonised to different extents at present.
- ◆ **In the case of full EVs:** The lower the emissions from power production, the lower the vehicle's well-to-wheel and life-cycle emissions.

How can hybrid or plug-in hybrid EVs help us decarbonise?

- ◆ The current focus in the industry is on **full EVs**.
- ◆ **Hybrid EVs – either full or plug-in hybrids** – present a big opportunity to lower emissions in the interim, i.e. from today, with ICE vehicles, until we have full

EVs powered 100% by renewable energy.

- ◆ **Higher fuel economy** of hybrids in electric mode drastically reduces fuel **costs, emissions, and oil imports**.
- ◆ **Regenerative braking in hybrid EVs** – i.e. recovering the kinetic energy of the vehicle while slowing down instead of dissipating it as heat in the braking system – can improve fuel economy especially in urban areas with frequent stop-go conditions and in hilly conditions. An engine start-stop mechanism can also save fuel at traffic junctions and in heavy traffic.
- ◆ Finally, the purchase price of hybrid cars is only **5-15% higher than conventional vehicles** and is independent of the vehicle range.

Government Interventions:

- ◆ **The Faster Adoption and Manufacturing of Electric Vehicles (FAME) Scheme II**, which provides incentives for EV manufacturers and buyers. These incentives include subsidies, tax rebates, preferential financing, and exemptions from road tax and registration fees.
- ◆ **The National Electric Mobility Mission Plan (NEMMP)**, which sets out the target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards by providing fiscal incentives.
- ◆ **The National Mission on Transformative Mobility and Battery Storage**, which seeks to create a comprehensive ecosystem for the adoption of EVs and support the establishment of Giga-scale battery manufacturing plants in India.
- ◆ **The Production Linked Incentive (PLI) scheme**, which provides incentives for the manufacturing of electric vehicles and components.
- ◆ **The Vehicle Scrappage Policy**, which provides incentives for the scrapping of old vehicles and the purchase of new electric vehicles.
- ◆ The **Go Electric campaign** aims to create awareness on the benefits of **EVs and EV charging infrastructure**.



UNDISPOSED TOXIC WASTE AT BHOPAL DISASTER SITE

Context: According to a report by the Central Pollution Control Board (CPCB) submitted to the National Green Tribunal (NGT), **337 metric tonnes (MT) of hazardous waste stored on the Union Carbide India Limited (UCIL) premises – the site of the 1984 Bhopal gas tragedy is yet to be disposed of.**

Points from the Report:

- ◆ As per a **2009 joint study by NEERI and the National Geophysical Research Institute (NGRI)**, the UCIL site contains about **1 million tonnes of contaminated soil**, around **1 tonnes of mercury spillage**, and **nearly 150 tonnes of underground dumps**.
- ◆ In 2022, an NGT-appointed committee had found the "**possibility of contamination of soil**" and suggested "**speedy disposal**" of the waste.

About Bhopal Gas Tragedy:

Methyl isocyanate is extremely toxic gas and if its concentration in the air touches **21ppm** (parts per million), it can cause death within minutes of inhaling the gas.

- ◆ Post-midnight on December 3, 1984, **Methyl Isocyanate (MIC) (Chemical formula- CH₃NCO or C₂H₃NO)** leaked from the **pesticide plant of Union Carbide (now Dow Chemicals)**, an **MNC**, in Madhya Pradesh's capital Bhopal.
 - ▶ It is estimated that about **40 tonnes of gas and other chemicals leaked** from the Union Carbide factory.
- ◆ It is one of the worst chemical disasters globally and still continues to have its ill effects on the people of the affected areas.
- ◆ After the tragedy, the government of India enacted a **Public Liability Insurance Act (1991)**, making it mandatory for industries to get insurance the premium for this insurance would contribute to an **Environment Relief Fund** to provide compensation to victims of a Bhopal-like disaster.

Hazardous Waste Management:

Stockholm Convention:

- The **Stockholm Convention** is a global treaty that aims to **protect human health and the environment** from the effects of **Persistent organic pollutants (POPs)**.
- The Convention entered into force on May 17, 2004.
- The Stockholm Convention, which currently **regulates 29 POPs**, requires parties to adopt a range of control measures to reduce and, where feasible, eliminate the release of POPs.

- ◆ Hazardous-waste management, is the **collection, treatment, and disposal of waste material** that, when improperly handled, can cause **substantial**

harm to human health and safety or to the environment.

- ◆ Hazardous wastes can take the **form of solids, liquids, sludges, or contained gases**, and they are generated primarily by chemical production, manufacturing, and other industrial activities.
- ◆ They may cause damage during **inadequate storage, transportation, treatment, or disposal operations**.
- ◆ Improper hazardous-waste storage or disposal frequently contaminates surface water and groundwater supplies as harmful water pollution and can also be a source of dangerous land pollution.
- ◆ People living in homes built near old and abandoned waste disposal sites may be in a particularly vulnerable position.
- ◆ In an effort to remedy existing problems and to prevent future harm from hazardous wastes, governments closely regulate the practice of hazardous-waste management.

Laws governing Hazardous Wastes:

The Indian government has enacted various regulations to prevent neurotoxic gas leaks, such as:

- ◆ **Environmental Laws:** Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981
- ◆ **Hazardous Waste Management:** The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, govern the safe handling, storage, and disposal of hazardous waste to minimize the risk of toxic gas leaks.
- ◆ **Factory Licensing and Inspection:** Factories handling hazardous chemicals must obtain licenses under the Factories Act, 1948. Further, they are subject to regular inspections to ensure compliance with safety standards and regulations.
- ◆ **Public Liability Insurance Act:** The Public Liability Insurance Act, 1991, requires industries dealing with hazardous substances to have insurance policies, providing compensation in case of accidents, including neurotoxic gas leaks.
- ◆ **Chemical Accidents Rules:** The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, outline safety requirements and emergency response plans for industries handling hazardous chemicals.
- ◆ **NDMA guidelines:** The NDMA has established clear guidelines on Chemical Disaster Management for various authorities in India. These guidelines promote a proactive and multi-disciplinary approach to chemical disaster preparedness and response.



STATE OF INDIA'S BIRDS' REPORT 2023

Context: The State of India's Birds (SoIB) 2023, released recently finds that while a few bird species like the Indian peafowl are thriving in India, many are in decline.

About the Report:

- ◆ The report is based on **30 million observations** contributed by **30,000 birdwatchers** across the country.
- ◆ It lists **178 bird species** in the country as being of "High Priority" for immediate conservation action.
- ◆ **Developed by:** There are about **13 institutions** in India (six government institutions including the **Wildlife Institute of India** and seven conservation NGOs) and independent professionals came together to analyse data on bird distribution and population trends of **942 bird species** in the country.
- ◆ The data is taken as updated on **eBird**, an online database of bird observations.

Key-highlights of the Report:

- ◆ **SoIB 2023 Report Overview:** Survey categorizes **942 bird species**; 178 High Priority, 323 Moderate Priority, and 441 Low Priority.
- ◆ **Data Enrichment:** SoIB 2023 widens scope with more data, expanded species coverage, providing comprehensive insights into bird population shifts. 
- ◆ **Long-Term Decline:** 60% of 338 species analyzed showed long-term declines, with 204 species declining, 98 rapidly.
- ◆ **Current Annual Trends:** 40% of 359 species declining; 142 species, including **raptors and vultures**, in rapid decline.
- ◆ **Habitat Specialists:** Grassland, wetland birds in decline; some generalists like **Indian peafowl thriving; Ashy Prinia, Rock pigeon, Asian koel increasing.** 
- ◆ **Biodiversity Hotspots:** Western Ghats, Sri Lanka hotspot rapidly declining for which reasons remain unclear, impacting overall bird populations.
- ◆ **High Priority Species:** Includes **Ruddy shelduck,**

Indian courser, Narcondam hornbill, and Nicobar megapode; some globally Least Concern.

- ◆ **Recommendations for Change:** Report suggests 17 species qualify for different IUCN threat status nationally, like **Indian Roller and Northern shoveler.**
- ◆ **Continued Decline:** Trends align with 2020 report as around **74 of 101 High Concern birds** persist, **104 new High Priority listings.**

Who is the most threatened?

- ◆ While raptors, migratory shorebirds, and ducks have declined the most, birds living in habitats like **open ecosystems, rivers, and coasts** are among the worst affected.
- ◆ **Key factors responsible for the decline:** climate change, urbanisation, infrastructural development, environmental pollutants, **loss of habitat, pesticide accumulation**, targeted killing, monocultures, exposure to toxic chemicals and increasing diseases.

BRAZIL AMAZON SUMMIT

Context: The two-day summit of the Amazon Cooperation Treaty Organisation (ACTO) recently took place in Belem after an over-decade-long gap. It sought much needed consensus on protecting the all-important rainforest and methods of sustainably developing the member economies without damaging the Amazon.

About:

- ◆ The summit was the **first-ever gathering** of its kind in 14 years aimed at protecting the **world's largest and most prolific rainforest** that covers significant swathes of the South American continent.

The Eight Amazon rainforest nations are **Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela.**

- ◆ During the Summit, the leaders of **eight South American nations** that are home to the Amazon met in the **Brazilian city of Belem**, with the task of agreeing to a **list of unified environmental policies** and measures to bolster regional cooperation and **stop the destruction of the rainforest.**
- ◆ The summit adopted what host country Brazil called a "**new and ambitious shared agenda**" to save the rainforest.

Key points of the Summit:

- ◆ **Against Deforestation:** The final joint declaration, called the '**Belem Declaration**', created an alliance for combatting forest destruction, with countries left to pursue their individual deforestation goals.
- ◆ **Protection of Indigenous rights and society:** The nearly **10,000-word road map** asserted **Indigenous rights and protections**, while also agreeing to cooperate on water management, health, common negotiating positions at climate summits, and sustainable development.
- ◆ **Establishment of a Science body:** The declaration additionally established a **science body** to meet annually and produce authoritative reports on science related to the Amazon rainforest, akin to the United Nations' International Panel on Climate Change.

Amazon Cooperation Treaty Organization (ACTO):

- ◆ ACTO was formed in 1995 to protect and manage the Amazon.
- ◆ The group aimed to recognize the reality that the Amazon rainforest crossed borders and needed international management, but also to protect the Amazon countries' sovereignty over their territory.
- ◆ **Member countries:** Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela are members of the organisation.

All the countries at the summit have ratified the **Paris climate accord**, which requires signatories to set targets for reducing **greenhouse gas emissions**.

Problems unaddressed:

- ◆ The summit stopped short of environmentalists' and Indigenous groups' boldest demands, including for all member countries to adopt Brazil's pledge to end illegal deforestation by 2030 and Colombia's pledge to halt new oil exploration.
- ◆ It also did not fix a deadline on ending illegal gold mining, although leaders agreed to cooperate on the issue, and did not include shared commitments to zero deforestation by 2030.

The Amazon forests:

- ◆ These are **large tropical rainforests** occupying the drainage basin of the **Amazon River** and its tributaries in **northern South America** and covering an area of **6,000,000 square km**.
- ◆ Tropical forests are **closed-canopy forests** growing within **28 degrees north or south** of the equator.

- ◆ They are very wet places, receiving more than **200 cm rainfall per year**, either seasonally or throughout the year.
- ◆ Temperatures are uniformly high - **between 20°C and 35°C**.
- ◆ The rainforest, at roughly **twice the total land area of India**, is
 - ▶ a key producer of oxygen
 - ▶ a major carbon sink for a warming planet
 - ▶ the home of tens of thousands of species of plants, animals and insects that cannot be found anywhere else in the world

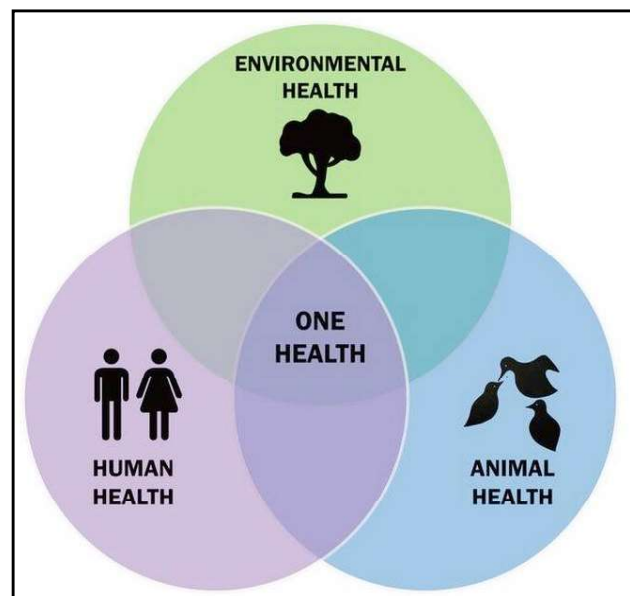


NATIONAL 'ONE HEALTH' MISSION

Context: The concept of 'One Health' is currently gaining popularity worldwide which, India must deploy to bolster the way it responds to health crises.

About the Mission:

- ◆ India is currently preparing for a wider '**National One Health Mission**' under the Office of the **Principal Scientific Advisor**.



- ◆ **Objective:** The idea behind this mission is to **coordinate, support, and integrate** all existing One Health initiatives in the country.

What does One Health concept mean?

- ◆ One Health is a holistic approach to problems that recognizes the **interconnections** between the

health of humans, animals, plants, and their shared environment.

An early articulation can be found in the **writings of Hippocrates (460-367 BC)**, who contemplated the relationships between **public health and clean environments**.

How 'One health' is linked to Humans and Animals?

◆ Human population growth, **urbanization**, and

industrialisation have compounded the damage to biodiversity and ecosystems.

- ◆ These harmful environmental changes are **linked to zoonoses** – diseases shared between animals and humans.
- ◆ Researchers have estimated that **60% of emerging diseases** that can infect humans are zoonotic in nature.
- ◆ They include **bird flu, Ebola, rabies, and Japanese encephalitis**.

SOME ZOOONOTIC SPILLOVER EVENTS	
COVID-19 Pandemic:	The SARS-CoV-2 virus responsible for the COVID-19 pandemic is believed to have originated in bats and possibly passed to humans through an intermediate animal host, possibly pangolins.
MERS-CoV:	The Middle East Respiratory Syndrome (MERS) coronavirus is believed to have originated in dromedary camels. Human infections have occurred through close contact with infected animals or their products.
Avian Influenza (H5N1 and H7N9):	These bird flu strains have caused sporadic human infections, often associated with close contact with infected poultry. Although human-to-human transmission has been limited, the potential exists for these viruses to adapt and spread widely.
Rabies Virus	Rabies is often transmitted to humans through the bites of infected animals, primarily dogs, bats, and other mammals.

Need for such an initiative:

- ◆ Humankind has also become beset by major issues of **antimicrobial resistance, food safety and security**, and the control of **vector-borne diseases**.
- ◆ These issues warrant both the **inter-sectoral management and the efficiency** that characterises the One Health strategy.

What are some recent One Health initiatives?

- ◆ The Government of India established its '**Standing Committee on Zoonoses**' in 2006 under the Ministry of Health and Family Welfare (MoHFW) to provide guidance and recommendations on challenges related to zoonoses.
- ◆ **India's first consortium on One Health:** The Department of Biotechnology launched India's first consortium on One Health in October 2021. It brings together 27 organisations from several ministries and plans to assess the burden of five transboundary animal diseases and 10 select zoonotic diseases.
- ◆ **One Health pilot project in Karnataka and Uttarakhand:** This initiative intends to strengthen intersectoral collaborations through capacity-building, with the goal of improving livestock health,

human health, wildlife health, and environmental health.

NEWS MEDIA VERSUS OPENAI'S CHATGPT

Context: Recently, prominent media outlets like **New York Times, Reuters, CNN, and ABC blocked OpenAI due to copyright concerns and potential legal actions.**

What does OpenAI do?

- ◆ The company is best known for creating 'ChatGPT', which is an **AI conversational chatbot**.
- ◆ Users can ask questions on just about anything, and ChatGPT will respond pretty accurately with answers, stories and essays.
- ◆ It can even help programmers write **software code**.

What started the face-off between news outlets and OpenAI?

The reason given by media against OpenAI was;

- ◆ **Basis of LLMs:** Large language models (LLMs) like **ChatGPT** require **extensive training data** to comprehend human language patterns effectively.
- ◆ **Data Collection:** Tech giants such as **Google, Meta, and OpenAI** rely on web-crawlers to gather data from online sources like **social media, news articles, and e-books**.
- ◆ **Privacy and Usage Concerns:** News outlets, including The New York Times, reacted against OpenAI's data collection via web-crawlers, blocking access to **their content**.
- ◆ **Training Material:** News organizations objected to their published content being used to **train AI chat bots without consent**.
- ◆ **Ethical Implications:** The standoff highlights debates on **data scraping, copyright, and ethical considerations** in AI model training.

Reason for opposing OpenAI by media:

- ◆ **No monetary benefits:** Search engines like **Google or Bing** use **web crawlers** to index websites and present relevant results when users search for topics.
 - ▶ The only difference is that search engines represent a mutually beneficial relationship. OpenAI, on the other hand, provides **no benefit, monetary or otherwise**, to news companies.
 - ▶ It simply collects publicly available data and uses it for the company's own purposes.

What are concerns associated with 'OpenAI'?

- ◆ **Data Usage Rights:** The use of data to train AI models raises questions about whether unauthorized usage constitutes a **violation of data owner's rights**.
- ◆ **Financial Feasibility:** The financial sustainability of AI endeavors, like OpenAI, hinges on the compensation required for data usage, with a balance to avoid becoming financially unviable.
- ◆ **Value of Online Content:** The argument arises that while AI models can function without specific sources, an aggregate of diverse content enhances quality.
- ◆ **Quality Impact:** Widespread denial of data access from media sources could potentially lower the quality of AI-generated content like ChatGPT.
- ◆ **Licensing Arrangements:** OpenAI's licensing deal with The Associated Press exemplifies the willingness to compensate for data usage, while legal battles with other content creators underscore complexities.
- ◆ **Legal Implications:** Legal battles over copyright infringement will influence journalism, intellectual property rights, and shape the future of AI development.



METAGENOME SEQUENCING

Context In order to get a breakthrough in the definitive identification of SARS-CoV-2, Scientists didn't go the more time-consuming microbiology route; instead, and in a break from tradition, they were directly subjected to **genome-sequencing and bioinformatic analysis, which helped the scientists quickly identify the virus. This new approach is called metagenomics.**

What is Metagenomics?

- ◆ Metagenomics is a field of molecular biology and genomics
- ◆ It refers to the application of sequencing techniques to analyse the totality of the genomic material (DNA or RNA) present in a sample.
- ◆ **Metagenomics** uses **gene sequencing** to discover proteins in samples from environments across Earth, microbes living in the soil, in extreme environments like hydrothermal vents, deep in the oceans and in our guts and on the skin.
- ◆ A vast number of proteins, beyond those catalogued in well-studied organisms, exist in the natural world.

What are its major applications?

- ◆ **Microbiome Research:** Understanding the composition and functional roles of microbial communities in various environments, such as the human gut, soil, oceans, and plants. This knowledge has implications for health, agriculture, and ecology.
- ◆ **Biotechnology:** Identifying novel enzymes, pathways, and metabolic functions from environmental samples, which can be used for industrial processes, such as bioremediation, biofuel production, and the synthesis of valuable chemicals.
- ◆ **Disease Diagnosis:** Investigating the role of microbial communities in human health and disease. Metagenomic analysis can help identify potential pathogens, study the human microbiome, and understand the impact of microbial dysbiosis on various health conditions.
- ◆ **Environmental Monitoring:** Assessing the impact of pollution, climate change, and other environmental factors on microbial ecosystems. Metagenomics can provide insights into ecosystem health and aid in conservation efforts.
- ◆ **Pharmaceutical Discovery:** Exploring natural products and bioactive compounds produced by diverse microorganisms in the environment, which may have potential applications in drug development.

- ◆ **Evolutionary Studies:** Examining the evolutionary relationships between microorganisms and tracing the evolution of specific genes or functions within microbial communities.
- ◆ **Agriculture and Food Safety:** Analyzing the microbiota of crops, livestock, and food products to improve agricultural practices, enhance crop yield, and ensure food safety.
- ◆ **Bioprospecting:** Identifying novel species and genetic elements with unique properties that can be used for various purposes, including biotechnology, medicine, and industrial processes.



ROOM TEMPERATURE SUPERCONDUCTIVITY

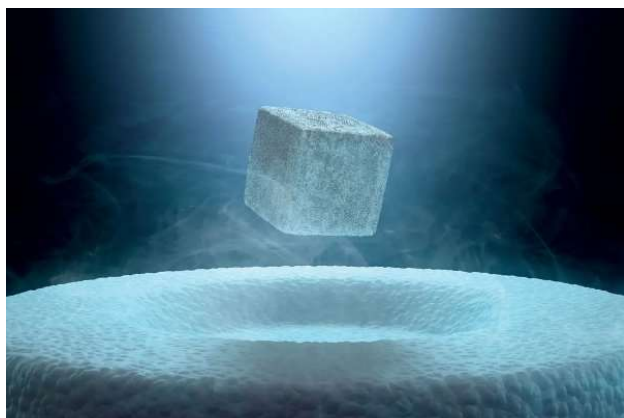
Context: Recently, two South Korean researchers proposed papers, claiming that a 'lead-based compound' developed by them had shown superconducting properties at room temperature, under normal pressure conditions.

- ◆ The discovery has the potential to **revolutionize the technology space**, and be one of the most impactful scientific discoveries of this century.

The first material to have been discovered to show **super conductive properties** was **Mercury**, which becomes a superconductor at close to **270 degree Celsius** below zero.

What is Superconductivity?

- ◆ **Superconductivity** refers to a state in which a **material offers zero**, or near-zero, resistance to electric current.



- ◆ A current is nothing but the **movement of charged particles**, electrons in most cases, in a particular

direction. When the electrons move, they **collide, and interact**, with other atoms in the material.

- ◆ The current flowing **encounters resistance** which is an essential property in **electrical conductivity**.
- ◆ Resistance involves a **loss of energy**, mostly in the form of heat. This is the reason why **electrical appliances** get heated is this resistance.

What are Superconducting materials?

- ◆ Most of the other materials commonly used as superconductors are **Lead, Aluminum, Tin, Niobium, and several others** –at comparable temperatures, called **critical temperature**.
- ◆ There are several elements that show superconductivity at **higher temperatures** like up to **150 degrees**.
- ◆ Scientists are looking for a material that can display **superconductivity at room temperature** (usually considered to be **between 20 and 25 degree Celsius**) and under **normal pressure conditions**.

How Superconductivity helps?

- ◆ Elimination of the **electric resistance** can result in super-efficient electrical appliances like removal of **transmission losses** in power cables, and massive gains in energy.
- ◆ Also, Superconducting materials show very interesting behaviour under **magnetic field** which allows the functioning of systems like the **MRI scan machine** and the **superfast Maglev trains** that float above the tracks.
- ◆ Superconductors have very **critical uses** in a wide variety of other scenarios as well.

What are the existing issues faced to induce superconductivity?

- ◆ As of now, superconductivity can be achieved only at very low temperatures, more than **250 degree Celsius** below zero, very close to absolute zero which is – **273 degree Celsius**.
- ◆ Additionally, some compounds are difficult to be produced; they are **brittle and chemically unstable**.
- ◆ The need of low temperatures for the materials to become superconductive, close to the absolute zero, which results in **high operating costs**.

Other researches related to superconducting materials:

- ◆ Recently, the researchers have created a material that is superconducting at room temperature, however, it only works **at a pressure of 267 Gigapascals (GPa)**, which is equivalent to about **three-quarters of**

pressure at the centre of Earth (360 GPa).

- ◆ **Material Used:** A mixture of **carbon, hydrogen and sulfur** was put in a microscopic niche carved between the tips of two diamonds (diamond anvil) and laser light was used on them to trigger chemical reactions.

India's steps in similar direction:

- Various **Indian research groups work** on developing novel superconducting materials, and also strive to bring upon significant improvements in the functioning of already existing diverse superconductors ranging from the commonly used **metallic A-15 compounds to cuprates, boro-carbides, borides, iron pnictides and chalcogenides to the more recent topological ones.**
- **Some of the recent developments are:**
 - ▶ topological insulators superconductivity;
 - ▶ superconductivity at interface of insulator ultra-thin films;
 - ▶ Size effects in Nano structured superconductors along with superconducting junctions, circuits and qubits.

RULES GOVERNING SPACE JUNK

Context: According to the Australian Space Agency, recently found object on Australian shore has been confirmed to be the debris of an Indian Space Research Organisation (ISRO) rocket.

- ◆ ISRO has agreed with the assessment, saying the debris could be from one of its **Polar Satellite Launch Vehicle (PSLV) rockets.**

What is Space Junk?

- ◆ Space junk, or space debris, is any piece of machinery or debris left by humans in space.

Space junk (The numbers)

- 2,000 active satellites in Earth's orbit
- 3,000 dead satellites in Earth's orbit
- 34,000 pieces of space junk larger than 10 centimetres
- 128 million pieces of space junk larger than 1 millimetre

- ◆ It can refer to big objects such as dead satellites that have failed or been left in orbit at the end of their mission.
- ◆ It can also refer to smaller things, like bits of debris or paint flecks that have fallen off a rocket.

- ◆ All space junk is the result of us launching objects from Earth, and it remains in orbit until it re-enters the atmosphere.
- ◆ However, there is no regulation against these anti-satellite tests.

How much is India responsible for?

- ◆ India still produces much less space junk than the top three polluters: Russia, the US, and China, according to ODPO data.
- ◆ Indian-made space debris, however, is on the rise - from 117 pieces in 2018 to 163 in 2019.

Causes of space debris	Consequences of space debris
<ul style="list-style-type: none"> ◆ Defunct satellites ◆ Missing equipment ◆ Rocket stages ◆ Weapons 	<ul style="list-style-type: none"> ◆ Fragmentation incidents ◆ Small fragments can damage solar panels on active satellites ◆ Can cause damage and disperse pollutants into the atmosphere ◆ Congestion

Existing Framework:

- ◆ The **Liability Convention of 1972, the Moon Agreement of 1979, the Outer Space Treaty of 1967, the Rescue Agreement of 1968, and the Registration Convention of 1975** are all relevant legal frameworks for outer space operations.
- ◆ The **Outer Space Treaty (OST) of 1967**, also referred to as the Constitution of Space Law because it entails the fundamental principles of space operations, is the most important of them all.

Provisions in magna carta of space law

- **Article VI of OST**, which declares that States Parties to the Treaty shall bear international responsibility for national activities in outer space.
- **Article VII of OST**, which declares that State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty
- **Article IX of OST**, which prescribes that the launching state should take 'appropriate measures' in case it believes that their space exploration will lead to 'harmful contamination of outer space.'

Government interventions pertaining to space debris

- ◆ **ISRO System for Safe & Sustainable Operations Management (IS4OM):** IS4OM is ISRO's holistic

approach to ensure the safety of space assets and thus, sustains the utilization of outer space for national development.

- ◆ **Project NETRA:** It is an initiative by the Indian Space Research Organisation (ISRO) which is an early warning system in space to detect debris and hazards to the Indian satellites.
- ◆ In 2025, the **European Space Agency** will launch the first space mission to remove debris from Earth's orbit.

TACKLING THE ETHICAL ISSUE OF ERADICATING ENERGY POVERTY

Context: At the G20 meetings in Goa, India, energy ministers debated climate change and the shift to clean energy. A delegate mentioned the ethics-climate change link, prompting officials to suggest an approach to ethical aspects of the energy transition.

Key-highlights of the discussion

Severity of the Problems

- Nearly 700 million people lack access to clean energy, and nearly 2.3 billion people are still burning firewood, farm waste and animals for cooking.
- This causes the death of nearly 4 million people annually, most of them women and children, as a result of pollution, according to the agency's report, quoting the **World Health Organization**.

- ◆ **Energy Transition and Ethics:** The leaders highlighted the neglect of a significant ethical concern during discussions about energy transition and climate change. Millions of people globally suffer from energy poverty, a critical issue that needs attention.
- ◆ **Energy Poverty in Host Country – India:** Despite being the host country, India faces energy poverty to some extent. India has made considerable progress in addressing energy poverty, but challenges remain.
- ◆ **Ethics and Energy Transition:** Some participants passionately brought ethics into the conversation about energy transition. They emphasized that the ethical aspect often overlooked is the lack of access to electrical energy for approximately 700 million people worldwide.

Ethical Considerations in Energy Transition:

- ◆ **Energy Poverty:** Millions of people worldwide lack access to reliable and affordable energy.

- ◆ **Environmental Impact:** Ethical concerns involve minimizing ecological damage and protecting ecosystems during this transition.
- ◆ **Just Transition:** Ethical responsibility lies in minimizing job losses and supporting affected communities.
- ◆ **Global Responsibility:** Ethical considerations demand that these countries take a lead in transitioning and support less-developed nations.
- ◆ **Technological Equity:** Ethical energy transition should prioritize accessible technologies for all socio-economic groups.
- ◆ **Inter-Generational Equity:** Ethical responsibility involves minimizing negative consequences for future populations.
- ◆ **Transparency and Participation:** Ethical energy transition respects democratic values and promotes inclusivity.
- ◆ **Climate Justice:** Ethical considerations emphasize the need for equitable solutions and supporting those disproportionately affected.
- ◆ **Long-Term Sustainability:** Ethical decision-making focuses on creating sustainable solutions for the future.
- ◆ **Social and Economic Impact:** Ethical approach entails balancing environmental benefits with social well-being.

ETHICAL USE OF AI

Context: Recently, addressing the B20 summit, the Prime Minister called for a global framework to ensure the ethical use of artificial intelligence (AI) as he flagged concerns over algorithmic bias and its disruptive impact on society.

So, let us see the dimension around the ethical use of Artificial Intelligence (AI).

About:

- ◆ The rapid rise in **artificial intelligence (AI)** has created many opportunities globally, from facilitating healthcare diagnoses to enabling human connections through social media and creating labour efficiencies through automated tasks.
- ◆ However, these **rapid changes** also raise profound ethical concerns. These arise from the potential AI systems have to embed biases, **contribute to climate degradation**, threaten human rights and more.
- ◆ Such risks associated with AI have already begun to compound on **top of existing inequalities**, resulting in further harm to already marginalised groups.

Why are AI ethics important?

- ◆ AI is a technology designed by humans to **replicate, augment or replace** human intelligence.
- ◆ These tools typically rely on large volumes of various **types of data to develop insights**.
- ◆ Poorly designed projects built on data that is faulty, inadequate or biased can have unintended, potentially harmful, consequences.
- ◆ Moreover, the rapid advancement in **algorithmic systems** means that in some cases it is not clear to us how the AI reached its conclusions, so we are essentially relying on systems **it can't explain to make decisions that could affect society**.
- ◆ An AI ethics framework is important because it shines a light on the risks and benefits of AI tools and establishes guidelines for its responsible use.
- ◆ Coming up with a system of moral tenets and techniques for using AI responsibly requires the industry and interested parties to examine major social issues and ultimately the question of what makes us human.

Can AI be ethical and moral?

Yes, AI can be ethical and moral. Here are some examples in these terms;

- ◆ **Classification of Machine Agents:** Moore's 2006 classification categorizes machine agents based on their ethical involvement, ranging from those with ethical consequences to those capable of ethical judgments.
- ◆ **Ethical Impact Agents:** Machines like robot jockeys may not make ethical decisions but raise ethical considerations due to their impact on **activities like sports**.
- ◆ **Implicit Ethical Agents:** Machines with embedded guidelines, such as **airplane autopilots**, adhere to pre-set ethical rules for safety but lack the ability to **actively evaluate ethics**.
- ◆ **Explicit Ethical Agents:** Some machines go beyond preset rules, using methods to estimate ethical values of choices, as seen in systems balancing investments with social responsibility.
- ◆ **Challenges and Bounded Ethicality:**
 - ▶ Creating advanced **Artificial Moral Agents (AMAs)** is challenging, especially for **complex or unpredictable ethical scenarios**.
 - ▶ Additionally, machines might

exhibit bounded ethicality, potentially engaging in unethical behavior due to how ethical principles are framed, similar to human moral disengagement.

Perspectives for Ethical use of AI:

- Immanuel Kant's ethical philosophy emphasises **autonomy, rationality, and the moral duty** of individuals.
- Applying **Kantian ethics** to the use of AI in decision-making within governance could lead to serious concerns.
- If decisions that were once the **purview of humans are delegated to algorithms**, it could threaten the capacity for **moral reasoning**.

Points of concerns related to AI:

Ethical issues with AI span a **wide range of dimensions**, reflecting concerns about the potential impact of AI technologies on various aspects of society, individuals, and human values. Below are some key dimensions to consider:

- ◆ **Bias and Fairness:** AI systems can inherit biases present in their training data, leading to discriminatory outcomes in areas such as criminal justice, hiring, and lending.
- ◆ **Privacy:** AI can process and analyse massive amounts of data, raising concerns about the privacy and security of individuals. Striking a balance between **data utilization and individual privacy rights** is a challenge.
- ◆ **Transparency:** Lack of transparency in AI decision-making processes, especially in complex systems like deep neural networks, can lead to a loss of accountability and trust.
- ◆ **Accountability:** Determining who is responsible for AI-related decisions and actions is challenging.
- ◆ **Job Disruption:** Automation powered by AI could



lead to job displacement, potentially causing economic and social disruption. Preparing for the workforce's transition and creating new job opportunities becomes crucial.

- ◆ **Safety:** In contexts where AI systems interact with the physical world, safety is paramount. Ensuring that AI systems do not cause harm to humans or the environment is an ethical imperative.
- ◆ **Dual-Use:** AI technologies developed for beneficial purposes could potentially be misused for malicious intent, such as deepfakes or autonomous weapons. Addressing the dual-use nature of AI requires ethical considerations.
- ◆ **Inequality:** AI development and access to its benefits could exacerbate existing inequalities, both globally and within societies. Ensuring equitable distribution and access to AI's benefits is important.
- ◆ **Long-Term Implications:** Speculation about the long-term impact of advanced AI, including super-intelligent AI, raises concerns about **control, ethics, and humanity's role** in a world where machines may surpass human capabilities.
- ◆ **Manipulation and Disinformation:** AI can be used

to generate highly convincing fake content, leading to concerns about its potential to spread disinformation and manipulate public opinion.

- ◆ **Human Dignity and Autonomy:** Deploying AI in areas such as **healthcare and decision-making** could raise questions about preserving human dignity and autonomy, especially when crucial decisions are delegated to machines.
- ◆ **Cultural and Social Impact:** AI's impact on culture, creativity, and social interactions can be both positive and negative. Balancing technological advancement with cultural preservation is an ethical challenge.
- ◆ **Environmental Impact:** The energy consumption and **carbon footprint of AI technologies**, especially resource-intensive training processes, raise ethical concerns in an era of climate change.
- ◆ **Legal and Regulatory Challenges:** Rapid advancements in AI often outpace the development of appropriate laws and regulations. Ethical considerations include establishing effective legal frameworks that govern AI development and usage.



Section B

[CONTEMPORARY ISSUES BASED ESSAY]

Topic

☞ The Role and Impact of the G20 in Shaping Global Economic Governance

THE ROLE AND IMPACT OF THE G20 IN SHAPING GLOBAL ECONOMIC GOVERNANCE

In an era marked by unprecedented global interconnectedness and economic interdependence, the task of managing the world's economic affairs has become increasingly complex. Amid this complexity, the Group of Twenty (G20) has emerged as a critical force in shaping global economic governance. Comprising the world's major economies, the G20 has played a pivotal role in addressing global economic challenges, promoting cooperation among nations, and steering the course of international economic policies.

The G20's origins can be traced back to 1999 when it was established as a forum for finance ministers and central bank governors to discuss financial stability in the wake of the Asian financial crisis. Over time, its mandate expanded to include heads of state and government, reflecting its broader economic agenda. The G20's primary objectives encompass economic stability, sustainable growth, financial resilience, and international cooperation.

One of the most notable contributions of the G20 was its response to the 2008 global financial crisis. In the midst of the crisis, the G20 member countries came together and implemented stimulus packages and financial reforms, effectively preventing a deeper economic meltdown and stabilizing the global financial system. This demonstration of collective action underscored the G20's significance as a crisis management platform.

Furthermore, the G20 serves as a vital platform for policy coordination among its member countries. It facilitates discussions on monetary policy, fiscal measures, and exchange rates, addressing issues like trade imbalances and currency fluctuations. The G20 also advocates for reforms in international financial institutions, seeking to enhance the representation of emerging economies in organizations like the International Monetary Fund (IMF) and the World Bank.

In recent years, the G20 has recognized the importance of sustainable development, acknowledging the intricate relationship between economic stability and global challenges such as climate change and inequality. It has actively engaged in discussions on climate change mitigation, the transition to clean energy sources, and measures to reduce income disparities within and between nations.

However, the G20 is not without its criticisms and challenges. Critics argue that it remains an exclusive club, with smaller economies often feeling marginalized. Effectiveness can be hampered by divergent national interests, leading to difficulties in reaching binding

agreements and inconsistent implementation of agreed-upon measures. There are also concerns about a democratic deficit within the G20, as its informal structure lacks the transparency and accountability mechanisms found in formal international organizations.

To address these criticisms and enhance its effectiveness, the G20 should consider reforms that promote greater inclusivity, transparency, and long-term global development. Expanding membership to include more countries, especially those from underrepresented regions, can make the G20 more inclusive and representative. Implementing measures to increase transparency



and accountability in decision-making processes can address concerns about a democratic deficit. Moreover, the G20 can develop a long-term agenda that prioritizes sustainable development, emphasizing issues such as climate change, inequality, and the digital transformation of economies.

In conclusion, the G20 has emerged as a critical player in shaping global economic governance, responding to crises, coordinating policies, and advocating for reform. Its evolution from a forum for finance ministers to a platform for heads of state and government reflects its growing importance. Despite its challenges and criticisms, the G20 remains an indispensable forum for addressing the complex economic issues that define our interconnected world. As the global economic landscape continues to evolve, the G20's adaptability and commitment to international cooperation will be essential in shaping a more stable and equitable global economy.



Section C [PRELIMS]

To Attempt

Weekly Current Affairs Test, Visit

www.iascore.in

- ☞ Cloudbursts
- ☞ Bharat Mandapam
- ☞ Seethakali folk art
- ☞ Archaeologists discover 'crystal quartz weighing unit'
- ☞ Maharishi Dayanand Saraswati
- ☞ Traditional medicines in India
- ☞ Bharat NCAP (New Car Assessment Programme) Launched
- ☞ National Curriculum Framework for school Education 2023
- ☞ Geographical Indication (GI) Tags in 2023
- ☞ Stapled visa and its applicability
- ☞ UN Commission for Social Development (CSocD)
- ☞ EC publishes final report on 'Assam delimitation'
- ☞ 14 States yet to join Centre's flagship education scheme
- ☞ International Day of the World's Indigenous People 2023
- ☞ Haryana plans dam at Hathnikund to curb Yamuna fury
- ☞ Digital Health Incentives Scheme
- ☞ Govt launches 'Study in India' portal
- ☞ Formation of 19 new districts approved in Rajasthan
- ☞ Amrit Bharat Station Scheme (ABSS)
- ☞ CAG audit exposes multiple frauds in PMJAY
- ☞ Akhil Bharatiya Shiksha Samagam and ULLAS Initiative
- ☞ RCS-UDAN Scheme on ground level
- ☞ The Vivad Se Vishwas II (Contractual Disputes) scheme
- ☞ Lokniti-CSDS's survey
- ☞ Infrastructure Debt Funds - Non-Banking Financial Companies (IDF-NBFCs)
- ☞ China enters into 'Deflation'
- ☞ 'STAR series' numbering system in Banknotes
- ☞ Indian firms can now directly list on IFSC exchanges
- ☞ Railways to install intrusion detection system in Odisha
- ☞ World Water Week 2023
- ☞ Fukushima nuclear disaster: Japan to release treated water
- ☞ New Global Biodiversity Framework Fund (GBF-Fund) ratified
- ☞ Kampala Declaration on climate change
- ☞ India, ADB to set up climate change and health hub
- ☞ 'Cleantech', for an inclusive green future in India
- ☞ Himalayan vulture bred in captivity
- ☞ 5% of birds in India are endemic: Report
- ☞ Government Panel provides anti-air pollution measures
- ☞ Iraq eliminates Trachoma
- ☞ Havana Syndrome
- ☞ Soft-landing on the Moon & the Challenges
- ☞ ASTRA air-to-air missile



CLOUDBURSTS

Context: Cloudbursts are a common occurrence in Himalayan regions but experts are alarmed by the increase in extreme weather-related events.

What is Cloudburst?

- ◆ A cloudburst is defined as an **intense downpour** that lasts only a brief time and is occasionally accompanied by hail and thunder.
- ◆ It is defined by **the India Meteorological Department (IMD)** as unexpected precipitation that **exceeds 100mm (or 10 cm) per hour** across a region of land that is between 20 and 30 square kilometres.
- ◆ It occurs in high-altitude regions due to the formation of **low-pressure areas (LPAs)**.

LPAs form under areas of wind divergence that occur in upper levels of **the troposphere**.

- ▶ **LPAs** accumulate clouds with great force on the top of mountains and result in orographic precipitation.
- ◆ **Phenomenon:** The phenomenon that is responsible for this is '**orographic lift**', a process by which clouds that are already to rain are pushed up by warm air currents.
 - ▶ As they reach higher elevations, the water droplets within the clouds become bigger and new ones are formed.

A **doppler-radar system** is ideal for predicting the calamity

- ▶ These dense clouds eventually burst, unable to hold the large volume of moisture.
- ◆ This results in torrential downpours in the region right below and leads to overflowing of water bodies in a very short duration of time.



BHARAT MANDAPAM

Context: The Bharat Mandapam, that hosted the G20 Summit in New Delhi, is a symbol of India's idea of 'the whole earth is one family'.

About Bharat Mandapam:

- ◆ The international exhibition-cum-convention

Centre (IECC) complex named **Bharat Mandapam** is located at Pragati Maidan in New Delhi.



- ◆ The IECC complex is India's largest **MICE (meetings, incentives, conferences, and exhibitions)** destination and features state-of-the-art facilities, including a **convention centre, exhibition halls, and an amphitheatre**.
- ◆ The architectural design of the convention centre incorporates elements from **India's traditional art and culture**, representing the nation's **rich heritage and modern achievements**.
- ◆ The term 'Bharat Mandapam' is derived from Lord Basaveshwara's concept of '**Anubhav Mantapa**', which was a significant institution in the 12th century.
- ◆ Anubhav Mantapa is considered one of the earliest parliaments in human history, where poets and socio-spiritual reformers known as **Sharanas** discussed and deliberated on various reforms.
- ◆ The new complex is one of India's largest and among the world's biggest convention centres.



SEETHAKALI FOLK ART

Context: The 20-member group is going to perform Seethakali folk art, outside Kerala for the first time as to revive one of the fading dance forms of Kerala.

About:

- ◆ In the early times, Seethakali was performed as part of the **harvest festival Onam**.
- ◆ From **Atham star** till the 28th day after Onam, the performers who belong to the **subaltern communities** go from one house to another performing this art.

Key Features of Seethakali:

- ◆ **Folk Dance Drama:** Seethakali is a traditional folk dance drama that was once performed during the festival days in erstwhile **Desinganad (Kollam, Kerala)**, primarily during the Onam festivities.
- ◆ **Dalit Artists:** The performance was carried out by Dalit artists belonging to the **Veda and Pulaya communities**, focusing on presenting episodes from the **Ramayana from Sita's perspective**.



- ◆ **Vanayatra to Andardhanam:** Seethakali portrays the journey from "vanayatra" (exile to the forest) to "andardhanam" (descend into the earth) of Sita, featuring a blend of songs, storytelling, and fast movements.
- ◆ **Instruments:** The dance drama is accompanied by instruments such as **ganjira, manikatta, chiratta, and kaimani**.
- ◆ **Narrative through Songs:** Seethakali's story is conveyed through songs, with **28 collected** over three years, featuring a folk style influenced by Vallappaattu, Kuthirappaattu, and Rakshasappaattu.
- ◆ **Oral Tradition:** Seethakali songs were orally transmitted from one generation to the next, which led to a pause in the tradition.
- ◆ **Basic Movements:** The dance involves basic steps, striving to preserve the original essence of the art form.
- ◆ **Character Ensemble:** The performance includes key characters such as **Sita, Ram, Lakshman, Ravan, and Hanuman**.

Revival Efforts:

- **Documentary:** A documentary was created titled **Seethakali – Desinganadinte Dalit Ramayanam**, tracing the evolution, popularity, and relevance of the art form.
- Currently, in Kerala, there is only one registered Seethakali performing group – **Perinad Seethakali Sangham**.

ARCHAEOLOGISTS DISCOVER 'CRYSTAL QUARTZ WEIGHING UNIT'

Context: Archaeologists working at Keeladi, a historic excavation site located near Madurai in Tamil Nadu, have unearthed a crystal quartz weighing unit from the Sangam era.

Highlights of the finding:

- ◆ The **quartz weighing unit**, found 175 cm beneath the ground, is the first of its kind since excavations began in Keeladi in 2014.
- ◆ The quartz unit is probably from a period between **600 BC to 2nd century AD**.
- ◆ The unit measures 2 cm in diameter, 1.5 cm in height and weighs a mere 8 grams.
- ◆ The researchers claim that they were used for **weighing purposes**.
- ◆ These weighing units were not used for **paddy or vegetables** but for weighing high-value items such as **gold, precious and semi-precious stones**.
- ◆ **Crystals or mineral materials** are used as **weighing units** because they give accurate results and do not depend on the climate.
- ◆ Archaeologists also found terracotta hopscotch, an iron nail, black and red ware, and red slipped ware.
- ◆ Archaeologists also found an **earthen snake figurine**.

About the site:

- ◆ Keeladi is a small hamlet in south Tamil Nadu, about 12 km southeast of the **temple city of Madurai**.
- ◆ It is located along the **Vaigai River**.
- ◆ In the **eight rounds of excavations**, including the first three by the ASI, over **18,000 artefacts** have been unearthed from the site and the unique artefacts will be on display at the museum to be opened soon.
- ◆ Unearthing of heaps of pottery suggest the existence of a pottery making industry, mostly made of locally available raw materials.
- ◆ Over 120 potsherds containing **Tamil Brahmi inscriptions** have been found.
- ◆ Over a thousand inscribed potsherds, found at Keeladi and other sites clearly suggest the **long survival of the script**.
- ◆ **Other major findings till now:**
 - ▶ Gold ornaments, copper articles, semi-precious stones, shell bangles, ivory bangles and ivory

combs reflect the artistic, culturally rich and prosperous lifestyle of the Keeladi people.

- **Agate and carnelian beads** suggest import through commercial networks while terracotta and ivory dice, gamesmen and evidence of hopscotch have been unearthed revealing their pastime hobbies.

The Sangam Age:

- The word 'Sangam' is the Tamil form of the Sanskrit word 'Sangha' which means a group of persons or an association.
- The **Tamil Sangam** was an **academy of poets** who flourished in three different periods and in different places under the **patronage of the Pandyan kings**.
- The **Sangam literature** which was largely consolidated from the **third Sangam**, throws information on **conditions of life of people around the beginning of the Christian era**.
- It deals with the **secular matter** relating to the public and social activities like **government, war, charity, trade, worship, agriculture, etc.**
- Sangam literature consists of the **earliest Tamil works** (such as the Tolkappiyam), the ten poems (Pattupattu), the eight anthologies (Ettutogai) and the eighteen minor works (Padinenkilkanakku), and the three epics.

- ◆ He was a social leader, Indian philosopher, and reform movement of the **Vedic dharma**.
- ◆ He was the first to give the call for Swaraj "**India for Indians**" in 1876, which was later taken up by **Lokmanya Tilak**.
- ◆ He took inspiration from the Vedas and considered them to be '**India's Rock of Ages**', the infallible and the true **original seed of Hinduism**.
- ◆ He gave the slogan "**Back to the Vedas**".
- ◆ Dayananda died after vigorous **public criticism of a princely ruler**, under circumstances suggesting that he might have been poisoned by one of the maharaja's supporters, but the accusation was never proved in court.

Arya Samaj:

- Arya Samaj is a **monotheistic Indian Hindu reform movement** that promotes practices and values based on the belief in infallible authority of the Vedas.
- It was founded by Dayanand Saraswati on **April 10, 1875**.
- It was the **first Hindu organisation** to introduce **proselytization in Hinduism**.
- It has worked towards the growth of the **civil rights movement** across India since the 1800s.

MAHARISHI DAYANAND SARASWATI

Context: The Prime Minister inaugurated the year-long celebrations commemorating the 200th birth anniversary of Maharishi Dayanand Saraswati, at Indira Gandhi Indoor Stadium, Delhi.

About Maharishi Dayanand Saraswati (1824-1883):

- ◆ Dayanand Saraswati was the founder of Hindu reform organisation called '**Arya Samaj**'.
- ◆ He was born on **February 12, 1824** in Gujarat.
- ◆ His original name was **Mool Shankar Tiwari**.
- ◆ He wandered as an ascetic for **fifteen years (1845-60)** in search of truth.
- ◆ He was born to **Karshanji Lalji Kapadi, and Yashodabai**.



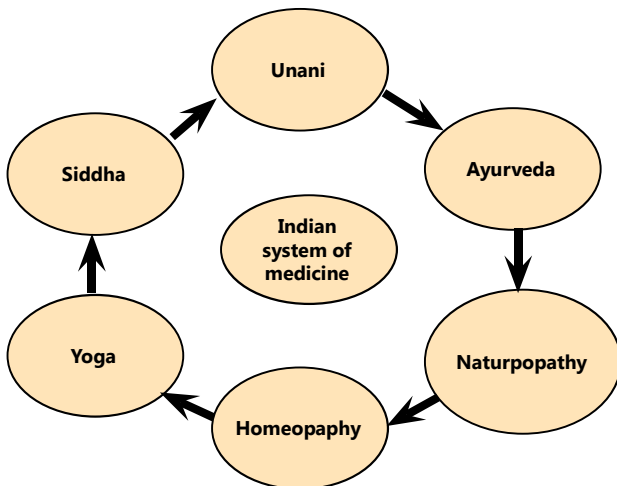
TRADITIONAL MEDICINES IN INDIA

Context: Recently, WHO director-general Tedros Adhanom Ghebreyesus attends the Global Conference on Traditional Medicine as part of the G-20's Health Ministers' meeting in Gandhinagar, Gujarat.

- ◆ He urged countries around the world to work towards unlocking the power of traditional medicine and provide **evidence and action-based suggestions** that can be interpreted into a global strategy.

What is Traditional Medicine?

- ◆ According to the WHO, traditional medicine is the total sum of the "knowledge, skills and practices indigenous and different cultures have used over time to maintain health and prevent, diagnose and treat physical and mental illness".
- ◆ Its reach encompasses ancient practices such as acupuncture, ayurvedic medicine and herbal mixtures as well as modern medicines.



Role of India in Traditional Medicines:

- ◆ In India, it is often defined as including practices and therapies — such as **yoga, Ayurveda, Siddha**.
- ◆ These therapies and practices have been part of Indian tradition historically as well as others — such as homoeopathy — that became part of Indian tradition over the years.
- ◆ Ayurveda and yoga are practised widely across the country.
- ◆ The Siddha system is followed predominantly in Tamil Nadu and Kerala

The **Sowa-Rigpa system** is practised mainly in **Leh-Ladakh** and Himalayan regions such as **Sikkim, Arunachal Pradesh, Darjeeling, Lahaul & Spiti**.

BHARAT NCAP (NEW CAR ASSESSMENT PROGRAMME) LAUNCHED

Context: India's road and car safety just received mass acceleration as the government launched the much-awaited Bharat New Car Assessment Programme (Bharat NCAP), India's homegrown vehicle safety rating system.

What is Bharat NCAP?

- ◆ The Bharat NCAP is India's **very own automobile safety performance assessment programme**.
- ◆ In this programme, vehicles sold in the domestic market will be tested and graded on several measures.
- ◆ **Aim:** to enhance road safety by elevating vehicle safety standards for up to 3.5-tonne vehicles in India.

- ◆ With the launch of this programme, India becomes the fifth country in the world – behind the **United States, China, Japan and South Korea** – to have its dedicated car crash safety program.
- ◆ The Bharat NCAP is aligned with global crash test protocols. Incidentally, until now, India relied on **Global NCAP**, which performs 'voluntary' crash tests of cars to give them a rating out of five.

Global NCAP:

- In 2011, a **UK-based charity Towards Zero Foundation** formed the **Global NCAP** to enhance cooperation among the various NCAPs and promote vehicle crash-testing and reporting in emerging markets.

How will it work?

- ◆ **Applicability:** It will be applicable to all passenger vehicles that can seat up to **eight people and weigh less than 3.5 tonnes**, starting from 1 October.
- ◆ In addition to **petrol and diesel vehicles**, Bharat NCAP could also offer tests and safety ratings for CNG and hybrid cars.
- ◆ As part of the programme, cars will be **crash-tested** and given points which in turn would translate into stars. The safest of the lot will get **five stars**.
- ◆ As of now the Bharat NCAP crash test will be voluntary for now.

A series of tests:

- The car will have to go through a **frontal crash test** conducted at a speed of 64 kmph, as well as a **side and pole-side tests** occur at 50 kmph and 29 kmph respectively.
- The ratings are based upon two main criteria (similar to the Global NCAP):
 - ▶ **Adult safety for front passengers:** To achieve a five-star rating for adult safety, a vehicle will have to gain a minimum of 27 out of 32 possible points.
 - ▶ **Child safety for rear occupants:** a score of 41 out of 49 points secures the highly acclaimed five-star rating.
- Furthermore, vehicles can earn additional points by incorporating features like ISOFIX anchorages, which play a pivotal role in bolstering child restraint systems.

The need

- ◆ India is one of the leading nations when it comes to road accidents and fatalities on the roads. Official data shows that in 2021, 1.54 lakh people lost their lives and 3.84 were injured in road accidents.

- ◆ The 2020 data was also shocking – 1.31 lakh people lost lives, and 3.49 lakh were injured in road mishaps.

NATIONAL CURRICULUM FRAMEWORK FOR SCHOOL EDUCATION 2023

Context: Recently, the final National Curriculum Framework (NCF) has been released by the National Council of Educational Research and Training (NCERT).

About the Proposed framework:

- ◆ **Framed by:** The NCF was drafted by the **National steering committee** headed by former Chairman of the Indian Space Research Organisation (ISRO), **K. Kasturirangan**.
- ◆ **Key points:**
 - ▶ **For languages:**
 - From now, Students in **Classes 9 and 10** will need to learn **three languages**, of which at least two will be native to India.
 - Classes 11 and 12, students will learn **two languages**, including one of Indian origin.
 - ▶ **Board Exams:** The NCF states that all students will be allowed to take **Board exams** on **at least two occasions** during any given school year, with only the best score being retained.
 - ▶ **New Text books:** It follows the lead of the National Education Policy (NEP) 2020, and gives assent for formulating new textbooks from **Grades 3 to 12** under the **Central Board of Secondary Education (CBSE)**.
 - ▶ **Number of Subjects:** For students from **Classes 9 to 12** has to study five mandatory subjects, with an option of adding one more subject.
 - ▶ Now, the number of mandatory subjects for **Classes 9 and 10** is seven and six for **Classes 11 and 12**.
 - ▶ **Optional subjects** have been grouped in three parts in the NCF.
 - The first optional group includes **art education, physical education and vocational education**.
 - The second group includes **Social Science, the Humanities, and interdisciplinary areas**.
 - The third group includes **Science, Mathematics, and computational thinking**.

- ▶ **Shift to semester-based term:** The NCF has recommended that in the long term, all Boards should **change to semester or term-based systems**.
- ▶ Now, there is no hard separation between **academic and vocational subjects**, or **between Science, Social Science, Art, and Physical Education**.

NCF from NEP 2020:

The NCF brings the **aims and commitments** of the NEP:

- ◆ This includes the full range of human capacities, values and dispositions that are aimed to be developed in school education.
 - ▶ Pedagogy, practices, and culture must work in tandem to develop these, and move away from an overemphasis on memorization and content accumulation; in fact, content reduction is required to create space for such development.
- ◆ The **5+3+3+4 Curricular and Pedagogical structure** of school education is reflected in the learning standards, the content, the pedagogy, and the assessment approaches.
- ◆ It is integrative and holistic with equal status to all subjects and learning domains from **Math to Sports**.
- ◆ It integrates **vocational education in all schools**, and there is integration across subjects while developing rigorous subject understanding and capacities.

National Council of Educational Research and Training (NCERT):

- The National Council of Educational Research and Training (NCERT) is an **autonomous organisation** set up in 1961 by the **Government of India** to assist and advise the **Central and State Governments** on policies and programmes for qualitative **improvement in school education**.
- The **major objectives** of NCERT and its constituent units are to:
 - ▶ Undertake, promote and coordinate research in areas related to school education
 - ▶ Prepare and publish model textbooks, supplementary material, newsletters, and journals and develops educational kits, multimedia digital materials, etc.
 - ▶ organize pre-service and in-service training of teachers
 - ▶ develop and disseminate innovative educational techniques and practices
 - ▶ Collaborate and network with state educational departments, universities, NGOs and other educational institutions.



GEOGRAPHICAL INDICATION (GI) TAGS IN 2023

Context: With the recently added products in GI tag lists, has made the total number of GI tags in India 2023 to over 430.

About GI tags:

◆ Background:

- ▶ A **Geographical Indication (GI)** tag is given to an entrepreneur or a group of businessmen of a particular **area/ state/ country to manufacturer goods** of exemplary quality.
- ▶ These tags are issued according to the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.

◆ Key Points:

- ▶ GI tags are issued for products like **agricultural goods, wine and spirit drinks, foodstuff, handicrafts, and industrial products**.
- ▶ **Top 5 states** in India which holds maximum number of GI tags includes **Uttar Pradesh, Tamil Nadu, Karnataka, Maharashtra, and Kerala**.

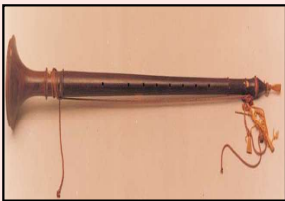


- ▶ **Tamil Nadu and Karnataka** holds maximum number of GI tags followed by Kerala with **35 GI tag, Uttar Pradesh with 34 GI tag and Maharashtra with 31 GI tag**.






◆ Significance:







- ▶ It provides legal security for the manufacturer of unique goods originating from a particular place in the Country.
- ▶ The GI tag also helps customers to get the finest quality products of their desired quality.
- ▶ The GI tag is an assurance of authenticity. If manufacturers have a GI Tag then it is an indication that the product they are manufacturing is genuine.
- ▶ It also enhances and promotes goodwill of manufacturers of GI tag goods by boosting the product demand in the national and international markets.





Latest entrants: The products included are **Tandur red gram of Telangana, gamocha of Assam, Alibag white onion of Maharashtra, and Raktsey Karpo apricot of Ladakh** among others.

GEOGRAPHICAL INDICATION (GI) TAG LIST FOR 2023:

Name of the product	Category of the product	State or Union Territory
Narasinghapettai nagaswaram 	Handcrafted	Tamil Nadu
Dindigul Locks 	Manufactured	Tamil Nadu
Idu Mishmi Textiles 	Handicraft	Arunachal Pradesh

<p>Khola Chilli</p> 	<p>Agricultural</p>	<p>Goa</p>
<p>Srivilliputtur Palkova</p> 	<p>Food Stuff</p>	<p>Tamil Nadu</p>
<p>Kaji Nemu</p> 	<p>Agricultural</p>	<p>Assam</p>
<p>Kandang Saree</p> 	<p>Handicraft</p>	<p>Tamil Nadu</p>
<p>Kashmir Saffron</p> 	<p>Agriculture</p>	<p>Jammu & Kashmir</p>
<p>Kandhamal Haladi</p> 	<p>Agricultural</p>	<p>Odisha</p>
<p>Manipuri Black Rice</p> 	<p>Food Stuff</p>	<p>Manipur</p>

<p>Hmaram</p> 	Handicraft	Mizoram
<p>Ngotekherh</p> 	Handicraft	Mizoram
<p>Kodaikanal Malai Poondu</p> 	Agricultural	Tamil Nadu
<p>Rasagola</p> 	Food Stuff	Odisha
<p>Palani Panchamirtham</p> 	Food Stuff	Tamil Nadu
<p>Pawndum</p> 	Handicraft	Mizoram

<p>Tawlhlohpuan</p> 	Handicraft	Mizoram
<p>Tirur Betel Leaf (Tirur Vettila)</p> 	Agricultural	Kerala
<p>Gulbarga Tur Dal</p> 	Agricultural	Karnataka
<p>Mizo Puanchei</p> 	Handicraft	Mizoram

STAPLED VISA AND ITS APPLICABILITY

Context: India has called off the wushu (martial art) team's scheduled visit to China after it issued stapled visas to three athletes from Arunachal Pradesh.

Two hundred and twenty-seven Indian athletes are participating in 11 other sports at the games that are held every two years, and are officially known as the **FISU World University Games**.

What are Stapled visas?

◆ A stapled visa is simply an **unstamped piece of paper** that is attached by a pin or staples to a page of the passport and **can be torn off or detached at will**.



- ◆ This is different from a regular visa that is affixed to the passport by the **issuing authority** and stamped.
- ◆ When a person with a stapled visa returns to their home country, the entry and exit passes on the stapled visa are torn off.
- ◆ This means that no details of the trip are recorded. It is also an expression of China that it does not acknowledge Arunachal Pradesh and J&K as part of India.

ADDITIONAL INFORMATION

Different Types of Passports in India

Blue Passport	General public use this passport to travel for leisure or business purposes
White Passport	Government officials use this passport for travelling abroad for official work.
Diplomatic Passport	Indian diplomats and senior government officials use this passport during foreign tours where they represent India.
Orange Passport	Individuals who have not studied beyond class 10 can use this passport for flying abroad.



UN COMMISSION FOR SOCIAL DEVELOPMENT (CSOCD)

Context: India's Permanent Representative to the UN, Ambassador Ruchira Kamboj, has assumed the chairship of the 62nd Session of the Commission for Social Development, the first time in nearly 50 years the country has held this position within the UN agency.

Key-highlights:

- ◆ **Theme:** "Fostering Social Development and Social Justice through Social Policies to accelerate Progress on the Implementation of the 2030 Agenda for Sustainable Development and to achieve the overarching goal of poverty eradication".
- ◆ It pledged to make the **conquest of poverty, the goal of full employment and the fostering of social integration** overriding objectives of development.

About UN Commission for Social Development:

- The purpose of the commission is also to advise the **United Nations Economic and Social Council (ECOSOC)** on social policies of a general character and, in particular, on all matters in the social field not covered by the specialised inter-governmental agencies.
- The Chair is backed by vice-chairs from **Luxembourg, North Macedonia, Dominican Republic**, and a forthcoming African State election.
- **Members:** The commission has **46 members**, who are elected by the ECOSOC, based on equitable geographical distribution for four-year terms.
 - ▶ India is a **member** of the **62nd session** of the **Commission for Social Development**, and its **term expires in 2027**.



EC PUBLISHES FINAL REPORT ON 'ASSAM DELIMITATION'

Context: The Election Commission published its final report on the delimitation of assembly and parliamentary constituencies in Assam, keeping their total numbers unchanged at 126 and 14 respectively.

Key-highlights of Order:

Reservation of constituencies for Scheduled Castes and Scheduled Tribes has been done on the basis of the provisions laid down in Article 330 and 332 of the Constitution of India

- ◆ In its final order, the poll panel has revised the nomenclature of one parliamentary and 19 assembly constituencies.
 - ▶ 19 assembly and two Lok Sabha constituencies have been reserved for Scheduled Tribes (STs).
 - ▶ One Lok Sabha and nine assembly constituencies have been reserved for Scheduled Castes (SCs).
- ◆ All assembly and parliamentary constituencies in the state were delimited (redrawn) based on the 2001 Census.

What is Delimitation?

- ◆ Delimitation means the **act or process of fixing limits or boundaries of territorial constituencies** in a country or a province having a legislative body, as per the Election Commission of India.
- ◆ In India, the job of delimitation is assigned to the **Delimitation Commission or a Boundary Commission**.
- ◆ Since Independence, the Commissions have been constituted four times — in **1952, 1963, 1973 and 2002**.

Why was Assam left out?

- ◆ Under the provisions of the Delimitation Act, 1972, the last delimitation of constituencies in Assam was done on the basis of census figures, 1971, by the then Delimitation Commission in 1976.
- ◆ However, when the exercise was repeated in 2002, Assam was not a part of that. Not just Assam, but Arunachal Pradesh, Manipur, and Nagaland, were also left out after a Public Interest Litigation (PIL) was filed in the Guwahati High Court challenging the use of the 2001 Census for reference.
- ◆ In February 2020, then President Ram Nath Kovind paved the way for the delimitation exercise in Assam, rescinding the February 8, 2008 order.



Context: At present, 14 States and Union Territories are yet to sign a crucial Memorandum of Understanding (MoU) with the Union Education Ministry, which mandates the under the Centre's flagship scheme for State-run higher education.

What is the new Scheme?

- ◆ **Pradhan Mantri Uchcharat Shiksha Abhiyan (PM-USHA)** is the new name for the Ministry's scheme to **improve the quality of higher education in State Universities** — through curricular and programme changes, teacher training, physical and digital infrastructure, accreditation, and enhancing employability — while ensuring equity, access, and inclusion.
- ◆ **Funding:** PM-USHA scheme has 60:40 funding split between Centre and States, with no extra money for NEP reforms.
- ◆ It provides an outlay of ₹12,926.10 crore between 2023-24 and 2025-26.

What are State's Concerns?

- ◆ States like Kerala, Tamil Nadu, and West Bengal are among the 14 States and Union Territories that have not yet signed the crucial MoU with the Union Education Ministry.
- ◆ This MoU is necessary to receive funds of nearly ₹13,000 crore over the next three years for state-run higher education under the Centre's Flagship Scheme.

- ◆ The states who have not signed yet are concerned as 40% of the **PM-USHA budget** must be borne by the States themselves, and no extra funds have been earmarked for **NEP reforms**.

What are the issues in the higher education system?

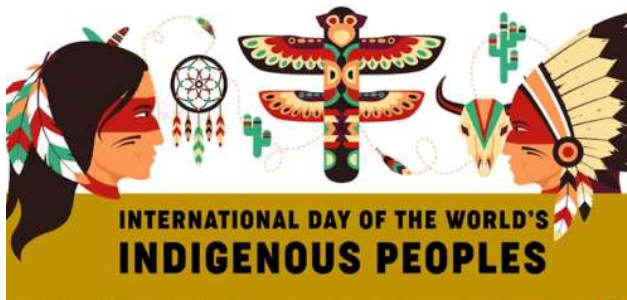
- ◆ **National Education Policy 2020 (NEP)** is a guiding force in preparing the base for PM-USHA.
- ◆ NEP has identified some of the major problems currently faced by the higher education system in India, which are:
 - ▶ **A severely fragmented higher educational ecosystem;** less emphasis on the development of cognitive skills and learning outcomes
 - ▶ **A rigid separation of disciplines,** early specialization, and streaming of students into narrow areas of study
 - ▶ **Limited access** particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages
 - ▶ **Limited teacher** and institutional autonomy
 - ▶ **Inadequate mechanisms** for merit-based career management and progression of faculty and institutional leaders
 - ▶ **Lesser emphasis on research** at most universities and colleges, and lack of competitive peer-reviewed research funding across disciplines; g. Suboptimal governance and leadership of HEIs
 - ▶ **An ineffective regulatory system;** and large affiliating universities result in low standards of undergraduate education.



Context: The International Day of the World's Indigenous People is observed on August 9 every year to raise awareness and protect the rights of the world's indigenous population.

Background:

- ◆ Through a resolution, the United Nations General Assembly decided on December 23, 1994, that every year August 9 will be celebrated as the International Day of the World's Indigenous People.
- ◆ This date was chosen as on the same day back in 1982 the UN Working Group on Indigenous Populations convened its first meeting.



About the Day:

- ◆ It is also known as **World Tribal Day**.
- ◆ The day recognizes the achievements and contributions that Indigenous people make to improve world issues such as environmental protection.
- ◆ **Theme for International Day of World's Indigenous People 2023:** "*Indigenous Youth as Agents of Change for Self-determination.*"

On 9th August 2018, the first **National Report on the State of India's Tribal People's Health** was submitted to the Government of India by the **Expert Committee on Tribal Health**.

Tribal Communities in India:

- ◆ Tribal people are concentrated in 809 blocks in India.
- ◆ Such areas are designated as the **Scheduled Areas**.

Government initiatives for Tribal Welfare

- Anamaya
- 1000 Springs Initiative
- Pradhan Mantri Adi Adarsh Gram Yojna (PMAAGY)
- TRIFED
- Digital Transformation of Tribal Schools
- Development of Particularly Vulnerable Tribal Groups
- Pradhan Mantri Van Dhan Yojana
- Eklavya Model Residential Schools

- ◆ Around 50% of India's tribal population (around 5.5 crore) live outside the Scheduled Areas, as a scattered and marginalised minority.

Why Tribes need special recognition?

- ◆ Tribal people heavily depend on government-run public health care institutions, such as **primary health centres and hospitals**.
- ◆ There is a **27% to 40% deficit** in the number of such facilities, and 33% to 84% deficit in medical doctors in tribal areas.

- ◆ Government health care for the tribal people is **starved of funds** as well as of human resources.

HARYANA PLANS DAM AT HATHNIKUND TO CURB YAMUNA FURY

Context: To prevent a repeat of the July floods caused by the Yamuna in Delhi and in adjoining areas of the river in Haryana, the Haryana government is planning to build a dam at a cost of Rs 6,134 crore.

What is the plan?

- ◆ The dam will have a 14-km-long reservoir and will be built 4.5 km upstream from the **Hathnikund Barrage in Yamunanagar district**.
- ◆ Nine villages will be displaced for its construction, besides shifting an 11-km stretch of NH-73.
- ◆ It will also submerge a large chunk of forest land, including areas in **Kalesar National Park and Wildlife Sanctuary**.
- ◆ The dam area also shares borders with Uttarakhand and Uttar Pradesh. Its reservoir will have a capacity of 10.82 lakh cusecs.

About Hathnikund barrage

- ◆ Built on the **Yamuna river**, the Hathnikund barrage is located on the border of Haryana's Yamuna Nagar and Saharanpur in Uttar Pradesh (UP).



- ◆ Yamuna water is allocated to **Himachal Pradesh, Haryana, Delhi, Uttar Pradesh, and Rajasthan** as per an MoU dated May 12, 1994.

- ◆ Water from the Hathnikund barrage is released in three directions:
 - ▶ **Eastern Yamuna Canal:** diverted towards UP for irrigation purposes.
 - ▶ **Western Yamuna Canal:** diverts water to different parts of Haryana for irrigation purposes.
 - ▶ **Yamuna river:** After sending water to both the canals, there is a part that is left in the main river.
- ◆ The WYC takes Yamuna water to Haryana for irrigation and to Delhi for drinking. Its capacity is 20,000 cubic feet per second (CFS).

Why can't the Haryana government store water at the HKB?

- ◆ Haryana have a barrage at Hathnikund and not a dam.
 - ▶ **A barrage** is a man-made structure built on water courses or rivers to facilitate and control diversion of water into canals for navigation or irrigation.
 - ▶ **A dam** collects water, especially to make a reservoir.
- ◆ The HKB's main function is to **divert Yamuna's water to the canals.**



DIGITAL HEALTH INCENTIVES SCHEME

Context: The National Health Authority (NHA) has announced extension of its Digital Health Incentives Scheme (DHIS) under the Ayushman Bharat Digital Mission (ABDM) till December 31, 2023.

What is Digital Health Incentives Scheme (DHIS)?

- ◆ The DHIS was launched on **January 1, 2023** and was operational from **April 2023**.
- ◆ The scheme is a part of the **Ayushman Bharat Digital Mission (ABDM)**.
 - ▶ While ABDM aims to make digital health services available and accessible to all citizens of our country, it intends to **incentivise healthcare facilities** to promote and support this adoption through the **Digital Health Incentive Scheme**.
- ◆ **Incentives:** Under the DHIS, incentives are provided to **hospitals and diagnostic labs** and to the providers of digital health solutions such as **Hospital/ Health Management Information System (HMIS)** and **Laboratory Management Information System (LMIS)** for adopting and enabling transformative digitization under the ABDM.

Who all are eligible?

- All Health facilities like Clinics, Nursing Homes & Hospitals
 - Laboratory/Radiology diagnostics centres
 - **Digital Solution Companies** (Entities providing ABDM enabled digital solutions)
- ◆ Under the DHIS, the eligible health facilities and digital solutions companies shall be able to earn financial incentives of up to **Rs.4 crore** based on the number of **digital health records** created and linked to **ABHA (Ayushman Bharat Health Account)** numbers of the patients.
 - ◆ It is anticipated that the DHIS advantages offered to the DSCs will contribute to cost reduction or will be transmitted further to the relevant healthcare facilities to pay their **digitisation costs**, etc.
 - ◆ **Digital Solution Companies (DSCs)** will be given an **incentive of 25%** of the incentive amount received by the eligible health facilities using their digital solutions.
 - ◆ For the ABHA linked transactions done by facilities **not eligible for direct incentives** (Clinics/ Small Hospitals/ Health Lockers/ Teleconsultation Platforms etc.), an incentive would be provided to Digital Solution Companies.



GOVT LAUNCHES 'STUDY IN INDIA' PORTAL

Context: The Ministry of Education has launched the 'Study In India (SII)' portal to offer a one-stop solution for student registrations and visa applications, in line with vision of establishing India as a global education hub.

About the Portal:

- ◆ **Study in India Portal** is a **one-stop platform** that will simplify international students' academic journey in India.
- ◆ It is a dedicated website that will provide comprehensive information about **the Indian Higher Education Institutions (HEIs)**.
- ◆ **Information:** The portal will provide comprehensive information about:
 - ▶ Indian Higher Education Institutions



- ▶ academic facilities, research support, and related information
- ◆ It will also provide an **integrated one-stop solution** for the student registration and visa application processes.
- ◆ The new website will now have the provision for students to apply in **more than one institute/course of their choice**.
- ◆ **Courses:** Undergraduate (UG), postgraduate (PG), doctoral-level programmes, courses in Indian Knowledge systems like Yoga, Ayurveda, classical arts, etc.
- ◆ The portal is guided by the **National Education Policy (NEP) 2020**.
 - ▶ The **NEP 2020** envisages global institutions to be promoted through special efforts, research collaboration and student exchanges between Indian institutions.

The **UGC (Academic Collaboration between Indian and Foreign Higher Educational Institution to offer Twinning Joint Degree, and Dual Degree Programmes) Regulations, 2022** clearly brings forth various arrangements between Indian institutions and foreign institutions for academic collaboration.

What is Study in India Programme?

- ◆ Study in India is a **flagship program** of the Government of India, under the aegis of the **Ministry of Education (MoE)**.
- ◆ **Overall Objectives**
 - ▶ To increase the number of international students in India.
 - ▶ To promote India as the preferred study destination, providing affordable and quality education comparable with global standards
 - ▶ To contribute to improving the overall quality improvement in higher education
- ◆ The Study in India programme seeks to facilitate international students' access to these courses and showcase the country's academic excellence.
- ◆ **Partnership with Premier Education Institutes:** The Study in India programme involves partnership with educational institutes **fulfilling one of the following criteria:**
 - ▶ National Institutional Ranking Framework (NIRF) ranking (≤ 100)
 - ▶ National Assessment and Accreditation Council (NAAC) accreditation score (≥ 3.01)
 - ▶ Institutes of National Importance (INI)

FORMATION OF 19 NEW DISTRICTS APPROVED IN RAJASTHAN

Context: The Rajasthan government has approved a decision taken earlier for the formation of 19 new districts and three new divisions, taking the total number of districts in the country's largest State to 50.

Key-highlights

- ◆ Earlier, Rajasthan has **31 Districts** which has now been **increased to 50**.
- ◆ These districts are categorized under **7 different divisions** of **Ajmer, Kota, Jaipur, Bharatpur, Bikaner, and Udaipur**.
- ◆ The districts of Rajasthan are segregated under separate divisions for ease of administration.
- ◆ As per new District List in Rajasthan, **new additions** are Anupgarh, Balotra, Beawar, Deeg Didwana, Kuchaman City, Dudu, Gangapur City, Jaipur North, Jaipur South, Jodhpur West, Kekdi, Kotputli, Khairthal, Neemkathana, Phalodi, Salumbar, Sanchore, Shahpura & Bhilwara.
- ◆ The last district added to the state of Rajasthan was **Pratapgarh** in 2008.

Ram Lubhaya Committee

- The State Cabinet approved the proposal of the high-level **Ram Lubhaya Committee** (constituted in 2019) for the creation of new districts and divisions.

What is the Procedure to form a new District?

- ◆ The power to create **new districts or alter or abolish existing districts** rests with the **State government**.
- ◆ This can either be done through an **executive order or by passing a law** in the State Assembly.
- ◆ The Centre has **no role to play** in the alteration of districts or the creation of new ones. States are free to decide on this matter.
- ◆ **Name change:** If the state government wants to change the name of a district or a railway station, then the Home Ministry comes into the picture and must follow the following procedure;
 - ▶ The State government will propose a new name to a district and forward the proposal to the Home ministry.

- ▶ The Home Ministry will forward the proposal to other departments.
- ▶ After that, the departments such as the **Ministry of Earth Sciences, Intelligence Bureau, Department of Posts, Geographical Survey of India Sciences, and the Railway Ministry,** provide their clearance to the proposal of the state government.
- ▶ After examination of their replies, the state government receives a **no-objection certificate**. Then the name of the district changes.

Advantages of forming new districts	Associated challenges
<ul style="list-style-type: none"> • Better administration • Smaller district ensures better governance • Serve a large population • Bring administration closer to the people • New districts attract more district-specific schemes • Increase employment 	<ul style="list-style-type: none"> • Increase in expenditure and resources • Substitute for genuine decentralization • Increases cost of living in new districts • A Political move • Underutilization of administration

AMRIT BHARAT STATION SCHEME (ABSS)

Context: Prime Minister Narendra Modi laid the foundation stone virtually to revamp the 508 railway stations across the country with an investment of Rs.25,000 crore under the Amrit Bharat Station scheme. Out of 508, 13 stations are listed in Karnataka.

About the Scheme:

- ◆ The 'Amrit Bharat Station Scheme' is a new policy launched by the **Ministry of Railways**.



AMRIT BHARAT STATION SCHEME

- ◆ The scheme envisages development of stations with a long term vision.
- ◆ The policy is based on **Master Planning** for long term and implementation of the same as per needs and demand of the station to station.
- ◆ This is in line with the government's vision of '**Naya Bharat**'.
- ◆ Objectives:
 - ▶ Transform the railway stations

- ▶ Modernise the infrastructure with latest technologies, amenities and others from time to time
- ▶ Enhancing the facilities beyond the Minimum Essential Amenities
- ▶ Construction of Roof Plazas and City Centres at the station
- ▶ Introduction of new amenities as well as upgradation and replacement of existing amenities
- ◆ The project will provide modern passenger amenities along with ensuring well-designed traffic circulation, inter-modal integration and signage for the guidance of passengers.
- ◆ The design of the station buildings will be inspired by **local culture, heritage and architecture**.
- ◆ Amrit Bharat Station Scheme embodies a commitment to progress, convenience, and a brighter future for passengers.

Key features of the scheme:

- ◆ **Elegant Station Building:** A new station building will redefine Station's architectural landscape, reflecting a modern and inviting design.
- ◆ **Focus on Swachh Bharat:** Keeping in step with the **Swachh Bharat mission**, the station will introduce a modular Sewage Treatment Plant, ensuring efficient sewage treatment and a cleaner environment.
- ◆ **Guidance and Information:** Modernized train indication boards and passenger-friendly signages will facilitate seamless navigation within the station premises.
- ◆ **Inclusivity:** All improvements will be designed to be divyangjan (specially-abled) friendly, ensuring equal access and convenience for all.



CAG AUDIT EXPOSES MULTIPLE FRAUDS IN PMJAY

Context: As per the audit findings released by Comptroller and Auditor General (CAG), multiple cases of the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PMJAY) has been found providing treatment for patients who had already been declared dead, as well as for thousands of people using the same Aadhaar number or invalid mobile phone number.

Findings from the Audit:

- ◆ Due to the absence of adequate validation controls, errors were noticed in beneficiary databases, such as **invalid names, unrealistic date of birth, duplicate PMJAY IDs, and unrealistic size of family members in a household.**
- ◆ Patients earlier shown as 'dead' continued to avail treatment under the scheme.
- ◆ The maximum number of such cases was in **Chhattisgarh, Haryana, Jharkhand, Kerala and Madhya Pradesh.**
- ◆ The minimum number of such cases was observed in the **Andaman & Nicobar Islands, Assam, Chandigarh, Manipur and Sikkim.**
- ◆ Penalties amounting to Rs.12.32 crore from 100 hospitals were pending in nine States.
- ◆ In **Andhra Pradesh and Punjab**, private hospitals were performing procedures reserved for public hospitals.

About Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PMJAY):

- ◆ PM-JAY is the world's largest health insurance/assurance scheme fully financed by the government.
- ◆ Launched in February 2018, it offers a sum insured of **Rs.5 lakh per family for secondary care** (which doesn't involve a super specialist) as well as **tertiary care (which involves a super specialist).**
- ◆ Under PMJAY, **cashless and paperless access** to services is provided to the beneficiaries at the point of service, that is, hospital.
- ◆ **Health Benefit Packages** covers surgery, medical and day care treatments, cost of medicines and diagnostics.
- ◆ Packaged rates (Rates that include everything so that each product or service is not charged for separately).

Nodal Agency:

- The **National Health Authority (NHA)** has been constituted as an autonomous entity under the Society Registration Act, 1860 for effective implementation of PM-JAY in alliance with state governments.
- The **State Health Agency (SHA)** is the apex body of the State Government responsible for the implementation of AB PM-JAY in the State.

- ◆ **Funding pattern:** The funding for the scheme is shared – 60:40 for all states and UTs with their own legislature, 90:10 in Northeast states and Jammu and Kashmir, Himachal and Uttarakhand and 100% Central funding for UTs without legislature.

Identification of beneficiaries

- ◆ AB-PMJAY identifies the beneficiary through **Aadhaar identification** wherein the beneficiary undergoes the process of mandatory **Aadhaar based e-KYC.**
- ◆ The details fetched from the Aadhaar database are matched with the source database and accordingly, the request for **Ayushman card** is approved or rejected based on the beneficiary details.
- ◆ The scheme only used **mobile numbers** to reach out to the beneficiaries in case of any need and for collecting feedback regarding the treatment, rather than for any verification purposes.



AKHIL BHARATIYA SHIKSHA SAMAGAM AND ULLAS INITIATIVE

Context: Recently, the Prime Minister (PM) of India inaugurated Akhil Bharatiya Shiksha Samagam a two-day event. The event is organized to mark the third anniversary of the National Education Policy (NEP) 2020.

- ◆ Additionally, the Union Minister of Education launched the **ULLAS: Nav Bharat Saksharta Karyakram mobile application.**

What are the Key Highlights of Akhil Bharatiya Shiksha Samagam?

- ◆ The PM released the **first installment of funds under the PM SHRI Scheme**, supporting the establishment of schools that nurture engaged, productive, and contributing citizens, in alignment with the NEP 2020 vision.
- ◆ The PM also released **education and skill curriculum books translated into 12 Indian languages**, enhancing learning by allowing students to **study in their mother tongue.**

What is ULLAS: Nav Bharat Saksharta Karyakram?

- ◆ The **ULLAS (Understanding Lifelong Learning for All in Society)** is a transformative initiative launched by the Indian government to promote **lifelong learning and bridge the gaps in basic literacy and critical life skills among citizens aged 15 and above.**
- ◆ The program aims to empower individuals with essential knowledge and skills for **personal and national development.**
- ◆ ULLAS **User-Friendly Mobile Application** serves as a digital gateway to diverse learning resources via the **DIKSHA portal.**
- ◆ **Key Features of ULLAS: Nav Bharat Saksharta Karyakram:**
 - ▶ **Lifelong Learning Focus:**
 - Emphasizes continuous learning throughout life.
 - Fosters a culture of knowledge-sharing and personal development.
 - ▶ **Digital and Financial Literacy:**
 - Equip participants with digital literacy skills.
 - Promotes financial awareness and empowerment.
 - ▶ **Critical Life Skills:**
 - Impart important life skills such as **legal literacy and digital literacy.**
 - Enhances **citizenship and empowerment.**
 - ▶ **Incentives for Student Volunteers:**
 - Provides **credits in school/university for student volunteers.**
 - Offers appreciation through certificates, letters, and felicitations.

RCS-UDAN SCHEME ON GROUND LEVEL

Context: According to a recent update, out of the 479 airport routes that were revived by the Union Government under the Regional Connectivity Scheme (RCS-UDAN), 225 have ceased its operations.

About the update:

- ◆ As per the information, of the **225 routes** that have ceased operations, **128 routes shut down even before completing the mandatory three-year period under the scheme.**

- ◆ Airlines found **70** of these routes to be **commercially unviable** despite the subsidy, while the remaining **58** have been cancelled either due to “**non-compliance**” by the airline operator, or the airline surrendering routes, or the airline companies shutting down.
- ◆ **As many as 97 routes shut down after completing the three-year period during which the government provides support.**

Scenario of Civil aviation in India:

- ◆ Since the launch of modern **civil aviation in India in 1911**, only 76 airports had been connected by scheduled commercial flights.
- ◆ The number of **operational airports has gone up to 141 from 76 in 2014.**

With 479 new routes initiated, UDAN Scheme has provided air connectivity to more than **29 States/ UTs across the country.**

About Regional Connectivity Scheme – UDAN:

- ◆ The **Regional Connectivity Scheme (RCS)-UDAN (Ude Desh Ka Aam Naagrik)** is a regional connectivity scheme launched by the Government of India, as a part of the **National Civil Aviation Policy in 2016.**
- ◆ The scheme has recently celebrated its fifth anniversary.
- ◆ It aims to operation for a period of **10 years (2016-26)**, envisages providing connectivity to un-served and underserved airports through revival of existing airports and air strips.
- ◆ **Objective:** To take flying to the masses by improving air connectivity for **tier-2 and tier-3 cities** and subsidising air travel on these routes.
- ◆ The routes are awarded after a bidding process, and the winning airlines are given certain incentives, along with **viability gap funding (or a subsidy) equivalent to 50% of the seating capacity on their aircraft.**
 - ▶ In return, the airlines sell **50% of their seats** at a flat rate of **Rs.2, 500 per hour of flight**, in order to make air travel affordable.
- ◆ **Airport Authority of India (AAI)** is the implementing agency for the scheme.

Phases of the Scheme:

- ◆ **RCS – UDAN scheme** has gone through different phases in which new flight routes and airports/ airstrips have been added under the program:
 - ▶ **UDAN 1.0:** 5 airlines companies were awarded 128 flight routes to 70 airports.

- ▶ **UDAN 2.0:** Helipads were also connected.
 - In this phase, Central government awarded contracts to 15 airliners to operate in 325 routes across hilly, remote areas.
 - It involved connecting 56 new airports and helipads to 36 existing aerodromes, as per the Ministry of Civil Aviation.
- ▶ **UDAN 3.0:** Inclusion of Tourism Routes under Phase 3 in coordination with the Ministry of Tourism.
 - Inclusion of Seaplanes for connecting Water Aerodromes.
 - Bringing in a number of routes in the North-East Region under the ambit of UDAN.
- ▶ **UDAN 4.0:** It was launched in December 2019 with a special focus on North-Eastern Regions, Hilly States, and Islands.
- ▶ **UDAN 4.1:** Launched in March 2021, the UDAN 4.1 round is focused on connecting smaller airports, along with special helicopter and seaplane routes.
 - In addition to these, some new routes have been proposed under the **Sagaramala Seaplane Services** in consultation with the Ministry of Ports, Shipping, and Waterways.
- ▶ **UDAN 5.0:** Launched in April 2023, the **UDAN 5.0** round is focused on Category-2 (20-80 seats) and Category-3 (>80 seats) aircrafts. There is **no restriction** on the distance between the **origin and the destination of the flight**.

THE VIVAD SE VISHWAS II (CONTRACTUAL DISPUTES) SCHEME

Context: In order to settle the pending contractual disputes of government and government undertakings, the finance ministry has launched the 'Vivad se Vishwas II – (Contractual Disputes)' scheme.

- ◆ The last date for submission of claims is October 31, 2023.

Background:

- ◆ The Finance Minister had announced the scheme, termed '**Vivad se Vishwas II — (Contractual Disputes)**' Union Budget 2023-24.
- ◆ The **Department of Expenditure** had indicated the guidelines for its operation in an earlier order issued in May 2023.

About the Scheme:

- ◆ **Objective:** The **Vivad Se Vishwas II (Contractual Disputes) scheme** is aimed at clearing the backlog of litigation, freeing lock-up funds, and improving the ease of doing business.
- ◆ Under the scheme, **contractors would be offered settlement amounts** depending on the status of a dispute.
- ◆ The scheme will apply to **all domestic contractual disputes** where one of the parties is either the **Government of India or an organisation working under its control**.
- ◆ Apart from **Ministries and Government departments**, the scheme would apply to **autonomous bodies, public sector banks and enterprises** and all organisations, like metro rail corporations, where the Government of India has a **50 per cent stake**.
- ◆ Under the scheme, it would be mandatory for **Government departments** to accept the settlement where the claim amount is **Rs.500 crore or less**.
- ◆ To be **eligible for settlement under the scheme**, the ministry has laid out **two conditions** —
 - ▶ **For Arbitral award passed on or before January 31, 2023-** the settlement amount offered is up to 65 per cent of the net amount awarded.
 - ▶ **For Court award passed on or before April 30, 2023-** The settlement amount offered to the contractor will be up to 85 per cent of the net amount awarded/ upheld by the court.
- ◆ **Applicability:** The scheme shall be applicable to all kinds of procurement, including procurement of goods, services and works.
 - ▶ It is also applicable to all '**earning contracts**' (i.e. contracts where government receives money in exchange for goods, services, rights, etc.) as well as contracts under **Public Private Partnership (PPP) arrangements**.
- ◆ **Government e-Marketplace (GeM)** has developed a dedicated web-page for implementation of this scheme.
- ◆ Eligible claims shall be processed only through GeM.

LOKNITI-CSDS'S SURVEY

Context: As per the report released by Lokniti-CSDS recently, suggest that the youth identify challenges relating to the economy as the most significant facing the nation.

- ◆ The report offers insights into **career aspirations, job preferences, and expectations of younger Indians**.

About the survey:

- ◆ The data is collected from survey conducted in **18 states** with a sample of **9,316 respondents** — show **unemployment** as a significant concern across all economic classes.
- ◆ **Conducted by: Centre for the Study of Developing Societies (CSDS)**, it is an Indian research institute for the social sciences and humanities.
 - ▶ It was founded in 1963 by **Rajni Kothari** and is largely funded by the Indian Council of Social Science Research Government of India.

The Lokniti programme for comparative democracy:

- The **Lokniti Programme for Comparative Democracy** was established in 1997 as a research programme of the Centre for the Study of Developing Societies (CSDS), Delhi.
- CSDS is an **autonomous social science research institute**.
- CSDS has argued in favour of a more **humane holistic view of democracy** that goes beyond democratic institutions and processes in their narrow sense and emphasizes the survival of dissent and cultural contents of the civil society as central concerns of democracy.

Key points of the Report:

- ◆ **For views on Biggest concern in country:**

Table: The Biggest Concern (In %)			
	Unemployment	Poverty	Price rice
Overall	26 (18)	10 (0)	13(7)
Poor	29	25	20
Lower	37	18	12
Middle	39	14	12
Rich	35	12	12
Non-literate	27	22	25
Up to Primary	32	22	20
Middle Class	31	22	12
Matric Pass	37	17	16

12th Pass	34	16	13
Graduate and above	40	13	11
Men	42	15	10
Women	31	18	16

Note: Only top three problems have been reported. Figures in parentheses refers to the change from 2016 **Question asked:** What is the biggest problem in India today?

- ▶ More than one in three (36%) Indians between the ages of 15 and 34 believe **unemployment is biggest** problem in the country.
- ▶ Reasons considered for unemployment remains to be about one in six (16%) think it **is poverty**, and 13% think it **is inflation**.
- ▶ About **6%** of respondents identified **corruption** as the most significant challenge;
- ▶ **4%** each identified problems in **education and high population**.
- ▶ Only 27% of non-literate individuals cited unemployment as their primary concern, likely due to their greater willingness to take on a range of jobs.
- ▶ **Forty-two per cent of men** said unemployment was the most significant problem; among young women, this number was **31%**.
- ◆ **Occupational status in the country:**
 - ▶ Sixteen per cent were professionals such as doctors or engineers, **15%** were involved in **agriculture, and semi-unskilled and skilled workers** made up **27% of the total**.
 - ▶ Only **6%** were in government job.
- ◆ **Job Aspirations :**
 - ▶ The preference for setting up an own business has grown consistently over this period — from 16% in 2007 to 27% in 2023.

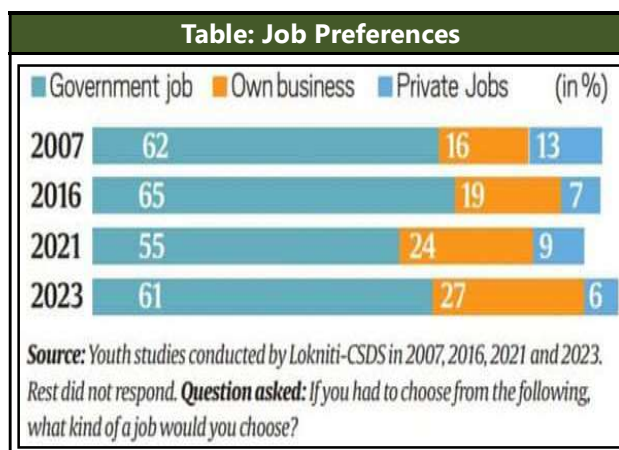
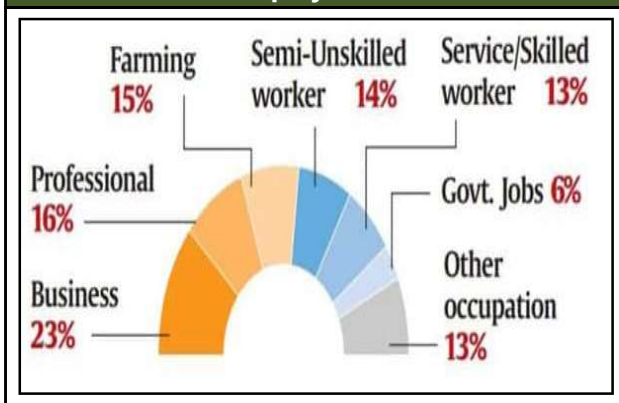


Table: Employment Profile



INFRASTRUCTURE DEBT FUNDS – NON-BANKING FINANCIAL COMPANIES (IDF-NBFCs)

Context: In a release, the Reserve Bank of India (RBI) detailed the revised guidelines for Infrastructure Debt Funds - Non-Banking Financial Companies (IDF-NBFCs) and the sponsorship of IDF-MFs by Non-Banking Financial Companies (NBFCs).

What are Infrastructure Debt Funds - Non-Banking Financial Companies (IDF-NBFCs)?

- ◆ An IDF-NBFC is a **company registered as NBFC** to facilitate the flow of **long- term debt** into infrastructure projects.
- ◆ It comes under the **regulation of RBI**.
- ◆ It raises resources through **issue of rupee or dollar-denominated bonds** of minimum **5-year maturity**.
- ◆ Only **Infrastructure Finance Companies** can sponsor IDF-NBFCs.
- ◆ IDF-NBFCs would take over loans extended to infrastructure projects which are created through the Public **Private Partnership (PPP)** route and have successfully completed **one year of commercial production**.

Infrastructure Debt Funds (IDFs):

- IDFs are investment vehicles for **channelizing investment** into the infrastructure sector.
- They are sponsored by **commercial banks and NBFCs** in India in which **domestic/offshore institutional investors**, specially insurance and pension funds can invest through units and bonds issued by the IDFs.

Eligibility parameters for NBFCs as sponsors of IDF-MF:

NBFCs sponsoring IDF-MFs are required to comply with the following requirements:

- ◆ The NBFC should have a minimum Net Owned Funds (NOF) of Rs.300 crore; and Capital to Risk Weighted Assets (CRAR) of 15%;
- ◆ its net NPAs should be less than 3% of net advances;
- ◆ it should have been in existence for at least 5 years;
- ◆ it should be earning profits for the last three years and its performance should be satisfactory;
- ◆ the CRAR of the NBFC post investment in the IDF-MF should not be less than the regulatory minimum prescribed for it;
- ◆ The NBFC should continue to maintain the required level of NOF (Net Owned Fund) after accounting for investment in the proposed IDF and
- ◆ There should be no supervisory concerns with respect to the NBFC.

About the revised guidelines:

- ◆ According to the revised definition, an IDF-NBFC refers to a **non-deposit-taking NBFC** that is authorized to **refinance infrastructure projects** that have completed at **least one year of satisfactory commercial operations**.
- ◆ Additionally, IDF-NBFCs can directly finance **toll-operate-transfer (TOT) projects**.
- ◆ To qualify as an IDF-NBFC, entities must adhere to **specific net owned funds (NOF)** and **regulatory capital requirements**.
- ◆ The guidelines said that IDF-NBFCs are **allowed to raise funds** through **rupee or dollar-denominated bonds** with a **minimum maturity of five years**.
- ◆ For better **asset-liability management (ALM)**, they can also utilise shorter tenor bonds and commercial papers (CPs) up to **10 per cent of their total outstanding borrowings**.
- ◆ Additionally, **external commercial borrowings (ECBs)** can be used, provided they have a minimum tenure of five years and are not sourced from **foreign branches of Indian banks**.
- ◆ **Need:**
 - ▶ In order to enable IDF-NBFCs to play a greater role in the financing of the infrastructure sector and to harmonise the regulations governing financing of infrastructure sector by the NBFCs, a review of the guidelines applicable to IDF-NBFCs has been undertaken, in consultation with the Government of India.

CHINA ENTERS INTO 'DEFLATION'

Context: China's economy has now entered a period of deflation.

What is deflation?

- ◆ Deflation is a **general decline in prices for goods and services**, typically associated with a contraction in the **supply of money and credit** in the economy.
- ◆ During deflation, the purchasing power of currency rises over time.
- ◆ **Impact:**
 - ▶ Deflation benefits consumers because they can purchase more goods and services with the same nominal income over time.
 - ▶ However, economists are often concerned about the consequences of falling prices on various sectors of the economy, especially in financial matters.
 - For instance, deflation can harm borrowers, who can be bound to pay their debts in money that is worth more than the money they borrowed, as well as any financial market participants who invest or speculate on the prospect of rising prices.

'STAR SERIES' NUMBERING SYSTEM IN BANKNOTES

Context: To address the concern regarding the validity of the STAR series numbering system, the Reserve Bank of India (RBI) confirmed that notes with a star (*) symbol are genuine and valid.

About the 'STAR series numbering system':

- ◆ The asterisk (*) was introduced on the new Rs. 500 banknotes in December 2016.



- ◆ The symbol is inserted in the **number panel of a banknote** that is used as **replacement for defectively printed notes** in a packet of **100 pieces** of serially numbered banknotes.

- ◆ A banknote with a star (*) symbol is **identical to any other legal banknote**, except that in the number panel a star (*) symbol is added between the prefix and the serial number.

◆ Features:

- ▶ The **Star series notes** will look exactly like the existing notes of **Rs.10, Rs.20 and Rs.50** in the Mahatma Gandhi series but will have an additional character viz. a ***(star) in the number panel**.
- ▶ Packets with star series notes will have **100 pieces as usual but not in serial order**.
- ◆ They are genuine and can be freely used as legal tender.

What Is Legal Tender?

- Legal tender is anything recognized by law as a **means to settle a public or private debt** or meet a **financial obligation, including tax payments, contracts, and legal fines or damages**.
- The **national currency** is **legal tender** in practically every country.
- A creditor is legally obligated to accept legal tender toward repayment of a debt.

INDIAN FIRMS CAN NOW DIRECTLY LIST ON IFSC EXCHANGES

Context: India companies can list their shares directly on foreign exchanges at the International Financial Services Centre (IFSC) in Gujarat International Financial Tech (GIFT) City in Gujarat.

What is GIFT City?

- ◆ The Gujarat International Finance Tec-City (**GIFT City**), the first and **only IFSC currently operational in India**, was established in 2015.
- ◆ GIFT City is **India's first operational smart city** and **International Financial Services Centre** is an emerging global financial and IT services hub, a first of its kind in India, designed to be at or above par with globally benchmarked business districts.
- ◆ It is the **only green-field smart city in India** set up as a multi-service **special economic zone (SEZ)** and is regulated by the **IFSC Authority (IFSCA)**.

- ◆ It is both a conduit and a destination for **foreign direct investment (FDI)**.
- ◆ The IFSCA oversees all financial institutions, ahead of bodies such as the **Reserve Bank of India (RBI)** and the **Securities and Exchange Board of India (SEBI)**.

RAILWAYS TO INSTALL INTRUSION DETECTION SYSTEM IN ODISHA

Context: To prevent death of elephants due to train hits, the East Coast Railway (ECoR) has decided to install intrusion detection systems (IDS) at the sensitive locations of elephant passing zones and elephant corridors in Odisha.

What is Intrusion detection system (IDS)?

- ◆ IDS is based on **artificial intelligence (AI)** and **existing optical fibres** will be used as sensors to identify movements of elephants at locations and alert **control offices, station masters, gatemen and loco pilots**.
- ◆ It uses the **fibre optic based acoustic system** to sense **real time presence of elephants** on the track.
- ◆ The AI-based system can monitor **unusual movement up to a stretch of 60 km**.
- ◆ The system will help in locating and detecting the presence of elephants near the track so that speed of the trains in the sections will be reduced.
- ◆ IDS will send alarms to the loco pilot unit via **SMS/internet with GPS tag**, providing real time information about the location of elephants.
- ◆ **Significance:**
 - ▶ The detection system will work as an **early warning system** for elephant intrusion.
 - ▶ IDS will also help in detecting rail fracture, trespassing on **railway track and alert about disaster mitigation** due to unauthorized digging near **railway tracks, landslides near tracks**.

Need of such an initiative:

- ◆ According to official data, as many as **784 elephants** died in Odisha during 2012-13 to 2021-22 due to various reasons while **electrocution and train-hits** are considered among the key reasons.
- ◆ Similarly, **925 persons** were trampled to death by tuskers while **212 persons** were permanently disabled during the period.

Status of Elephants in India:

- India has about **27,000 Asian Elephants**, which is the **world's largest population of the species**.
- As per **Elephant Census (2017)**, Karnataka has the highest number of elephants (6,049), followed by Assam (5,719) and Kerala (3,054)
- More than **60% of the world's elephant** population is in India.
- The elephant is the '**Natural Heritage Animal of India**'.

Other Steps taken for Elephant conservation:

- ◆ **Gaj Yatra (a nationwide awareness campaign to protect elephants):** Monitoring the Illegal Killing of Elephants (MIKE) program (2003, to monitor the effectiveness of field conservation efforts)
- ◆ **Gaj Soochna' mobile application for forest officials:**
 - ▶ Upholding the right of passage of elephants by SC
 - ▶ Involvement of mahouts and their families in the welfare of elephants
- ◆ **Gaj Utsav:** Asian Elephant Alliance, an umbrella initiative by five NGOs, had, last year, come together to secure 96 out of the 101 existing corridors used by elephants across 12 States in India.

WORLD WATER WEEK 2023

Context: World Water Week has been recently organized by the Stockholm International Water Institute at the Waterfront Congress Center.

About World water week 2023:

- ◆ **Theme:** "Seeds of Change: Innovative Solutions for a Water-Wise World".
- ◆ The event this year invites a rethink of how water is managed, and urges consideration of the ideas, innovations, and governance systems that are needed in an increasingly **unstable and water scarce world**.
- ◆ **World Water Week 2023** will draw on the latest scientific knowledge and experiences from around the world to explore how water can be a powerful tool for addressing the water crisis, global warming, biodiversity loss, and poverty.
- ◆ The **World Bank Group** will convene and participate in **multiple sessions** on a wide range of topics, including digitalization for **water utilities, tools for managing flood and drought risks, water services for refugees, and smart water management in rice cultivation**.



FUKUSHIMA NUCLEAR DISASTER: JAPAN TO RELEASE TREATED WATER

Context: Japan is gearing up to release the treated radioactive water from the tsunami-hit Fukushima nuclear plant into the Pacific Ocean, despite opposition.

Background:

- ◆ In 2011, a tsunami triggered by a magnitude 9.0 earthquake flooded three reactors of the **Fukushima Daiichi Nuclear Power Plant**.
- ◆ The event is regarded as the **world's worst nuclear disaster since Chernobyl**.
- ◆ Shortly after, authorities set up an exclusion zone which continued to be expanded as radiation leaked from the plant, forcing more than 150,000 people to evacuate from the area.

Key-highlights:

- ◆ Some 1.34 million tonnes of water - enough to fill 500 **Olympic-size pools** - have accumulated since the 2011 tsunami destroyed the plant.
- ◆ The water will be released over 30 years after being filtered and diluted.
- ◆ As per Japan, the water is a necessary step in the lengthy and costly process of decommissioning the plant, which sits on the country's east coast, about 220km (137 miles) north-east of the capital Tokyo.
- ◆ The U.N.'s nuclear watchdog has endorsed the move.

Where is the plant?

- The **Fukushima Daiichi Nuclear Power Plant** is in the town of Okuma, in Fukushima Prefecture.
- It sits on the country's east coast, about 220km (137 miles) north-east of the capital Tokyo.

How safe is the water?

- ◆ The water has been filtered to remove more than 60 radioactive substances.
- ◆ But the water will not be entirely **radiation-free** as it will still contain **tritium and carbon-14- radioactive isotopes of hydrogen and carbon** that cannot be easily removed from water.



NEW GLOBAL BIODIVERSITY FRAMEWORK FUND (GBF-FUND) RATIFIED

Context: The Global Biodiversity Framework Fund (GBFF) was ratified and launched at the Seventh Assembly of the Global Environment Facility (GEF) in Vancouver, Canada.

About the Global Biodiversity Framework Fund (GBF-Fund):

- ◆ GBF-Fund is a **special trust fund** under the GEF, to support the implementation of the **Kunming-Montreal Global Biodiversity Framework** agreed at COP15 last year.
- ◆ As part of the **Kunming-Montreal Global Biodiversity Framework** agreement, the GEF was requested to establish the Global Biodiversity Framework Fund, a special trust fund to support the implementation of the Agreement.
- ◆ **Significance:** The creation of this fund and its commitment to supporting Indigenous Peoples and local communities is an important and clear recognition of the fundamental role they have had for generations protecting biodiversity.

The Global Environment Facility:

- The GEF is a **family of funds** dedicated to confronting biodiversity loss, climate change, pollution, and strains on land and ocean health.
- Its grants, blended financing, and policy support helps developing countries address their biggest environmental priorities and adhere to international environmental conventions.
- Over the past three decades, the GEF has provided more than 23 billion dollars.

Kunming-Montreal Global Biodiversity Framework:

- The Kunming-Montreal Global Biodiversity Framework (GBF) was adopted during the **fifteenth meeting of the Conference of the Parties (COP 15)** following a four year consultation and negotiation process.
- This historic Framework, which supports the achievement of the **Sustainable Development Goals** and builds on the Convention's previous Strategic Plans, sets out an ambitious pathway to reach the global vision of a world living in harmony with nature by 2050.



KAMPALA DECLARATION ON CLIMATE CHANGE

Context: A total of 48 African countries have now agreed to adopt the **Kampala Ministerial Declaration on Migration, Environment and Climate Change (KDMECC)** to address the nexus of human mobility and climate change in the continent.

About the Declaration:

◆ **Background:** KDMECC was originally signed and agreed upon by **15 African states** in Kampala, Uganda in July 2022.



- ◆ The Declaration is the first comprehensive, **action-oriented framework** led by Member States to address climate-induced mobility in a practical and effective manner.
- ◆ The **KDMECC-AFRICA** is expected to be signed by Member States during the **Africa Climate Summit** in Nairobi on September 4, 2023.
- ◆ **Need:**
 - ▶ Africa is one of the **world's most vulnerable continents** to the impacts of climate change.
 - ▶ Climate change, which leads to an **increased frequency and intensity of extreme weather events**, has a direct impact on migration.
- ◆ **Significance:**
 - ▶ The **Kampala Ministerial Declaration on Migration, Environment and Climate Change** gives us the unprecedented opportunity to support **Member State priorities** in addressing the challenges while also leveraging migration for sustainable development.

- ▶ It will ensure that all voices, including those of **youth, women and persons in vulnerable situations** are the priority of the expanded declaration.



INDIA, ADB TO SET UP CLIMATE CHANGE AND HEALTH HUB

Context: Having bagged the first WHO Centre for Global Traditional Medicine, to be set up in Gujarat, India is now all set to open a **climate change and health hub in New Delhi** in partnership with the Asian Development Bank (ADB).

What is this new hub?

- ◆ The new hub for **climate change and health** will facilitate **knowledge sharing, promote partnerships and innovations**, and also help countries beyond the G-20, especially **developing countries**.
- ◆ In its recently released G-20 outcome document, India also noted that climate change will continue to drive **health emergencies, including the emergence and re-emergence of infectious diseases**, and by increasing the severity and frequency of natural disasters, thereby threatening to overwhelm health systems' ability to deliver essential services.
- ◆ **The outcome document committed to:**
 - ▶ prioritize climate-resilient health systems development,
 - ▶ build sustainable and low-carbon/low greenhouse gas (GHG) emission health systems and healthcare supply chains that deliver high-quality healthcare,



- ▶ mobilize resources for resilient, low-carbon sustainable health systems, and
 - ▶ Facilitate collaboration, including initiatives such as the WHO-led Alliance for **Transformative Action on Climate and Health (ATACH)**.
- ◆ The new Climate Change and Health Hub in New Delhi will help countries all over the world to address to identify new drivers and address the existing drivers using a science and risk-based approach, and to strengthen existing infectious disease surveillance systems.

Asian Development Bank (ADB):

- ADB (founded in 1966) is an international development finance institution.
- Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people.
- Headquartered in Manila, ADB is owned and financed by its 68 members, of which **49 are from the region and 19 are from other parts of the globe**.
- The two largest shareholders of the Asian Development Bank are the **United States and Japan**.
- ADB is an official United Nations Observer.
- Voting rights in ADB are distributed in proportion with members' capital subscriptions.

'CLEANTECH', FOR AN INCLUSIVE GREEN FUTURE IN INDIA

Context: In his address to the nation on Independence Day 2023, Prime Minister talked about India showing the world how to combat climate change. For this, **Cleantech can deliver on development and climate action in the country's rural areas.**

What is Cleantech?

- ◆ Cleantech or clean tech is generally defined as **knowledge-based products** or services that improve operational **performance, productivity or efficiency** while reducing **costs, inputs, energy consumption, waste or pollution**.
- ◆ Cleantech is differentiated from **green technology** since it generally refers to the emerging financial industry (as opposed to the actual technology in which the industry invests).

◆ **Cleantech spans many industry verticals and is defined by the following eleven segments:**

- ▶ Energy Generation, Energy Storage, Energy Infrastructure, Energy Efficiency, Transportation, Water & Wastewater, Air & Environment, Materials, Manufacturing/Industrial, Agriculture, Recycling & Waste.

Applications:

- ◆ In agriculture, clean tech solutions enable farmers to **optimize water usage** and maximize crop yields by monitoring **soil moisture, wells, valves and weather stations**, and precisely targeting irrigation as needed.
- ◆ **Fish and livestock farms** can improve feeding processes and **production yield with automation**, and reduce **driving time and fossil fuel consumption**.
- ◆ Water districts can identify and correct **water waste with real-time water** monitoring across their infrastructure.
- ◆ Innovative companies today are **deploying drones** to perform inspections at **industrial sites, utilities and water towers** to quickly identify issues, while reducing environmental impact and cost.

HIMALAYAN VULTURE BRED IN CAPTIVITY

Context: Researchers have recorded the first instance of captive breeding of the Himalayan vulture in India at the Assam State Zoo, Guwahati.

About Himalayan Vulture (*Gypshimalayensis*):

- ◆ The Himalayan vulture is a **common winter migrant** to the Indian plains, and a resident of the high Himalayas.
- ◆ **IUCN Status:** Near Threatened
- ◆ They are one of the **two largest Old World vultures** and **true raptors**.
- ◆ The **Himalayan vulture** mostly lives the **Himalayas on the Tibetan plateau** (India, Nepal and Bhutan, central China and Mongolia) and is also found in the **Central Asian mountains** (from Kazakhstan and Afghanistan in the west to western China and Mongolia in the east).

Vultures in India:

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

S. No.	Name of of Vulture Species	IUCN Status	Pictorial Representation
1.	Oriental White-backed Vulture (<i>Gyps Bengalensis</i>)	Critically Endangered	
2.	Slender-billed Vulture (<i>Gyps Tenuirostris</i>)	Critically Endangered	
3.	Long-billed Vulture (<i>Gyps Indicus</i>)	Critically Endangered	
4.	Egyptian Vulture (<i>Neophron Perenopterus</i>)	Endangered	
5.	Red-Headed Vulture (<i>Sarcogyps Calvus</i>)	Critically Endangered	
6.	Indian Griffon Vulture (<i>Gyps Fulvus</i>)	Least Concerned	
7.	Himalayan Griffon (<i>Gyps Himalayensis</i>)	Near Threatened	

8.	Cinereous Vulture (<i>Aegypius Monachus</i>)	Near Threatened	
9.	Bearded Vulture or Lammergeier (<i>Gypactus Barbatus</i>)	Near Threatened	

Why vultures matter?

- ◆ **Nature's cleanup:** Vultures feeding on dead animals help areas getting rid of carcasses.
- ◆ **Healthy environment:** Vultures also play a valuable role in keeping wildlife diseases in check.
- ◆ **Keystone species:** Contribution in Detritus food chain and acts as a keystone species.

Important Terms

- **Keystone species:** A keystone species is an organism that helps define an entire ecosystem. Without its keystone species, the ecosystem would be dramatically different or cease to exist altogether. Keystone species have low functional redundancy.
- **Detritus Food chain:** It is the type of food chain that starts with dead organic materials. The dead organic substances are decomposed by microorganisms.
 - ▶ The organisms that feed on dead organic matter or detritus are known as **detritivores or decomposers.**

Threats to Vulture population:

- ◆ **Diclofenac Contamination:** Vultures feed on carcasses of dead farm animals and get exposed to the non-steroid anti-inflammatory drug (NSAID), diclofenac which causes kidney failure and death.
 - ▶ 99% of the mortality of Oriental.
 - ▶ White-backed, slender-billed and long-billed vultures are due to diclofenac.
- ◆ **Habitat Loss**
- ◆ **Low Food Availability**

Conservation efforts:

- ◆ Four **Vulture Conservation Breeding Centre** has been established by **Bombay Natural History Society (BNHS)** at Pinjore in Haryana, Bhopal in

Madhya Pradesh, Rani in Assam, and Rajabhatkhawa in West Bengal are involved in conservation breeding of the

- ▶ White-rumped vulture (*Gyps bengalensis*)
 - Slender-billed vulture (*Gyps tenuirostris*)
 - Indian vulture (*Gyps indicus*)

- ◆ **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.
- ◆ **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.

5% OF BIRDS IN INDIA ARE ENDEMIC: REPORT

Context: A publication, titled '75 Endemic Birds of India', which was released on the 108th foundation day of the Zoological Survey of India (ZSI), points out that about 5% of birds found in the country are endemic and are not reported in other parts of the world.

India's bird species:

- ◆ India is home to **1,353 bird species**, which represents approximately **12.40%** of global bird diversity.
- ◆ Of these **1,353 bird species**, **78 species**, which is around 5%, are endemic to the country.

About the Publication:





- ◆ The publication highlights the importance of **endemic bird species** in the country.
- ◆ The details of endemic bird species contained in the publication include **etymology (meanings of scientific names)** and their **historical relevance** along with vital facts such as **subspecies' differences, distinguishing traits, preferred habitats, breeding habits, and food preferences**.
- ◆ **Objective:** The publication is aimed at making information about endemic birds of the country

available to everyone, and highlighting the **efforts to conserve species** that are found only in restricted areas.

As, endemic species are **restrictive in nature**, it is important that their habitats need to be conserved.

Highlights from the Publication:

- ◆ Around 75 bird species belong to **11 different orders, 31 families, and 55 genera, and exhibit remarkable distribution patterns** across various regions in India.
- ◆ The highest number of endemic species has been recorded in the **Western Ghats**, with 28 bird species.
- ◆ Some of the rare species recorded in the country's **bio-geographic hotspot** are;

<p>The Malabar Grey Hornbill (<i>Ocyrocus griseus</i>)</p> <ul style="list-style-type: none"> • This hornbill is endemic to India, and found in the Western Ghats of south-west India. 	
<p>Malabar Parakeet (<i>Psittacula columboides</i>)</p> <ul style="list-style-type: none"> • It is restricted to the forests of India's Western Ghats. 	
<p>Ashambu Laughing Thrush (<i>Montecincla meridionalis</i>)</p> <ul style="list-style-type: none"> • It is a species of bird in the family Leiothrichidae. It is found in the Western Ghats in southern Kerala and southern Tamil Nadu. 	
<p>The White-bellied Sholakili (<i>Sholicola albiventris</i>)</p> <ul style="list-style-type: none"> • It is endemic to the Shola forests of the higher hills of southern India. 	

- ◆ Amongst them **25 bird species** are endemic to the **Andaman and Nicobar Islands**. Bird species which are only found in the Andaman and Nicobar Islands are:
 - ▶ Nicobar Megapode (*Megapodius nicobariensis*)
 - ▶ Nicobar Serpent Eagle (*Spilornis klossi*)
 - ▶ Andaman Crake (*Rallina canningi*)
 - ▶ Andaman Barn Owl (*Tyto deroepstorffi*)
- ◆ Four species of birds are endemic to the **Eastern Himalayas**, and one each to the **Southern Deccan**

plateau and central Indian forest.

- ◆ Of the 78 endemic species, 25 are classified as **'Threatened'** by the IUCN.
 - ▶ Three species are listed as **'Critically Endangered'**.
 - ▶ Five of the endemic birds in India are categorised as **'Endangered'**, and
 - ▶ 17 as **'Vulnerable'**,
 - ▶ While 11 are categorised as **'Near Threatened'** on the IUCN Red List.

BIRD SANCTUARIES IN NEWS

Bird Sanctuaries	State	Description
Bharatpur Bird Sanctuary (Keoladeo National Park)	Rajasthan	• It is one of the most important bird sanctuaries in India and a UNESCO World Heritage Site , known for its migratory bird species and being a critical breeding ground for several bird species.
Sultanpur National Park	Haryana	• It is a popular bird watching destination near Delhi and is important for the conservation of bird species like the Siberian Crane .
Salim Ali Bird Sanctuary	Goa	• Named after India's most famous ornithologist, it is a biodiversity hotspot for several endemic bird species and a crucial habitat for migratory birds .
Chilika Lake Bird Sanctuary	Odisha	• It is the largest coastal lagoon in India and a vital habitat for a variety of migratory and resident bird species, including the endangered Irrawaddy dolphin .
Nal Sarovar Bird Sanctuary	Gujarat	• It is a wetland sanctuary that supports a variety of migratory and resident bird species and is an important stopover for birds on the Central Asian Flyway .

GOVERNMENT PANEL PROVIDES ANTI-AIR POLLUTION MEASURES

Context: A government panel tasked with improving the air quality in Delhi and its adjoining areas has made crucial changes to a set of anti-air pollution measures followed in the region in winter.

Key-highlights of the changes

- ◆ The changes include strict restrictions on the plying of overage vehicles and a complete ban on the use of coal and firewood in eateries, restaurants and hotels when the **air quality index (AQI)** breaches the 200 mark.
- ◆ In addition, **BS III petrol and BS IV diesel four-wheelers** will be immediately if the AQI crosses the 400 mark.

Bharat Stage (BS) Emission Standards (BSES)

- The **Bharat Stage (BS) Emission Standards (BSES)** were introduced by the Government of India in 2000, and are set by the **Central Pollution Control Board (CPCB)** under the **Ministry of Environment**.
- 'BS' stands for **Bharat Stage**, the emission regulation or fuel standards mandated by the government of India for motor vehicles.
 - ▶ **BS-I** was launched in 2000
 - ▶ **BS-II** in 2001 (nationwide in 2005)
 - ▶ **BS-III** in 2005 (nationwide 2010)

- ▶ **BS-IV** in 2010 (nationwide 2017)
- There is no BS-V, and BS-VI arrived in 2017 (nationwide 2020).
- **BS-VI or less polluting emission** norms were mandated across the country from April 1, 2020, which meant that all new vehicles being manufactured after the norms were forced to comply with the new standards that cover four-wheelers, two-wheelers as well as commercial vehicles.

Amended GRAP:

- ◆ The **Commission for Air Quality Management (CAQM)**, a **statutory body** formed under an Act in 2021, had amended the **Graded Response Action Plan (GRAP)**, first notified in 2017, in July last year also to ensure proactive implementation of anti-air pollution steps based on forecasts -- up to three days in advance.
- ◆ GRAP is classified under four different stages of adverse air quality in Delhi:
 - ▶ **Stage I** – 'Poor' (AQI 201-300)
 - ▶ **Stage II** – 'Very Poor' (AQI 301-400)
 - ▶ **Stage III** – 'Severe' (AQI 401-450)
 - ▶ **Stage IV** – 'Severe Plus' (AQI greater than 450)
- ◆ The revised GRAP now recommends **strict enforcement** of the orders of the Supreme Court and the **National Green Tribunal** on overage diesel and petrol vehicles under **Stage 1**. It also calls for a **complete ban** on the use of coal and firewood in eateries, restaurants and hotels if the AQI crosses the 200 mark.

- ◆ The new steps suggested in the revised GRAP include "strict action to curb air pollution at all identified hotspots in the region under **Stage 2**".
- ◆ Under **Stage 3**, states must impose strict restrictions on the plying of **BS III petrol and BS IV diesel four-wheelers**.

IRAQ ELIMINATES TRACHOMA

Context: Recently, the World Health Organization (WHO) has announced that, Iraq has now joined the league of 17 other countries that have eliminated 'trachoma', which is world's leading infectious cause of blindness.

The 17 other countries that have eliminated trachoma are: **Benin, Cambodia, China, Gambia, Ghana, Islamic Republic of Iran, Lao People's Democratic Republic, Malawi, Mali, Mexico, Morocco, Myanmar, Nepal, Oman, Saudi Arabia, Togo and Vanuatu.**

About Trachoma:

- ◆ It is a **neglected tropical disease (NTD)**.



- ◆ It starts as a **bacterial infection** caused by *Chlamydia trachomatis* and can be easily treated.
- ◆ Over time, it causes the eyelashes to be pushed inward into the eye. So with every blink, they brush against the eyeball.
- ◆ The advanced form of trachoma is **called trichiasis**. Over time, if it is not treated, trichiasis can lead to **blindness**.
- ◆ **Cause of occurrence:** The disease thrives where there are **water shortages, poor sanitation and infestations of flies**, which are considered **physical vectors of the disease**.

- ◆ The disease is still known to be endemic in six countries of the **WHO's Eastern Mediterranean Region**, but there has been substantial progress in the number of people in the region requiring antibiotic treatment for **trachoma elimination purposes**, which has fallen from 39 million in 2013 to 6.9 million in April 2023.

What is Neglected Tropical Disease?

- ◆ NTDs are a group of infections that are most common among marginalized communities in the developing regions of **Africa, Asia and the Americas**.
- ◆ They are caused by a variety of pathogens such as **viruses, bacteria, protozoa and parasitic worms**.

NTD burden in India:

- India has the world's largest absolute burden of at least **10 major NTDs**, including hookworm, dengue, lymphatic filariasis, leprosy, visceral leishmaniasis or kala-azar and rabies.
- Of the **12-13 NTDs** existing in India only dengue, rabies, snakebite and leprosy are notifiable.
- **Most common NTDs in India:** Lymphatic Filariasis, Visceral Leishmaniasis, Rabies, Leptospirosis, Dengue and Soil-Transmitted Helminth Infections (STH).

HAVANA SYNDROME

Context: The Central government has told the Karnataka High Court that it will look into the matter of the 'Havana Syndrome' in India, in response to a Bengaluru resident's recent petition.

What is Havana Syndrome?

- ◆ Havana Syndrome refers to a **set of mental health symptoms** that are said to be experienced by **United States intelligence and embassy officials** in various countries.
- ◆ It is worth noting that in general, the word 'syndrome' simply means a set of symptoms.
- ◆ It **does not mean a unique medical condition**, but rather a set of symptoms that are usually experienced together whose origins may be difficult to confirm.
- ◆ **Involved symptoms:** hearing certain sounds without any outside noise, nausea, vertigo and headaches, memory loss and balance issues.
- ◆ The syndrome **traces its roots to Cuba in late 2016**.

What are the causes of Havana Syndrome?

- ◆ No one is entirely sure.
- ◆ But initially during the Cuban experience, being in a country that had been hostile to the US for over five decades, the suspicion was on Cuban intelligence or a section within the Cuban establishment that did not want US-Cuba relations to normalise.
- ◆ **Sonic attack:** It was then speculated to be a “sonic attack”.

About Sonic attack

- Sonic attacks are created by “long-range acoustic devices” that are often used over the open water, where they can be unleashed across greater distances without losing volume.
- They can result in hearing loss or brain damage.

- ◆ **Microwaves Weapon:** However, further study by scientists in the US and medical examination of the victims began to suggest that they may have been subjected to **high-powered microwaves** that either damaged or interfered with the **nervous system**.

Microwaves Weapon

- **Greater exposure to high-powered microwaves** is said not only to interfere with the body's sense of balance but also to impact memory and cause permanent brain damage.
- **Low levels of microwaves** are also emitted from mobile phones but they are not targeted.

- ◆ However, there are no conclusive evidence.

SOFT-LANDING ON THE MOON & THE CHALLENGES

Context: India has successfully soft landed on the Moon's South Pole, now became the first country to achieve this feat.

- ◆ The recent crash of **Russia's Luna-25** highlights the challenges of **safe lunar landings**, with only a few nations, including the **United States, Soviet Union, and China**, having successfully soft-landed on the Moon till now.

What is soft landing?

- ◆ A soft landing entails a successful landing by a spacecraft without sustaining any significant damage to itself or its payloads.
- ◆ Whereas, in a hard landing, the probe suffers damage which may result in the failure of the mission.

The South Pole:

- The region has a difficult terrain, full of craters and deep trenches. It is also far from the **equatorial region** explored by previous lunar missions.
- Some areas on the South Pole are shrouded in darkness and have never received sunlight.
- Temperatures are so cold there that they can plummet to as low as -230 degree Celsius. This rocky terrain, complete darkness and extremely cold weather make it more difficult for electronic instruments to function properly.
- Situated on the edge of the **Aitken basin**, the largest impact basin on the Moon, the lunar South Pole offers a unique opportunity to study materials from the Moon's deep crust and mantle.
- Before Russia, countries such as Japan, Israel and the United Arab Emirates (UAE) have tried and failed to land on the Moon's South Pole.

Why is landing on Moon challenging?

- ◆ **Less gravity than Earth:** The Moon has much less gravity than the Earth. Its thin and tenuous atmosphere, along with lunar dust, also makes it tough for spacecraft to land.
- ◆ **Dust:** The presence of dust, even in very small quantities, can have a significant effect on temperature control and optical performance of hardware on the lunar surface.
- ◆ **Deep space communication** also poses a challenge as the “large distance from the Earth and the limited on-board and radio signals are weak with heavy background noises that need to be picked up by large antennas”.

ASTRA AIR-TO-AIR MISSILE

Context: Recently, the Light Combat Aircraft (LCA) Tejas Limited Series Production-7 (LSP-7) successfully test fired the ASTRA indigenous Beyond Visual Range (BVR) air-to-air missile off the coast of Goa.

About ASTRA indigenous Beyond Visual Range (BVR):

- ◆ The Astra Mk-1 is a **Air-to-Air Missile (AAM)**.
- ◆ BVM missiles are capable of engaging beyond the range of **20 nautical miles or 37 kilometers**.
- ◆ AAMs are fired from an **airborne asset** to destroy an **airborne target**.

◆ **Range:**

- ▶ The range for Astra Mk-1 is around 110 km.
- ▶ The Mk-2 with a range over 150 km is under development and Mk-3 version with a longer range is being envisaged.
- ▶ One more version of Astra, with a range smaller than Mk-1 is also under development.

◆ **Designed and Developed by:**

- ▶ Defence Research and Development Organisation (DRDO)



Section D [QUICK BYTE]

- ☞ Mylara cult
- ☞ Yelagiri hut
- ☞ Monsoon Trough
- ☞ ASEAN-India Trade in Goods Agreement (AITIGA)
- ☞ Commonwealth Parliamentary Association (CPA)
- ☞ China releases new official map
- ☞ INTERPOL Global Academy Network
- ☞ Zayed Talwar' Exercise
- ☞ Malabar exercise
- ☞ Indira Rasois
- ☞ Indian Pharmacopoeia Commission (IPC)
- ☞ 830 MEIs on scholarship portal are fake: Report
- ☞ Adivasi ooru
- ☞ Promotion of Research and Innovation in Pharma MedTech Sector (PRIP)
- ☞ ST status for Paharis and Paddaris
- ☞ National Handloom Day
- ☞ IMF Quotas
- ☞ Mi-17 V5 helicopters
- ☞ Japan's H-IIA rocket
- ☞ Defence Ministry inks deal with Hindustan Shipyard Limited (HSL), Visakhapatnam
- ☞ National Space Day
- ☞ Finger Minutiae Record – Finger Image Record (FMR-FIR) modality
- ☞ Xenotransplantation

- ☞ INS Vindhyagiri
- ☞ Pink bollworm (PBW) Attack
- ☞ Matti Banana
- ☞ Butterflies of India consortium
- ☞ International Tiger Day
- ☞ Indian eagle-owl

[SPECIES IN NEWS]

- ☞ Western Tragopan (Tragopan melanocephalus)
- ☞ Tachymenoides harrisonfordi
- ☞ Kashmir stag (Cervus hanglu hanglu)
- ☞ Echidnas (Tachyglossus aculeatus)
- ☞ Red sand boa (Eryx johnii)
- ☞ Iberian wolf

[LOCATION IN NEWS]

- ☞ Black Sea
- ☞ Dhala structure
- ☞ Cocos Island
- ☞ Kuril islands
- ☞ Palau
- ☞ Pong Dam

[PERSONALITY IN NEWS]

- ☞ Abanindranath Tagore (1871-1951)
- ☞ Balladeer Gaddar (1997-2023)
- ☞ Alladi Ramakrishnan
- ☞ C.R. Rao (1920-2023)

Mylara cult



The recent discovery of **two sculptures**, which resembles one belonging to **15th century A.D.** and another to **17th century A.D.**, at Basrur, near Kundapura, in Udipi district has proved that the **Ancient Mylara cult** existed in the coastal region.

About:

- Mylara is a **folk deity** identified as a **manifestation of Lord Shiva**.
- This deity, commonly known as **Mailara in Karnataka** and as **Khandoba in Maharashtra**, has a plethora of other names as well, such as **Khanderao and Khandnatha**.
- This cult is prevalent in the **southern part of India**, including Karnataka, Maharashtra, Andhra Pradesh, and Tamil Nadu.

- **Mylara Lingeswara Temple** is a Hindu temple dedicated to the god (Mailara dynasty), a form of the **god Shiva in Mylara**.
- Mylara is the main deity of this temple, who is an **incarnation of Lord Shiva**.

Yelagiri hut



Over 200 **Malaiyali tribespeople** once inhabited traditional clay huts atop Yelagiri hill in northern Tamil Nadu, now replaced by modern homes except for one ancient hut, symbolizing their transition from foraging to modern living.

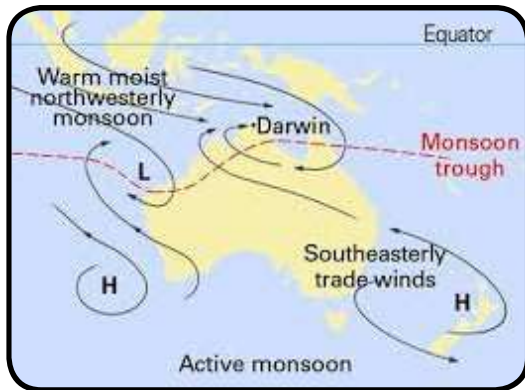
About Yelagiri hut

- The hut is formed of red clay on a teak wood structure.
- Made of dry bamboo leaves, the thatched roof is waxed with cow dung to prevent it from leaking during the monsoon season.
- **Weatherproofed:** A unique feature of the *munne veedu* (mud house) or *andara kotai* (storage facility) is that it stands on a stilt-like structure also made of teak wood.
 - ▶ This holds the house two feet above the ground to keep rodents at bay and to prevent the house from flooding during torrential rains.

About Malaiyali tribe

- The Malaiyali tribe – *malai* meaning “hill” and *yali* meaning “people” – is strewn across Tamil Nadu’s hilly regions.
- The tribespeople were foragers who settled in the upper Nillavur region of Yelagiri and began cultivating its tabletop peak for food.
- Initially living in makeshift huts, they found a permanent solution in the red loam clay abundant in the hills and constructed simple one-room structures that measured 16 by 22 feet.

Monsoon Trough



The monsoon trough, an **elongated low-pressure area** that was to the north of its normal position, causing heavy rainfall over **Himachal Pradesh and Uttarakhand**, has gradually started moving south, as per the India Meteorological Department.

What is Monsoon Trough?

- Monsoon Trough is an elongated low-pressure area which extends from heat low over **Pakistan to Head Bay of Bengal**.
- This is one of the **semi-permanent features of monsoon** circulation.
- Monsoon trough may be a characteristic of east west orientation of Himalayan ranges and north south orientation of **Khasi-Jaintia Hills**.
- Generally the eastern side of monsoon trough oscillates, **sometimes southwards and sometimes northwards**.
- Southward migration results in active/vigorous monsoon over major part of India.
- In contrast, the northward migration of this trough leads to break monsoon conditions over major part of India and heavy rains along foothills of Himalayas and sometimes floods in Brahmaputra River.

ASEAN-India Trade in Goods Agreement (AITIGA)



India and the ASEAN countries reached an agreement to review their free trade pact for goods and set a 2025 goalpost for concluding the review aimed at addressing the "asymmetry" in bilateral trade.

About AITIGA:

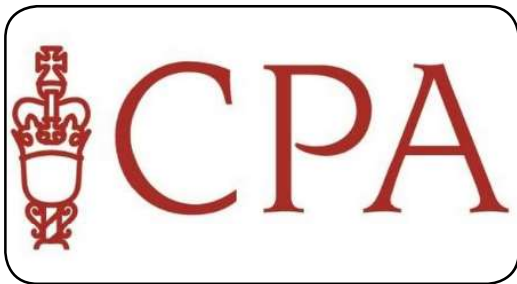
- The **ASEAN-India Trade in Goods Agreement (AITIGA)** was signed in 2009.
- AITIGA is a **free trade agreement (FTA)** between the Association of Southeast Asian Nations (ASEAN) and India, aimed at promoting trade and economic cooperation between the two regions.
- ASEAN is a regional intergovernmental organization comprising ten Southeast Asian countries, while India is a South Asian country.
- AITIGA aims to reduce or eliminate tariffs on a wide range of goods traded between ASEAN member states and India.

Commonwealth Parliamentary Association (CPA)

The **Ninth Commonwealth Parliamentary Association (CPA) India Region Conference** concluded recently.

What is CPA?

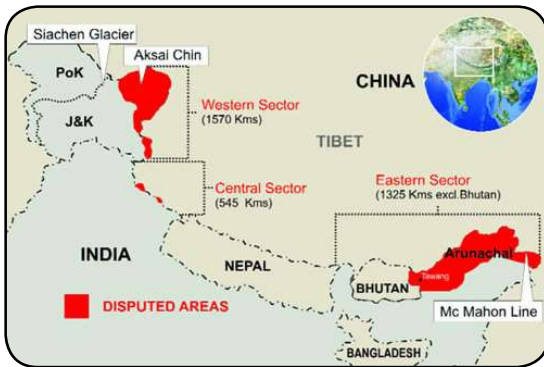
- **Founded in:** 1911
- The Commonwealth Parliamentary Association (CPA) is one of the oldest established organisations in the Commonwealth.
- It is a membership association which brings together Members, irrespective of gender, race, religion or culture, who are united by community of interest, respect for the rule of law and individual rights and freedoms, and by the pursuit of the positive ideals of parliamentary democracy.



- The Association is made up of over **180 Legislatures** (or Branches) divided up between nine geographic regions of the Commonwealth.
- **The nine Regions of the CPA are:** Africa; Asia; Australia; British Islands and Mediterranean (BIM); Canada; Caribbean, Americas and the Atlantic (CAA); India; Pacific; and South-East Asia.
- The CPA India Regional Secretariat is based within the Lok Sabha at the Parliament of India.

China releases new official map

China's government has released the "**2023 edition of the standard map of China**", which continues to show the entire **State of Arunachal Pradesh and the Aksai Chin region within China's borders.**



About the new map:

- The **2023 map** was released by the **Ministry of Natural Resources.**
- The territorial claims on China's western borders, as also the **nine-dash line covering the entire South China Sea**, are shown on the map as in previous editions.
- Also as in previous maps, a "**tenth dash**" is placed **east of Taiwan**, underlining Beijing's claims over the island.
- It would "**standardise**" the names of **11 places in Arunachal Pradesh**, including a town close to the **Arunachal Pradesh capital of Itanagar.**

This year marks the **30-year anniversary** of the **Law of Surveying and Mapping of the People's Republic of China.**

- This was the third such list "**renaming**" places in **Arunachal Pradesh** by China.

INTERPOL Global Academy Network

The **Central Bureau of Investigation (CBI) Academy of India** took a significant step towards enhancing international cooperation and bolstering law enforcement efforts by officially joining the **INTERPOL Global Academy Network.**





INTERPOL Global Academy Network:

- INTERPOL Global Academy Network was launched in 2019.
- This is led by INTERPOL's Capacity Building and Training Directorate and aims to lead a global approach to law enforcement training.
- By assisting INTERPOL in delivering specialized training on its policing capabilities, offering programmes of continuing education, jointly developing and delivering new training programmes, and collaborating on joint research projects, Network members support INTERPOL in expanding up skilling opportunities for law enforcement around the globe.

About INTERPOL:

- Commonly known as Interpol, it is an international organization facilitating international police cooperation against cross-border terrorism, trafficking, and other crime.

	<ul style="list-style-type: none"> • INTERPOL has 194 member countries, making us the world's largest police organization. • Headquartered: Lyon in France. • It was founded in 1923. • Each country hosts an INTERPOL National Central Bureau (NCB), which links national police with global network. In India, CBI is the NCB.
<p>'Zayed Talwar' Exercise</p> 	<p>Indian Navy and United Arab Emirates conducted bilateral exercise 'Zayed Talwar'.</p> <p>About:</p> <ul style="list-style-type: none"> • The exercise aims to share best practices and increase synergies between the two Navies. • This exercise will boost the maritime partnership between the two navies and foster a common understanding of the security challenges in the region. <div style="border: 1px solid black; padding: 5px;"> <p>India and the UAE established diplomatic relations in 1972 and UAE opened its Embassy in Delhi in 1972 whereas, India opened its Embassy in Abu Dhabi in 1973.</p> </div>
<p>Malabar exercise</p> 	<p>Australia to host latest edition of 10-day Malabar exercise for first time.</p> <p>Key-highlights</p> <ul style="list-style-type: none"> • Edition: 31st • Participants: India, Australia, Japan and the U.S • Australia was included as a permanent member of Ex. Malabar in 2020 amid the stand-off with China in Eastern Ladakh. • Location: The exercise will take place in a large designated area, the East Australian exercise area, and will have a harbour and sea phase. • Exercise Malabar will be followed by AUSINDEX, the India-Australia bilateral naval exercise. • Fielding <ul style="list-style-type: none"> ▶ Australia: HMAS Choules and HMAS Brisbane ▶ Indian Navy: INS Kolkata and INS Sahyadri ▶ The US and Japan are sending in a warship each
<p>Indira Rasoi</p>	<p>Chief Minister Ashok Gehlot inaugurated 1000 new Indira Rasoi in the Rajasthan.</p> <p>About the scheme:</p> <ul style="list-style-type: none"> • Background: In 2020, Rajasthan Chief Minister Ashok Gehlot launched Indira Rasoi Yojana to provide quality nutritious food-- 100 gms of pulses, 250 gms chapatti, 100 gms of vegetables, and pickles-- to poor people at just Rs. 8. It is expected to benefit around 4 crores 87 lakh people of the state. • The scheme will provide semi-rural rasoi or canteen, which offers a nutritious meal at a throwaway price.



- Today, there are **950 functional Indira Rasois**.
- Each plate has **100 grams of dal, 100 grams of seasonal vegetables and six chapatis along with a serving of pickle**.
- It costs Rs 17, but a patron pays Rs 8; the government subsidises the remaining amount.

But the popularity of **Indira Rasois** has affected **small vendors and restaurant** owners whose unique selling point is affordability.

Indian Pharmacopoeia Commission (IPC)



Recently, the '**Republic of Suriname**' recognised Indian Pharmacopoeia Commission (IP).

- The Indian Pharmacopoeia (IP) is officially recognized by **five (5) countries: Afghanistan, Ghana, Nepal, Mauritius and the Republic of Suriname**.

About:

- **Indian Pharmacopoeia Commission (IPC)** is an **Autonomous Institution** of the **Ministry of Health and Family Welfare, Govt. of India**.
- IPC is created to set **standards of drugs in the country**.
- Its basic function is to regularly update the standards of drugs commonly required for treatment of diseases prevailing in this region.
- It publishes official documents for improving Quality of Medicines by way of adding new and updating existing monographs in the form of **Indian Pharmacopoeia (IP)**.
- It further promotes rational **use of generic medicines** by publishing National Formulary of India.
- IP prescribes standards for **identity, purity and strength of drugs** essentially required from the health care perspective of human beings and animals.
- IPC also provides **IP Reference Substances (IPRS)** which act as a fingerprint for identification of an article under test and its purity as prescribed in IP.

830 MEIs on scholarship portal are fake: Report



The **Ministry of Minority Affairs** has found at least **830 minority institutions** registered with the **National Scholarship Portal (NSP)** to be either **fake or non-operational**.

What are minority Institutions?

- Minority educational institution or "**Minority Institution**" means a college or institution established or maintained by a **person or group of persons belonging to a minority**, recognized as such by the concerned **State Government/ UT Administration**.

Constitutional Provisions:

- **Right to Education under Article 21A:** It describes modalities of the importance of free and compulsory education for children aged **between 6-14 years** in India under **Article 21 (A)** of the **Constitution of India (86th Amendment)**.

Adivasi ooru



- **Article 29 and 30 of Indian Constitution** contain provisions securing rights of minorities and minority-run institutions.
- Minority institutions have the **Fundamental right** under **Article 30** of the Constitution to establish and administer their educational institutions according to their choice.

Though, Kerala was the first State in the country to declare **the right to Internet** as a basic right, as many as **189 Adivasi ooru** (tribal colonies) spread over 12 districts in the State still have **no access to Internet and mobile connection**, affecting the prospects of over **5,000 tribal students** in these colonies.

What are Adivasi ooru?

- En Ooru is a **tribal heritage village** which showcases the **vibrant culture and tradition of tribal communities of the state**.
- A cluster of **traditional tribal huts** roofed with hay and against the backdrop of towering hills has become a major tourist attraction in the region.
- Managed by **tribal communities** and with the aim of enhancing their livelihood options, the **village hosts cafeterias** that serve ethnic dishes and a tribal market.
- It is a joint venture of the **Departments of Tourism and Scheduled Tribe Development**, the village also takes the lead in preserving traditional knowledge on food processing and other related areas, and takes up training in organic farming.

Promotion of Research and Innovation in Pharma MedTech Sector (PRIP)



The **Department of Pharmaceuticals (DoP)** has notified the **Scheme for Promotion of Research and Innovation in Pharma-MedTech Sector (PRIP)** with an outlay of Rs. 5,000 crore to support **Research and development (R&D)** and innovation in **pharma, medical devices and animal health segments**.

About the scheme:

- The scheme has **two components** comprising strengthening of research infrastructure through establishment of seven National Institutes of **Pharmaceutical Education & Research (NIPERs)** as Centres of Excellence (CoEs) in specific specialisations and promotion of research in **Pharma-MedTech sector** by providing financial assistance for research in **six priority areas** –
 - ▶ New chemical and biological entities, and natural products;
 - ▶ Complex generics and biosimilars;
 - ▶ Precision medicines; medical devices;
 - ▶ Orphan drugs; and
 - ▶ Drug development for antimicrobial resistance (AMR).

- The Scheme proposes establishment of CoEs in the **seven existing NIPERs** at **Mohali, Ahmedabad, Hyderabad, Guwahati, Kolkata, Hajipur and Raebareli** at a tentative cost of Rs. 700 crore over a period of five years.
- This will help in building specific research capacities in the identified priority areas in a focused time bound programme, tapping industry-academia linkage.
- The CoEs will strengthen the research infrastructure in **Pharma-MedTech sectors** in the country by providing advanced facilities to conduct research and will also help in nurturing talent pool by promoting industry academia linkage.
- Under the **second component of promotion of research in pharma and MedTech sector**, the financial assistance will be provided in three categories.
- In the first category (BI), nine established pharma companies may be selected to carry out research in **six priority areas** with academic collaboration in government institute of national repute.

ST status for Paharis and Paddaris

Recently, the government has brought a Bill to include four communities in the list of **Scheduled Tribes (STs)** in Jammu and Kashmir.

- The Tribes are namely, **“Gadda Brahmin”, “Koli”, “Paddari Tribe”, and “Pahari Ethnic Group”**.

About:

- **Paharis:** The Paharis are Hindus, Muslims, and Sikhs, and include people of Kashmiri origin who settled in the districts of Rajouri and Poonch over a period of time.
- **Paddaris:** They live in the remote Paddar area of the hilly Kishtwar district.
- Spread over two tehsils, the Paddari homeland borders **Zanskar (Ladakh)** in the north and the east, Pangi in Himachal Pradesh in the south, and the rest of J&K in the west.



The 2011 census recorded the **Paddari population at 21,548**, comprising 83.6% Hindus, 9.5% Buddhists, and 6.8% Muslims. The people of the area, including those who have come from elsewhere to settle there, speak the **Paddari language**.

Tribes in J & K:

- With a population of almost 18 lakh, the **Gujjar-Bakerwal** is the **third largest group** after **Kashmiris and Dogras** in J&K.
- There are two smaller groups of namely **Gaddis and Sippis**.
- These four communities to **10% reservation** in government jobs and admission to educational institutions.
- Also in 2019, they were empowered politically after the Centre announced a 10% quota for them in Lok Sabha and Assembly seats in J&K.

National Handloom Day



National Handloom Day is commemorated annually on **7 August**.

About

- It is the day when the nation comes together to celebrate its **35 lakh handloom workers**.
- Women play an important role in the handloom sector as over **70% of all weavers and allied workers being women**.
- The date connects with the independence struggle when **Mahatma Gandhi** launched the **Swadeshi Movement** in 1905 to encourage indigenous industries and in particular handloom weavers.
- **e-portal of 'Bhartiya Vastra evam Shilp Kosh'**: It is a recently launched **Repository of Textiles and Crafts** that has been developed by the **National Institute of Fashion Technology (NIFT)**.

Swadeshi Movement

- The Swadeshi Movement, now known as 'Make in India' campaign was officially proclaimed on August 7, 1905 in Bengal.
- Boycott movement was also launched along with the Swadeshi movement.
- The movements included using goods produced in India and burning British-made goods.
- **Bal Gandadhar Tilak** encouraged **Swadeshi and Boycott movement** after the British government decided the partition of Bengal.

IMF Quotas



Reserve Bank Governor Shaktikanta Das pitched for the "expeditious completion" of the **16th general review of the quotas at the International Monetary Fund (IMF)**, pointing out that the same can help the multilateral lender assist distressed countries in a better way.

What are IMF Quotas?

- The IMF Quotas are the **building blocks of the IMF's financial and governance structure**.
- An individual member country's quota broadly reflects its relative position in the world economy.
- Quotas are denominated in **Special Drawing Rights (SDRs)**, the IMF's unit of account.
- The IMF's Board of Governors conducts general quota reviews quotas at least every five years.
- The two main issues addressed in a general review of quotas are the
 - size of an overall quota increase
 - distribution of the increase among the members
- **Quota Formula:** A quota formula is used to help assess members' relative position in the world economy and it can play a role in guiding the distribution of quota increases.
 - The current formula was agreed to in 2008.

Mi-17 V5 helicopters



The **Defence Acquisition Council (DAC)** accorded **Acceptance of Necessity (AoN)** for capital acquisition proposals worth approximately Rs. 7,800 crore, including **Electronic Warfare (EW) Suite** for the **IAF's Mi-17 V5 helicopters**.

About:

- AoN is the first step in the **long defence procurement process**.
- Grant of an AoN does **not necessarily lead to a final order**.
- The DAC is the **highest decision-making body** in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.

Mi-17 V5 helicopters:

- Mi-17V5 is part of the **Russian Mi-17 series**, which can fly at high altitudes in complex weather conditions, be it in tropical and maritime climates or even in desert conditions.
- They are medium **twin-turbine choppers** useful in search and rescue operations, and can be equipped with weapons.
- Mi-17s can travel at a maximum speed of 250 km/h, have up to eight fire posts for small weapons and can transport cargo up to 4,000 kg.
- The Mi-17V5 is produced and **manufactured in Kazan**, a city in southwest Russia.
- It is a modern military transport helicopter used by **the Indian Air Force**.

Japan's H-IIA rocket



Japan's space agency has recently suspended the scheduled rocket launch, which was intended to carry the **nation's first spacecraft to land on the moon**.

About H-IIA rocket:

- The H-IIA rocket being Japan's primary launch vehicle with an impressive 98 per cent success rate, unfavorable wind conditions in the upper atmosphere led to the decision to halt the launch.
- H-IIA, jointly developed by JAXA and MHI, has been Japan's flagship space launch vehicle, with 45 successful launches in 46 tries since 2001.
- The rocket is carrying **JAXA's Smart Lander for Investigating Moon (SLIM)**, which would be the **first Japanese spacecraft** to land on the moon.
- The rocket is also carrying an **X-Ray Imaging and Spectroscopy Mission (XRISM) satellite**, a joint project of **JAXA, NASA and the European Space Agency**.

Defence Ministry inks deal with Hindustan Shipyard Limited (HSL), Visakhapatnam



The **Defence Ministry** has signed a contract with Hindustan Shipyard Limited (HSL), Visakhapatnam, to acquire **five Fleet Support Ships (FSS)** at an overall cost of Rs 19,000 crore.

About the deal:

- **Expected weight:** 44,000 tonnes
- The ships will be the **first-of-a-kind ships** made in India by an Indian shipyard (Hindustan Shipyard Limited (HSL)).
- The FSSs will be used for replenishing ships at sea with fuel, water, ammunition and stores, enabling the Indian naval fleet to operate for prolonged periods without returning to harbour.
- These ships would enhance the strategic reach and mobility of the fleet.
- The induction of these ships will significantly enhance the blue water capability of the Indian Navy.
- The ships can also be deployed for evacuation of people and human assistance and disaster relief operations.

National Space Day



India has decided to celebrate **August 23** as '**National Space Day**' to mark the successful touchdown of **Chandrayaan-3 mission's lander** on the lunar surface.

About:

- The primary goal behind "**National space day in India**" is to inspire the youth.
- By celebrating the achievements, the younger generation would be motivated to dream big and consider careers in science and technology.

The name game:

- PM Modi also named the landing spot of the Vikram lander as 'Shiv Shakti'.
- He also christened the location where Chandrayaan-2 had left its mark in 2019 as '**Tiranga Point**'.

Who names sites on the Moon?

- The **International Astronomical Union (IAU)** determines some other rules for **Space activities**.
- The IAU's **Working Groups handle** the process of naming lunar spots, though its **decisions and recommendations** are not enforceable by any international law.
- India is among its **92 members**.
- The IAU has been the arbiter of **planetary and satellite nomenclature since its inception in 1919**.
- Many countries have been giving **informal names** to the spots on moon during lunar missions.
- The United States gave informal names to lunar sites during Apollo missions.

Finger Minutiae Record – Finger Image Record (FMR-FIR) modality



UIDAI (Unique Identification Authority of India) is employing artificial intelligence-based technology to address fraud in the **Aadhaar-enabled Payment System (AePS)**.

- The technology is called **Finger Minutiae Record–Finger Image Record (FMR-FIR) modality**.

What is FMR-FIR?

- FMR-FIR modality is an **Artificial Intelligence / Machine Learning technology** used by **UIDAI** to prevent fraud in **Aadhaar-enabled Payment System (AePS)**.

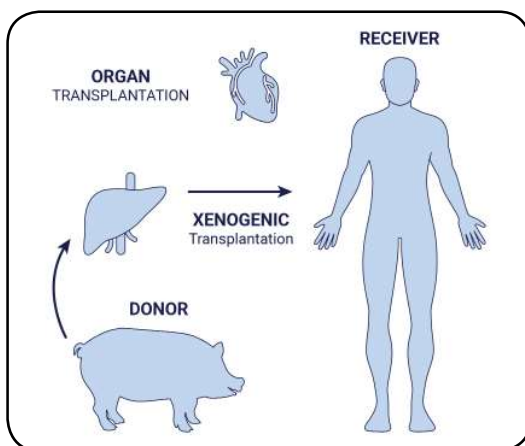
How does it work?

- It verifies the authenticity of fingerprints during authentication by combining finger minutiae (distinct ridge characteristics) and finger images.
- This technology helps detect cloned fingerprints, ensuring that only real fingerprints are used for verification, thus enhancing security and preventing fraud.

Need:

- In FY2023, the total number of fraud cases in the banking system was 13,530.
- Of this, almost 49 per cent or 6,659 cases were in the digital payment – card/internet – category.

Xenotransplantation



Surgeons at **NYU Langone Health** have transplanted a '**Pig kidney Xenotransplantation**' that continues to function well after **32 days in a man declared** dead by neurologic criteria and maintained with a beating heart on ventilator support.

- This represents the longest period that a **gene-edited pig kidney** has functioned in a human, and the latest step toward the advent of an **alternate, sustainable supply of organs for transplant**.

About the Process:

- Xenotransplantation is the **transplantation of organs or tissues** from an animal source into a human recipient.
- Scientists first attempted xenotransplantation in the early 1900s.
- Researchers have focused **on using pigs** because **primate organs carry infectious disease risks**, along with ethical concerns.
- Also, **pig organs** are a relatively compatible size for humans.
- Pig tissues and hormones have been used in medicine for years, including for **heart valves, insulin, and hormones**.

INS Vindhyagiri



President Droupadi Murmu launched **INS Vindhyagiri**, an advanced stealth frigate, at the GRSE facility on the banks of the River Hooghly in Kolkata.

About INS Vindhyagiri:

- INS Vindhyagiri is the **sixth stealth frigate** built under **Project 17A** at the GRSE.
- After the launch, **INS Vindhyagiri** will join its two sister ships at the outfitting jetty at GRSE, to progress on remaining activities and equipment trials, in the run-up to their delivery and commissioning.
- This is the **third and last stealth frigate** that the Kolkata-based warship maker was contracted to build for the Navy under the project.
- The state-of-the-art ship will be fitted with the latest gadgets and undergo extensive trials before being handed over to the Indian Navy for commissioning into service.

Project 17A Frigates are the follow-on class of the **Project 17 (Shivalik Class)** Frigates, with improved stealth features, advanced weapons & sensors and platform management systems.

Pink bollworm (PBW) Attack



The cotton crop in North India is under the threat of pink bollworm (PBW) attacks and the intensity of pest attacks is seen higher this year.

What is PBW?

- Pink bollworm (*Pectinophora gossypiella*), armyworm (*Spodoptera littoralis*), cotton bollworm (*Helicoverpa armigera*) and spotted bollworm (*Earias insulana*) are the major pests that limit cotton production around the globe.
- The pink bollworm (*Pectinophora gossypiella*) is one of the world's most destructive pests of cotton.
- This invasive lepidopteran occurs in nearly all cotton-growing countries.
- The origin of this invasive lepidopteran pest is not known, but a leading candidate is India where it was first discovered damaging cotton in **1843**.
- It has also been hypothesised to have originated in **Australia** or **South East Asia**.

Matti Banana



Tamil Nadu's **Kanniyakumari Matti Banana** has finally received the **GI tag**, making Tamil Nadu the region with the **highest number of GI tagged products**.

About the variety:

- The banana type known as the "**Matti Banana**" is widely cultivated in southern India.
- The majority of the time, matti bananas are little and slightly curved in shape.
- When ripe, their unique **yellow skin develops brown patches throughout**.
- The Matti banana's creamy white flesh has a tart and sweet flavour.

Butterflies of India consortium



Butterflies of India consortium, a collaboration of research institutions, NGOs and citizen science groups anchored the study on India's butterfly populations.

About:

- The Butterflies of India is a large consortium of **amateur and professional naturalists and research scientists**.
- The data on this website are contributed by hundreds of contributors, whose **butterfly images** and other contributions to this national butterfly database should be acknowledged.

- Maharashtra became the first State in the country to have a '**State Butterfly**'.
- It declared the **Blue Mormon (Papilio polymnestor)** as the State Butterfly.
- It is the **second largest butterfly in India** after the *Troides minos* commonly known as the Southern Birdwing.

International Tiger Day



July 29 is celebrated world over as the **International Tiger Day** in a bid to raise awareness on various issues surrounding tiger conservation.

About:

- It was first instituted in 2010 at the **Tiger Summit in St Petersburg, Russia** when the 13 tiger range countries came together to create **Tx2, the global goal to double the number of wild tigers by the year 2022**.

- The tiger is officially classed as **endangered** by the IUCN.

- **Project Tiger** was launched by the Indira Gandhi government on April 1, 1973, in a bid to promote conservation of the tiger.
- It came at a time when the population of tigers in India was rapidly dwindling, reaching an all-time low due to unfettered hunting and habitat loss.

SPECIES IN NEWS

The Indian eagle-owl was classified as a species only in recent years, thus distinguishing it from the **Eurasian eagle-owl**. The Indian species is an imposing bird.

About the Species:

- The Bengal eagle-owl (*Bubo bengalensis*), also widely known as the Indian eagle-owl or rock eagle-owl, is a large horned owl species native to hilly and rocky scrub forests in the Indian Subcontinent.
- It is a nocturnal species, bigger in size and does not have a dependency on forests.



Western Tragopan (*Tragopan-melanocephalus*)



- They eat rats, bandicoots, and doves living in open scrubland and agricultural tracts.
- Nearby rocky perches and crags provide ideal settings for its nests.
- Conservation status:
 - **IUCN Red list:** Least Concern
 - **CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora):** Appendix II

Himachal Pradesh's State bird – **Western Tragopan (*Tragopan-melanocephalus*)** has been facing threat due to habitat loss in parts of the country.

About the Species:

- The **Western Tragopan (*Tragopan-melanocephalus*)** is amongst the rarest of all living pheasants.
- **State Bird:** Himachal Pradesh (status accorded in 2007)
- **IUCN Status:** Vulnerable (Population decreasing)
- **Habitat:** It is endemic to the northwest Himalaya, within a narrow range from north Pakistan through Jammu and Kashmir and Himachal Pradesh, to the western part of **Garhwal**.
- **Diet:** Its diet consists primarily of plant matter, but it also includes insects and other small animals.
- It nests on the ground or in trees, as do other pheasants, but it roosts in trees alone or in couples.
- **Immatures males** look like females but are bigger and have longer legs. During mating season, adult males display their distinctively bare throats, or lappets, by making loud sounds to attract females.
- **The male**, who tips the scales at **1.8 to 2.2 kg**, sports a tall, black crest with a bright red tip and a bright red face and neck. Its back is a tan colour with large white patches of **varying sizes and shapes**.
- **Females** do not have crest feathers. The female has predominantly black feathers with white centre stripes. It has a pinkish face and legs with a speckled pale brownish grey upper body. The female has predominantly black feathers with white centre stripes. It weighs **between 1.3 kg and 1.4 kg**.

Pheasant is any bird of the family **Phasianidae (order Galliformes)** that is larger than a quail or partridge.

Tachymenoides harrisonfordi



June 30 is the observed as **death anniversary** of **Dadabhai Naoroji**.

About:

- **Dadabhai Naoroji (1825-1917)** was born in **Mumbai** in a Gujarati-speaking Parsi family.
- In 1855 he was appointed **Professor of Mathematics and Natural Philosophy** at Elphinstone College in Mumbai.
- The first Indian to be given an academic appointment, he was called '**The Promise of India**' by another professor at the institution.
- He opened his **own cotton trading company**, Dadabhai Naoroji & Co

Kashmir stag (*Cervus hanglu hanglu*)



After two years, the unique Kashmir stag, vernacularly known as Hangul, has again shown a marginal increase in its population.

About:

- The Kashmir stag (*Cervus hanglu hanglu*), also called hangul, is a subspecies of Central Asian red deer endemic to Kashmir and surrounding areas.
- It is the state animal of Jammu and Kashmir.
- It is found in dense riverine forests in the high valleys and mountains of **Jammu and Kashmir and northern Himachal Pradesh**.
- Hangul *Cervus hanglu* is the **only red deer species** in India.
- Hangul is a **critically-endangered species** as per the **International Union for Conservation of Nature and Natural Resources (IUCN) Red List**.
- It is listed as a **Schedule I Species** in **Indian Wildlife Protection Act 1972**.
- The species is under threat based on the vulnerability of population with regard to viability and structure, dwindling population, and habitat vulnerability.

Echidnas (*Tachyglossus aculeatus*)



According to a recent update, Scientists believe echidnas began as platypuses who left the water and evolved spines.

About the species:

- The Short-beaked Echidna is the only species of echidna in Australia.
- They are **nocturnal species**.
- The Short-beaked Echidna is easily recognised by its sharp spines, short legs and long snout.
- They live in forests and woodlands, heath, grasslands and arid environments.
- They are found throughout Australia, including Tasmania.
- The Short-beaked Echidna breaks into ant and termite nests and catches its prey by flicking its long sticky tongue in and out.

Red sand boa (*Eryx johnii*)



A report by the **Wildlife Conservation Society (WCS)-India** has pointed out around **172 incidents of seizures of red sand boa (*Eryx johnii*)** between the years 2016-2021.

About:

- It is a rare **non-poisonous snake** that is used for making certain **medicines, cosmetics and in black magic**, and is in huge demand in the international market.
- It is found in whole of India excluding **North-east states** after North-Bengal.
- Among layman it is famous as “**Two-headed Snake**” due to the presence of very thick tail having rounded end.
- The trade and possession of the red sand boa is an offence under the **Wildlife Protection Act 1972**.
- **Protection status:**
 - ▶ The species is listed under Schedule 4 of the Act. Also, it is listed in CITES Appendix II.
- The **Red sand boa** is classified as ‘**Near Threatened**’ by the International Union for Conservation of Nature (IUCN).

Iberian wolf



According to latest information, the **Iberian wolf (*Canis lupus signatus*)**, **native** to the Iberian Peninsula comprising **Spain and Portugal**, has been extinct in the historic region of **Andalusia** in the extreme south of Iberia since 2020.

About Iberian Wolf (*Canis lupus signatus*):

- It is a subspecies of **Grey wolf** that has been isolated from mixing with other wolf populations for over a century.
- The Iberian wolf forms the **largest wolf population** in Western Europe.
- Grey wolves are **nocturnal predators** and are mainly **carnivores**.
- Due to population controls and damage to livestock, Iberian wolves were, as of September 2021, the only **Western European** subspecies of wolf whose hunting remained legal, yet only in Spain.
- Nonetheless, very few hunting permits were given every year, strictly north of the **Douro River**.
- Along with the difficulty of their hunt by virtue of their vigilant nature and the rarity of their sightings, they were strongly desired by many European hunters as a big-game trophy.

LOCATION IN NEWS

Black Sea



Russia opens fire on cargo vessel in **Black Sea**.

About Black Sea

- Black Sea, an inland sea between Eastern Europe and Western Asia.
- It is bounded by the **Eastern European Plain** to the north, the **Balkans** to the west, the **Caucasus Mountains** to the east, and the **Anatolian Peninsula** (or Asia Minor, the largest part of Turkey) to the south.
- There are six countries with coastlines on the **Black Sea (clockwise), Ukraine, Russia, Georgia, Turkey (Türkiye), Bulgaria, and Romania**.



Recently, the Scientists from Allahabad University and the University of Bern have discovered that the **Dhala structure** in India was formed by a **rare ureilite meteorite** between 2500 and 1700 million years ago, making it the world's seventh oldest impact structure.

What is Dhala Structure?

- It was an **asteroid** about one kilometre in diameter, Dhala in the **Bundelkhand region of Madhya Pradesh's Shivpuri district** is one of the oldest impact structures in the world.
- An Indian geologist, **Jayanta K Pati**, discovered it.
- Named after the village Dhala, the crater is an eroded leftover of the original impact structure, estimated to be at a diameter of 11 kilometres, the largest in Asia.
- In fact, it is the largest confirmed impact structure reported between the **Mediterranean and south-east Asia**, claims the discoverer.
- While a British scientist discovered the **Lonar crater**, the Dhala crater is the only one discovered in the subcontinent and **Far East Asia** by an Indian scientist.

Ureilite meteorite:

- Ureilite is a rare type of stony meteorite that has a unique **mineralogical composition** very different from that of other stony meteorites.
- Ureilites tend to have a **high percentage of carbon** (average 3% by weight) in the form of **graphite and nanodiamonds**.

Cocos Island



Recently, an **Indian Navy Dornier maritime patrol aircraft** and an **Indian Air Force (IAF) C-130 transport aircraft** visited **Australia's Cocos (Keeling) Islands (CKI)** in the **Southern Indian Ocean**.

About the Location:

- They are a small group of islands located in the **Bay of Bengal**.
- **Great Coco Island**, the largest in the group, lies just 55 km from India's strategic **Andaman and Nicobar Islands**.
- They are part of the **Yangon Region of Myanmar**.
- It is geologically an extended division of the **Arakan Mountains** or **Rakhine Mountains** submerges as a chain of islands in the Bay of Bengal for a long stretch and emerges again in the form of the Andaman and Nicobar Islands.
- They are part of the same topography as India's Andaman & Nicobar Islands.



The strategically located islands are known as Kuril Islands in Russia, and were seized by Soviet forces in the closing days of **World War-II**.

- China might have plans to own it.

About the Location:

- The Kuril Islands are stretched from the **Japanese island of Hokkaido** to the southern tip of **Russia's Kamchatka Peninsula** separating the **Okhotsk Sea** from the **North Pacific Ocean**.
- The chain is part of the belt of geologic instability circling the **Pacific (Ring of Fire)** and contains at least 100 volcanoes, of which 35 are still active, and many hot springs.



The **U.S. Coast Guard** will have an expanded right to board vessels in Palau's waters under a **new maritime law enforcement agreement** that comes after incursions by Chinese ships into the Pacific island country's exclusive economic zone.

About Palau Island:

- Palau is a country in the **western Pacific Ocean** that consists of coral and volcanic islands surrounded by single barrier reef.
- Palau lies in the **southwest corner of Micronesia** (country spread across the western Pacific Ocean comprising more than 600 islands), with New Guinea to the south, and the **Philippines to the west**.

Palau became the **76th country** to sign the **International Solar Alliance framework agreement**.

- Its major populated islands are **Babelthuap (Babeldaob), Koror, Malakal, Arakabesan, and Peleliu**.
- There is concern that the **low-lying islands** could be badly affected by rising sea levels possibly due to climate change.



Amid torrential rain in the upstream territories of Himachal Pradesh, **the Bhakra and Pong Dams** are flowing above their capacity.

About Pong Dam:

- ◆ It is a reservoir has been constructed on the **river Beas** in the wet land of Shivalik hills of Kangra district of Himachal Pradesh, which has been named as **Maharana Pratap Sagar**.
- ◆ It is also known as **Pong reservoir or Pong Dam**.
- ◆ This dam was built in 1975 named in honor of **Maharana Pratap**, this reservoir or lake is a famous wildlife sanctuary and one of the 25 international wetland sites declared by **Ramsar Sammel** in India.

- ◆ The reservoir stretches to an area of 24,529 hectares (60,610 acres), and part of the lakes is 15,662 hectares (38,700 acres).
- ◆ Pong reservoir is the most important fish reservoir in the foothills of the Himalayas in Himachal Pradesh.
- ◆ In this reservoir, the majestic fish is found in excess.

PERSONALITY IN NEWS

Abanindranath Tagore (1871-1951)



152nd birth anniversary of Abanindranath Tagore (1871-1951) was celebrated recently.

About

- Abanindranath Tagore was born in **Jorasanko, Calcutta** on 7 August 1871.
- He was a **revolutionary artist** who played an instrumental role in establishing the **Bengal School of Art** which aimed at reviving traditional Indian art forms.
- It was Abanindranath who ushered in the **modern art movement in Bengal**.
- He was a supporter of **Swadeshi values** in India.
- He created first created the '**Indian Society of Oriental Art**' and later went on to establish the **Bengal school of Art**.
 - ▶ The **Indian Society of Oriental Art** was established to promote the **Abanindranath-style** on the national plane.
- **Famous Paintings:** Passing of Shah Jahan, *Bharat Mata*, *Radha Krishna*, and *Omar Khayyam*.
- **Major Publications:**
 - ▶ Some of his books like '**BudoAngla**', '**KhirerPutul**' and '**Rajkahini**' are best examples of **Bengali children's literature**.
 - ▶ His other books on art include **Banglar Brata**, **Bharatshilpe Murti**, **Bharatshilpa** and **Bharatshilper Sadanga** - all bearing the imprint of his great depth, profundity and simplicity.
- Victoria Memorial Hall is the custodian of the Rabindra Bharati Society collection, the single-largest collection of works by the artist.

Balladeer Gaddar (1997-2023)

Balladeer and poet Gaddar, a prominent face of the **Telangana statehood movement** and an activist for the **rights of Dalits and marginalised people**, passed away recently in Hyderabad.

About

- Gaddar was born to a **Dalit couple** at **Toopran of Medak** in 1949.
- His real name was **Gummadi Vittal Rao**. He went on to become popular as 'Gaddar'.
- Gaddar was the most **famous social-cultural face** of the **Telangana statehood movement**, infusing it with his soulful songs and music.



Alladi Ramakrishnan

Telangana was created as **India's 29th state** on 2nd June 2014.

- He took part in 'revolutionary politics.' He went underground in the 1980s and became a member of the **CPI-ML (People's War)**.
- He was the founder of the **Jana Natya Mandali**, the cultural outfit of the People's War Group (PWG) of Naxalites, which later transformed into the **Communist Party of India (Maoist)**.
- He was a former Maoist ideologue.
- He was described in Telugu as '*praja yuddha nouka*' (warship of people's agitations).
- Gaddar rose to be renowned as the people's singer, highlighting people's issues in his songs. He also acted in a few movies, including '*Maa Bhoomi*' and '*Rangula Kala*'.
- Famous Songs
 - ▶ Bandenaka bandi katti
- *Podustunna Poddu Meeda Nadustunna Kaalama Poru Telanganama*



C.R. Rao (1920-2023)

The **Institute of Mathematical Sciences (IMSc)** will pay homage to its visionary founder-director **Alladi Ramakrishnan** in his **birth centenary year** falling on 2023, by hosting a conference in his honour at its campus in Taramani, Chennai.

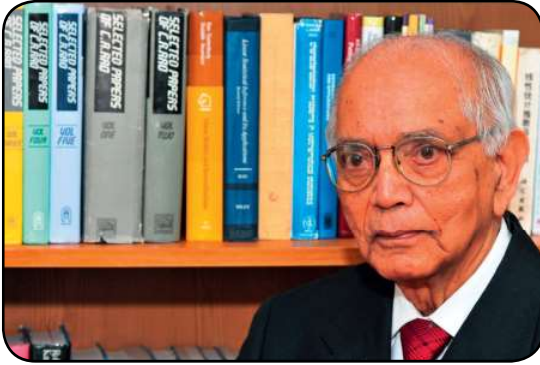
About:

- He was born on August 9, 1923.
- His father was the lawyer **Sir Alladi Krishnaswami Iyer**, who, as a member of the Constituent Assembly, was instrumental in **drafting the Constitution of India** with other prominent members.
- He had his early education in P. S. High School, Madras. He graduated from Presidency College, Madras, with B.Sc. (Hons) degree in physics.
- As a student of the college he had wanted to work under Sir C. V. Raman.
- **Major contributions:** He made contributions to stochastic process, particle physics, algebra of matrices, special theory of relativity and quantum mechanics.

Mr. Calyampudi Radhakrishnan Rao, 102, among the world's most eminent statisticians, and who spent nearly his entire professional career in India, died on 23 August in the United States.

About his achievements:

- C R Rao is an Indian-born mathematician and statistician who has worked most of his life in America.
- He graduated M.A. with First Class Honours in Mathematics from Andhra University in 1940.



- His most significant result was obtained during this period is now called the **Cramér-Rao inequality** and gives a bound for the variance of an unbiased estimate of a parameter.
- In 1972 he was appointed Director-Secretary of the Indian Statistical Institute.

Prizes and Awards:

- The S S Bhatnagar Prize of Council of Scientific and Industrial Research (1963),
- The Guy Medal in Silver of the Royal Statistical Society (1965),
- Awarded the title of Padma Bhushan by the Indian Government (1968),
- The Jagdish Chandra Bose Gold Medal of the Bose Institute (1979),
- The Silver Plate of the Andhra Pradesh Academy of Sciences (1984),
- Awarded the Samuel S Wilks Memorial Award of the American Statistical Association (1989)

