

Current Affairs Update (Aug 1-7)

National

The Multi-State Cooperative Societies (Amendment) Bill 2023

The Multi-State Cooperative Societies (Amendment) Bill 2023 was passed by the Lok Sabha.

Meaning: Co-operatives are voluntary, democratic, and autonomous organisations controlled by their members who actively participate in its policies and decision-making.

Efforts to promote them:

- **After independence**, the first five-year plan (1951-56) emphasised the adoption of co-operatives to cover various aspects of community development.
- **97th Amendment (2011):** It inserted Article 43B in the DPSP of the Indian Constitution inserted, As per Article 43B. States shall endeavour to promote voluntary formation, autonomous functioning, democratic control and professional management of cooperative societies.

Multi-state Co-operative Societies: Regulated by the **Multi-State Co-operative Societies Act 2002**, these are societies that have operations in more than one state (like FPOs). **Part IXB** (also inserted by the 97th amendment) of the Indian constitution is applicable only to multi-state co-operative societies (as per an SC verdict), as states have the jurisdiction to legislate over state co-operative societies.

Issues related to the Bill:

- **Imposing a cost on well-functioning societies:** Sick multi-state co-operative societies will be revived by a Fund that will be financed through contributions by profitable multi-state co-operative societies.
- **Dilute autonomy and independence of co-operatives:** By empowering the government to restrict redemption of its shareholding in multi-state co-operative societies.

Resource Efficiency Circular Economy Industry Coalition

The Union Minister of Environment Forest and Climate Change launched the Resource Efficiency Circular Economy Industry Coalition (**RECEIC**).

It was launched on the sidelines of the **4th G20 Environment and Climate Sustainability Working Group (ECSWG)** and Environment and Climate Ministers meeting in **Chennai**. As many as **39 multinational corporations (MNCs)** from sectors such as steel, FMCG, electronics came together to join RECEIC.

RECEIC: Conceptualised by India's G20 Presidency, it is envisaged to be industry-driven and a self-sustaining initiative continuing to function even beyond India's G20 Presidency. **The mission of this coalition** is to –

- Facilitate and foster **greater company-to-company collaboration**,
- Build advanced capabilities across sectors and value chains,
- Bring learnings from the diverse and global experiences of the coalition members, and
- **Unlock on-ground private sector action** to enhance resource efficiency and accelerate circular economy transition.

PESA Act

- The PESA Act was enacted in 1996 **“to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas”**.
- Part IX, **comprising Articles 243-243ZT of the Constitution**, contains provisions relating to municipalities and cooperative societies.
- Under the Act, Scheduled Areas are those **referred to in Article 244(1)**, which says that the provisions of the Fifth Schedule shall apply to the **Scheduled Areas and Scheduled Tribes in states other than Assam, Meghalaya, Tripura, and Mizoram**.
- The Fifth Schedule provides for **a range of special provisions for these areas**.
- Ten states — Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Telangana — **have notified Fifth Schedule areas that cover (partially or fully) several districts in each of these states**.
- **Purpose:** Self-governance recognises the right of tribal communities and empowers Gram Sabha.

Bengaluru 1st an Indian city to be a member of the cultural forum

- **Bengaluru has become the first Indian city** to join the **World Cities Culture Forum (WCCF)**, an organization founded in 2012 by the **office of the Mayor of London**.
- **With 40 member cities** already in its portfolio, **Bengaluru becomes the 41st member of the forum**. The city's inclusion was attributed to *its dedication to an inclusive and globalized culture*.

Byculla railway station (Mumbai)

- **The 169-year-old Byculla railway station in Mumbai**, which has been restored to its original glory, received the **prestigious UNESCO Asia Pacific Cultural Heritage award**.
- The Byculla railway station is **one of the oldest railway stations in India** still in use. Additionally, the **Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS)**, Stepwells of Golconda (Hyderabad) and Domakonda Fort (Telangana) also won the highest award of excellence in the **UNESCO Asia Pacific awards in 2022** in different categories.

- The first train was run by the **Great Indian Peninsula Railway (now Central Railway)** between **Bori Bunder** (now Chhatrapati Shivaji Maharaj Terminus) and **Thane**, a distance of 34 km (21 mi), on 16 April 1853.

Draft National Tourism Policy

The Indian Ministry of Tourism has drafted a **National Tourism Policy** with key strategic objectives to **enhance tourism's contribution to the economy**.

The key strategic objectives of the Policy are:

- To **enhance the contribution of tourism to the Indian economy** by increasing visitation, stay and spend and **making India a year-round tourist destination**
- To create **jobs and entrepreneurial opportunities** in the tourism sector and ensure the supply of skilled workforce
- To enhance the **competitiveness of the tourism sector** and attract private-sector investment
- To **preserve and enhance the cultural and natural resources**
- To ensure **sustainable, responsible and inclusive development of tourism** in the country.

Key focus areas of the policy:

- Green tourism
- Digital tourism
- Destination management
- Skilling in the hospitality sector and
- Supporting tourism-related MSMEs

Status of Tourism in India

- India is ranked **54th place in the global travel and tourism development index 2021, down from 46th in 2019**.
- World Travel and Tourism Council calculated that tourism generated over US\$170 billion or **5.8% of India's GDP** and supported over 3 crore jobs in 2021
- As of 2022, there are **40 World Heritage Sites** located in India. Out of these, **32 are cultural, 7 are natural, and one, the Khangchendzonga National Park**, is of mixed type.
- India has the **sixth largest number of world heritage sites in the world**.

GOBARDhan Initiative

- The GOBARDhan initiative in India, aimed at converting waste to wealth through biogas and compressed biogas (CBG), has **shown promising results and attracted significant investments**.
- **The Unified Registration Portal for GOBARDhan** has received requests for over 1200 biogas plants, including 320 CBG plants in just 60 days since its launch.

- **Acronym:** Galvanizing Organic Bio-Agro Resources Dhan (GOBARdhan), launched in 2018
- **Nodal Ministry:** Department of Drinking Water and Sanitation, Ministry of Jal Shakti

Constitution (J&K) Scheduled Tribes Order (Amendment) Bill, 2023

The Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2023, was introduced in Lok Sabha on July 26, with the aim to include four communities in the Scheduled Tribes (ST) list in Jammu and Kashmir. This development has generated both interest and agitation among various communities in the region.

The Bill seeks to include four communities in the ST list: **Gadda Brahmin, Koli, Paddari Tribe, and Pahari Ethnic Group**. The proposed inclusion is a significant step towards acknowledging the unique identities of these communities and providing them with specific benefits.

In Jammu and Kashmir, the **Gujjars and Bakerwals** are the dominant ST communities. With a combined population of nearly 18 lakh, they constitute the third-largest group in the region after Kashmiris and Dogras. The ST status granted to the Gujjar-Bakerwal community in 1991 brought them 10% reservation in government jobs and educational institutions.

International

Colombo Security Conclave (CSC) framework

A successful **joint expedition of ocean scientists from India, Bangladesh, and Mauritius**, organized under the Colombo Security Conclave (CSC) framework. The expedition onboard ORV Sagar Nidhi was the first of its kind under the CSC framework,

Objective:

- To enhance **ocean observation and data collection** to predict and manage changes in the Indian Ocean's regional environment.
- **Fostering collaboration in measuring and modelling ocean parameters** for better forecasting and services in the region.

The CSC is a **trilateral maritime security grouping formed in 2011**, consisting of **India, Sri Lanka, and the Maldives**. Mauritius is the fourth member, and **Bangladesh and Seychelles** attended as observers with invitations to join the group.

Global Slavery Index 2023

According to the Walk Free Foundation's Global Slavery Index 2023, **50 million people are living in conditions of modern slavery** – a 25% rise over the last five years.

Modern slavery: It refers to situations of exploitation in that **a person cannot refuse or leave** because of threats, violence, coercion, or deception. It manifests as **forced labour, child labour, forced marriage, debt bondage, commercial sexual exploitation, human trafficking, etc.**

The Global Slavery Index:

- It is **an assessment of modern slavery conditions** in 160 countries.
- It uses data released by the **International Labour Organisation (ILO), the International Organisation for Migration (IOM), etc.**
- The Index provides rankings across **3 dimensions:** Size of the problem (prevalence), Government response and Vulnerability (political instability, inequality).

Most prevalent

The countries estimated to have the highest prevalence of modern slavery tend to be conflict-affected, have state-imposed forced labour, and have weak governance.

	Rank	Prevalence Rate*	# of People
North Korea	1	104.6	2,696,000
Eritrea	2	90.3	320,000
Mauritania	3	32.0	149,000
Saudi Arabia	4	21.3	740,000

Least prevalent

The countries with the lowest prevalence of modern slavery are those with strong governance and strong government responses to modern slavery.

	Rank	Prevalence Rate*	# of People
Switzerland	160	0.5	4,000
Norway	159	0.5	3,000
Germany	158	0.6	47,000
Netherlands	157	0.6	10,000

The situation within G20 nations: India tops the list with 11 million people working as forced labourers, followed by China, Russia, Indonesia, Turkey and the U.S.

The State of climate in Asia 2022

- According to the State of climate in Asia 2022 report released by the World Meteorological Organisation (WMO), Asia is the world's most disaster-prone region.
- One of a series of WMO regional State of the Climate reports, it was released during a meeting of the **UN Economic and Social Commission for Asia and the Pacific's (ESCAP) Committee on Disaster Risk Reduction.**
- **UN ESCAP** (HQ: Bangkok; founded in 1947) is one of the five regional commissions under the jurisdiction of the United Nations Economic and Social Council.

Highlights of the report:

- **Over 50 million people** were directly affected due to 81 weather, climate and water-related disasters in Asia during 2022.
- **The number of disaster events in the region decreased** in comparison to 2021 (over 100 natural hazards).

- **But the effects of such events in 2022** were much more pronounced, with an increase in the number of fatalities, people affected and economic damage. **For example**, ~5,879 Asians died due to natural disasters in 2022 – 55% more than in 2021.
- **The economic cost of the damage** has been over \$ 36 billion and Pakistan accounted for 42% of this.

Papua New Guinea

- **India and Papua New Guinea** signed a Memorandum of Understanding (MoU) on sharing **INDIA STACK**, successful digital solutions implemented at the population scale, following the Global DPI Summit organized by MeitY in Pune.
- The MoU aims to **enhance digital transformation in areas such as Digital Public Infrastructure, Digital Identity, Digital Payment, Data Exchange, and Data Governance.**
- **Papua New Guinea**, in the southwestern Pacific, encompasses the **eastern half of New Guinea and its offshore islands**. A country of immense cultural and biological diversity, it's known for its beaches and coral reefs.

Hunger Hotspots

According to a new UN report – **Hunger Hotspots – FAO-WFP early warnings on acute food insecurity** – India's neighbours (Pakistan, Afghanistan and Myanmar) are among the hunger hotspots in the world.

Highlights of the report:

- **Many hotspots** [Afghanistan, Nigeria, Somalia, Sudan, South Sudan, Yemen, Haiti, and the Sahel (Burkina Faso and Mali)] are facing growing hunger crises.
- **Conflict, climate extremes and economic shocks** continue to drive more and more communities into crisis.
- **The spillover from the crisis in Sudan** is driving massive population displacement and hunger among people in search of refuge.

Kuril Islands

- The Kuril Islands dispute between **Russia and Japan has gained attention** amid the ongoing conflict between Russia and Ukraine.
- The Kuril Islands dispute, known as the Northern Territories dispute in Japan, is a territorial dispute between Japan and Russia over the **ownership of the four southernmost Kuril Islands.**
- The Kuril Islands are a **volcanic archipelago administered as part of the Sakhalin Oblast** in the Russian Far East. The islands stretch **approximately 1,300 km northeast from Hokkaido** in Japan to **Kamchatka Peninsula in Russia**, separating the **Sea of Okhotsk** from the North Pacific Ocean.

Science-Tech & Environment

PSLV-C56 Mission successful

- **Launch site:** Satish Dhawan Space Centre in Sriharikota
- **Launch vehicle:** Polar satellite launch vehicle
- **No of satellites launched:** 7 (All foreign-Singapore)
- **Main payload:** DS-SAR
- **Application:** To provide for all-weather day and night coverage, and capable of imaging at 1m-resolution at full polarimetry.
- **Other payloads:** VELOX-AM, ARCADE, SCOOB-II, NuLloN, Galassia, ORB-12 STRIDER

The Biological Diversity (Amendment) Bill 2021

The Lok Sabha passed the contentious Biological Diversity (Amendment) Bill 2021.

Significance of the Biological Diversity (Amendment) Bill 2021: The Bill seeks to amend the 2002 Act to:

- Simplify compliance requirements for domestic companies.
- Encourage the Indian system of medicine and cultivation of wild medicinal plants,
- Facilitate fast-tracking of processes for research, patent application, and transfer of research results,
- Decriminalise offences, and
- Encourage foreign investment in the sector.

Key issues:

- **The term codified traditional knowledge has not been defined.** A broad interpretation might exempt all local traditional knowledge from benefit-sharing requirements.
- **The Bill removes the direct role of local communities** in determining benefit-sharing provisions.
- **The Bill decriminalises offences** under the Act and instead provides for a wide range of penalties.
- **The Bill confers discretion to government officials,** as they can hold inquiries and determine penalties.
- **A review of the law was necessary,** however, the present bill can appear to be **limited and selective,** especially to favour specific bio resources-based industries.

Ministry of Earth Sciences

The Ministry of Earth Sciences (MoES) celebrated its **17th foundation day** with the launch of several citizen-centric initiatives.

The Ministry of Earth Sciences was formed on 29 January 2006 (HQ: New Delhi) from a merger of the India Meteorological Department, the National Centre for Medium-Range Weather Forecasting, the Indian Institute of Tropical Meteorology, Pune, the Earth Risk Evaluation Centre, and the Ministry of Ocean Development. It plays a crucial role in providing services for weather, climate, ocean, hydrology, and seismology.

Major Initiatives launched:

- **Four new meteorological centres** were inaugurated in Imphal (Manipur), Kohima (Nagaland), Aizawl (Mizoram), and Port Blair (Andaman and Nicobar).
- **A new website for disseminating** alerts for block-level weather forecasts and advisories to benefit our agricultural community, including farmers, fisherfolk, and livestock rearers.
- **Rainfall Atlas of India (1971-2020):** prepared by IMD, using data from 4389 rain gauges and is expected to provide resources for various agencies, researchers, students and operational meteorologists.
- **Indian Ocean Biodiversity Information System (IndOBIS):** a web portal that features the biodiversity of the Indian Ocean Exclusive Economic Zone and also provides information on marine species of the Indian Ocean.

INDIAai

INDIAai is an initiative under **Digital India Corporation, and Meta, India**, has signed an MoU to foster collaboration in the field of **Artificial Intelligence (AI) and Emerging Technologies**.

It is a joint venture between the Ministry of Electronics and Information Technology (MeitY), the National e-Governance Division (NeGD), and NASSCOM. It is a knowledge portal, research organization, and ecosystem-building initiative focused on preparing the nation for an AI-driven future

Objectives:

- To establish a framework for cooperation and to make Meta’s open-source AI models available for use by the Indian AI ecosystem.
- To advance research and development in AI and Emerging Technologies, seeking breakthroughs in AI technology and its applications.
- Establishing a Centre of Excellence to nurture the startup ecosystem of AI and other Emerging Technologies.
- Building datasets in Indian Languages to enable translation and large language models, prioritizing low-resource languages to foster social inclusion and improve government service delivery.
- Enhance accessibility to AI compute resources for researchers, startups, and organizations with limited resources.

Policy on rare diseases

The Delhi HC constituted a five-member 'National Rare Diseases Committee' to implement the National Rare Disease Policy-2021 efficiently and to "ensure that the benefits of the policy reach the ultimate patients of rare disease".

Rare Diseases

- A rare disease, also referred to as an orphan disease, is any disease that affects a small percentage of the population.
- There are 6,000-8,000 classified rare diseases, but less than 5% have therapies available to treat them.
- **Examples:** Lysosomal Storage Disorders (LSD), Pompe disease, cystic fibrosis, muscular dystrophy, spina bifida, haemophilia
- About 95% of rare diseases have no approved treatment and less than 1 in 10 patients receive disease-specific treatment.

Deep Techs

Deep Tech refers to **advanced and cutting-edge technologies** that are based on significant scientific and engineering innovations.

Example: Artificial Intelligence (AI) and Machine Learning (ML) are examples of Deep Tech. They involve the **development of sophisticated algorithms and models** that enable machines to learn from data and make intelligent decisions.

Status: India currently boasts the **third largest startup ecosystem** in the world with more than 326 incubators and accelerators. **About 14%** of them are in the area of Deep Tech.

Draft National Deep Tech Startup Policy (NDTSP) is based on the following themes:

- Nurturing Research, Development & Innovation
- Strengthening the Intellectual Property Regime
- Facilitating Access to Funding
- Enabling Shared Infrastructure and Resource Sharing
- Creating Conducive Regulations, Standards, and Certifications
- Attracting Human Resources & Initiating Capacity Building
- Promoting Procurement & Adoption
- Ensuring Policy & Program Interlinkages
- Sustaining Deep Tech Startups

Decarbonising Transport

- Decarbonising Transport refers to the **process of reducing or eliminating carbon dioxide (CO2) and other greenhouse gas emissions from the transportation sector.**
- **Examples:** Promoting electric vehicles, using alternative fuels, improving energy efficiency, and investing in public transport and active mobility.

Status of emission from the transport sector:

- As of 2021, the transport sector in India **contributes to around 14-15% of the country's total greenhouse gas emissions.**
- Within the transport sector, **road transport contributes to more than 90%** of the total CO2 emissions.
- India has the target to achieve **net-zero emissions by 2070.**

Key Highlights of the Report:

- India has still **no overall emissions or energy targets** for the transport sector
- India's transport-sector emissions could increase **65% by 2030 and 197% by 2050 (from 2020 levels)**
- **Contributors:** Road > Rail transport

Plastic Overshoot Day

Plastic Overshoot Day marks the **point in a year when the amount of plastic waste generated exceeds the capacity** to properly manage and dispose of it. It signifies a **tipping point where the world accumulates more plastic waste** than can be effectively handled by waste management systems.

World's first Plastic Overshoot Day on July 28, 2023, was marked recently.

Status of Plastic (as per the Report):

- India has Mismanaged Waste Index (MWI) (ratio of the mismanaged waste and the total waste) of **over 98%**
- **India categorized as 'The Waste Sponges':** It contributed a staggering over **73 lakh ton** of mismanaged plastic waste in 2023
- India has a **relatively low annual per capita plastic consumption of 5.3 kg (USA has 221 kg)**
- **1.33 %** of its total plastic waste was imported, while the country **exported 0.8 %** of its total waste
- India will contribute an **average of 16.7 days** of plastic overshoot to the environment in 2023.

Akira ransomware

- The Akira ransomware is a type of **ransomware that targets both Windows and Linux devices.**

- It encrypts data on the affected devices, **appends filenames with the “.akira” extension**, and deletes **Windows Shadow Volume copies** to prevent data recovery.
- The ransomware also **terminates Windows services to ensure uninterrupted encryption**. After stealing and encrypting sensitive data, **the attackers demand a ransom, threatening to release the data on the dark web if their demands are not met.**

How it works?

- The **ransomware is spread through spear phishing emails with malicious attachments**, drive-by downloads, specially crafted web links in emails, and insecure Remote Desktop connections.
- It has **targeted various domains, including education, finance, real estate, manufacturing, and consulting, and once inside a corporate network, it spreads laterally to other devices using stolen Windows domain admin credentials.**

To protect against Akira ransomware and other similar threats, **users are advised to:**

- **Maintain up-to-date offline backups**
- **Keep operating systems and networks updated**
- **Implement strong password policies and multi-factor authentication**
- **Enforce data encryption**
- **Block attachment file types that are commonly associated with malicious code**
- Regular security audits of critical systems

Perucetus colossus

- In a groundbreaking discovery, paleontologists have unearthed the fossilized remains of a **massive ancient creature** that roamed the coastal waters a staggering 40 million years ago. This newly discovered species, scientifically named Perucetus colossus, is believed to be a strong contender for the title of the **heaviest animal ever to have existed on Earth.**
- The remnants of Perucetus colossus were found in the **Ica desert of southern Peru**, shedding light on the distant past of Earth’s marine inhabitants.
- For centuries, the blue whale held the record for being the largest animal in the world, boasting a skeleton more than 25 meters long and weighing approximately 4.5 tonnes. Researchers believe that fully grown adults of this species might have weighed anywhere between 85 to a jaw-dropping **340 tonnes**. The density of their bones, unlike most whales, contributed to their substantial weight.

Economics

Evergreening of loans

- Recently, the **Reserve Bank of India (RBI) Governor** raised red flags over **banks adopting innovative methods for evergreening of loans** – covering up the real status of stressed loans of corporates.
- Evergreening of loans refers to a **practice where banks or lenders provide additional funds or take other measures to artificially sustain a loan** that is not being repaid as scheduled.
- It is a **temporary solution used by banks to avoid classifying the loan as a non-performing asset (NPA)** because such classification would **require them to set aside more money for potential losses, which could affect their profitability.**

Methods used by banks for Evergreening of loans:

- Bringing **two lenders together to evergreen each other's loans.**
- **Good borrowers are being persuaded to enter into structured deals with stressed borrowers.**

Self-Reliant India Fund

- As part of the **Aatmanirbhar Bharat package**, the Indian government announced a Rs. 50,000 crore Equity Infusion for **Micro, Small, and Medium Enterprises (MSMEs) through the Fund of Funds.** The initiative aims to provide equity funding to viable and promising MSMEs to help them grow and become larger units.
- **The Self-Reliant India (SRI) Fund** has been established to implement this plan, **with Rs. 10,000 crores contributed by the Government of India and Rs. 40,000 crores from Private Equity and Venture Capital funds.**
- The SRI Fund operates through a **mother-fund and daughter-fund structure for equity or quasi-equity investments.** The **NSIC Venture Capital Fund Limited (NVCFL)** is registered as the Mother Fund under the SRI Fund implementation.
- The government has also taken several other initiatives to support the MSME sector, including the launch of **the Champions 2.0 portal, the MSME Champions Scheme for financial assistance, budgetary support to Credit Guarantee Fund Trust for Micro & Small Enterprises, and the "Raising and Accelerating MSME Performance (RAMP)" program** aimed at strengthening MSMEs' access to credit and markets and promoting technology upgradation.

Worldcoin

- Worldcoin is an initiative to **create a digital network where individuals can claim a stake and join the digital economy.** The project involves **scanning individuals' irises through a device called "Orb" to collect biometric data** and issue them a **World ID.**
- In exchange, participants receive a **cryptocurrency called Worldcoin [WLD].** The goal is to build the **"world's largest identity and financial public network" accessible globally.**

- To be a part of the **Worldcoin network**, individuals can **become “Orb operators”** and scan the irises of others, or they can get their **own irises scanned to receive a World ID and WLD cryptocurrency**.

Features:

- Worldcoin uses **biometric data to ensure unique participation and avoid duplications**. The company claims to use **zero-knowledge proofs (ZKPs)** to maintain users’ privacy and **comply with Europe’s General Data Protection Regulation (GDPR)**.
- WLD’s price fluctuates, and it was criticized, **especially by NSA whistle-blower Edward Snowden, for using biometrics for verification**.
- Worldcoin has been **introduced in India**, with **Orb operators scanning people’s eyes at various locations in cities like Delhi, Noida, and Bangalore**.

Ethics & Society

UNESCO endorses banning smartphones from schools

UNESCO’s **Global Education Monitoring Report 2023** warns against the **uncritical adoption of digital technology** in educational settings, as there is little robust evidence of its added value in education.

Negative impact of mobile devices on children’s learning:

- Students get **distracted during lectures** or study time due to notifications from social media apps.
- Children find it **difficult to focus on a single task** for an extended period due to constant multitasking on devices.
- Children spend **more time on mobile games and videos than reading books** or educational material.
- Excessive use of mobile devices before bedtime leads to **sleep disturbances** and reduced sleep duration.
- Children experiencing **cyberbullying** through social media platforms, lead to emotional distress and impact their learning.
- Overreliance on virtual communication leads to **decreased social skills** and communication abilities.
- Spending excessive time on mobile devices leads to a **sedentary lifestyle**, affecting overall health and academic performance.

- Sharing personal information on social media or other platforms without understanding the **potential risks to privacy**.

Use of animals for espionage

Hvaldimir, the **beluga whale** spotted off the Swedish coast, gained attention due to the harness attached to its head, leading to speculations of it being a Russian spy.

Examples of animals being used for espionage: During World War I, **pigeons** were equipped with cameras and used to capture images over enemy territory; Dolphins and sea lions, have been trained for military purposes, such as detecting submarines and retrieving materials; the CIA even attempted to **use cats as listening devices** in the **Acoustic Kitty project**, although with limited success.

Ethical issues concerned: Animal cruelty, lack of respect for animal rights, and the potential for unintended consequences and harm to innocent animals.

Ethical concerns regarding Indian educational institutions

- Prevalent data manipulation and plagiarism
- Lack of clear ethical codes
- Misuse of authority by those in power
- Fear of expressing opinions
- A cultural perspective that sometimes sees cheating as “helping.”
- Increasing politicization of college campus

Current Affairs Update (Aug 8-13)

National

How UTs are administered?

The Union Territories (UTs) in India are administered by **the President** through an **appointed administrator**, who represents the President and exercises administrative powers in the UT. In some UTs, such as **Delhi and Puducherry**, the administrator holds significant powers, including the ability to make laws and regulations for the UT, while in others, the administrator's powers are limited to **providing advice to the elected government**.

Special provision for Delhi UT:

Special provisions have been made for certain UTs, such as **Puducherry, Delhi, and Jammu and Kashmir (yet to be constituted)**, which have a **legislative assembly and a Council of Ministers headed by a Chief Minister**. The legislative assembly of these UTs has the power to make laws with respect to matters enumerated in **List II or List III in the Seventh Schedule** of the Constitution insofar as these matters are applicable in relation to the UT.

However, **some entries in List II, such as public order, police, and land**, are not within the legislative competence of the legislative assembly of Delhi.

Justice G. Rohini Commission

- The **Justice G. Rohini Commission**, tasked with **sub-categorising Other Backward Classes (OBC) caste groups**, has submitted its report to **the Ministry of Social Justice and Empowerment after nearly six years**.
- **Formed in 2017** and led by former **Delhi High Court Chief Justice G. Rohini**, the commission aimed to **examine the concentration of reservation and benefits among dominant OBC caste groups**.
- Based on its findings, **the commission was to suggest a breakdown of the over 2,600 caste groups on the Central OBC list to ensure a more equitable redistribution of benefits**.

Major Findings:

- **The Dominance of Few Caste Groups:** A small number of caste groups among all OBC groups were found to **dominate the reservation quotas** and other government benefits meant for OBCs.

- **Equitable Redistribution:** The need to ensure a more equitable distribution of benefits among OBC communities was identified, aiming to address the imbalance caused by the dominance of certain groups.
- **Reservation Allocation Formula:** The Commission formulated a formula to **allocate reservation shares based on historical underrepresentation**, with the objective of providing a larger share to historically marginalized groups and reducing the share of dominant groups.
- **Rationalization of Central OBC List:** The Commission suggested corrections and replacements in **spellings within the Central OBC list**, aiming to rectify errors and inaccuracies in the entries.

Article 370

Article 370 was a provision in the Indian Constitution that **granted special autonomy and privileges to the state of Jammu and Kashmir**. It allowed the state to have **its own constitution, flag, and autonomy over most matters** except foreign affairs, defence, and communications. This article was **abrogated in 2019**, revoking the **special status of Jammu and Kashmir** and integrating it fully into the Indian Union.

Why was Article 370 abrogated in 2019?

Article 370 was **abrogated in 2019 to fully integrate the state of Jammu and Kashmir into the Indian Union and remove its special autonomy**. The Indian government stated that this move **aimed to promote economic development, better governance, and equal rights for all citizens across the region**, while critics expressed concerns about the potential erosion of **cultural and political distinctiveness**.

The present argument in the Supreme Court regarding Article 370:

Article 370 is part of the Constitution's **"Temporary, Transitional and Special Provisions"** section and is titled **"Temporary provisions with respect to the State of Jammu and Kashmir"**. The provision outlines that the **President can declare it inoperative**, making it commonly seen as **temporary**. However, the petitioners argue that its **temporary nature is due to the Jammu and Kashmir Constituent Assembly's role (1951-1957) in recommending changes to it**. Once the Constituent Assembly ceased to exist in 1957, the provision **was argued to have become a permanent feature**.

The central question that SC will decide is whether **Parliament has the power to abrogate Article 370 after 1957** when the Constituent Assembly was no longer in existence.

Comparison of Money Bills and Financial Bills

	Money Bills	Financial Bills
Introduction	Can only be introduced in the Lok Sabha	Can be introduced in either the Lok Sabha or the Rajya Sabha .
Originating House	Must originate only in the Lok Sabha.	Category II can originate in either the Lok Sabha or the Rajya Sabha .

Rajya Sabha Involvement	Rajya Sabha's involvement is limited ; it can only provide recommendations. (Article 117)	Rajya Sabha can fully participate , including amendments and discussions
Subjects Covered	Deals exclusively with matters listed in Article 110(1) of the Constitution .	Deals with matters beyond those listed in Article 110(1) and can include other financial provisions.
President's Role	President's recommendation is essential for the introduction	President's recommendation is required if the Bill involves expenditure from the Consolidated Fund of India
Overriding Authority	Lok Sabha's decision prevails in case of disagreements with the Rajya Sabha.	Requires agreement of both Houses for passage

Lowering the Minimum Age for Contesting Election

A Parliamentary panel has suggested lowering the minimum age for contesting in Assembly elections **from 25 years to 18 years**.

Benefits of Lowering Minimum Age

- **Youth Representation:** This allows young individuals to participate actively in the political process and bring fresh perspectives to policy discussions.
- **Enhanced Political Engagement:** Encourages political awareness and involvement among youth, contributing to a more engaged and informed citizenry.
- **Adaptation to Modern Challenges:** Acknowledges that young candidates may have insights into contemporary issues like technology, climate change, and social justice.
- **Diverse Leadership:** Promotes diversity in leadership by allowing representation from different age groups, backgrounds, and experiences.

Drawbacks of Lowering Minimum Age:

- Young candidates might lack the experience and maturity required for effective decision-making and governance.
- Young candidates may have a limited understanding of the complexities of governance and public policy.
- Young candidates might be more susceptible to external influence, as they may have less exposure to political dynamics.
- Lowering the age might lead to unprepared candidates entering the political arena, resulting in ineffective representation.

Devika: North India's First River Rejuvenation Project

North India's first River Rejuvenation Project, named Devika, is almost finished and was inaugurated by Prime Minister Narendra Modi. This project modeled after the '**Namami Ganga**' initiative, is aimed at **restoring the health of the Devika River** (in Udampur, Jammu & Kashmir).

The Liquid Waste Management Project involves creating a network of pipes and manholes connecting households under the Devika Rejuvenation Project. Additionally, a Solid Waste Management Project is planned to further enhance the river's restoration.

Mines and Minerals (Development and Regulation) Amendment Bill, 2023

Parliament passed the Mines and Minerals (Development and Regulation) Amendment Bill, 2023, (MMDR Amendment) in a bid to **attract private sector investment** in the exploration of critical and deep-seated minerals in the country.

What are critical and deep-seated minerals?

- **Critical Minerals:** Critical minerals are natural resources that are essential for various industries, including technology, manufacturing, and clean energy. E.g., Lithium, nickel, cobalt etc.
- **Deep-Seated Minerals:** Deep-seated minerals refer to minerals that are found deep within the Earth's crust and are typically more challenging and costly to explore and mine compared to minerals closer to the surface. E.g., Gold, Copper, Diamonds etc.

India's import dependency for critical and deep-seated minerals:

India is **highly dependent on imports for critical and deep-seated minerals** like

- **100% dependency:** lithium, cobalt, nickel, niobium, beryllium, tantalum,
- **Very high dependency:** copper, zinc, lead, gold, silver, platinum group elements (PGEs), and diamonds.

India's current status:

- India is the **world's 4th largest producer of iron ore** and the **2nd largest producer of coal** as of 2021.
- India is the **second-largest producer of Aluminium** globally
- India's mineral demand is projected to **rise by 3% in 2023**, fuelled by **expanded electrification** efforts and overall economic growth

Key provisions

- Allows the private sector to mine 6 atomic minerals- lithium, beryllium, niobium, titanium, tantalum and zirconium.

- The central government can **auction mining leases and composite licences** for critical minerals.
- Bill allows activities under a **single exploration licence** in an area of up to 1,000 square kilometres.
- The state conducts **auctions for mining leases** if resources are proven after exploration. **Licensee receives a share** in the auction value of the mining lease for prospected minerals.

International

BRICS summit 2023 Venue

Prime Minister Narendra Modi of India has confirmed his **attendance at the BRICS summit** scheduled to be held in Johannesburg. The **15th BRICS summit** is expected to involve substantive discussions about the potential expansion of BRICS membership.

South Africa is a country on the **southernmost tip of the African continent**, marked by several **distinct ecosystems**. Inland safari destination **Kruger National Park** is populated by big game.

Economic Community of West African States (ECOWAS)

In the ongoing crisis in Niger, where a military coup ousted the president, ECOWAS has been active. The Economic Community of West African States (ECOWAS) is a regional bloc established in **1975** with the goal of **promoting economic integration among its 15 member countries** in West Africa.

Members: These countries include Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal, and Togo.

Aim: ECOWAS aims to achieve a **single common currency and create a large trading bloc** in various sectors like industry, transport, telecommunications, energy, finance, and culture. The organization is committed to democratic principles, the rule of law, and good governance.

Actions taken:

- ECOWAS has a history of **intervening in conflicts within the region**, having deployed peacekeeping forces and playing roles in resolving conflicts in countries like Liberia and Sierra Leone.
- It suspended members like **Mali, Guinea, and Burkina Faso** following coups in those countries, refusing to recognize their new governments.

Science-Tech & Environment

What is the MPOWER measure?

MPOWER measures are tobacco control strategies developed by the World Health Organization (WHO) in 2008. They include:

- M=Monitor tobacco use
- P=Protect people from tobacco smoke
- O=Offer help to quit tobacco
- W=Warn about tobacco dangers
- E=Enforce bans on tobacco advertising
- R=Raise taxes on tobacco products

Other facts:

- The number of countries implementing at least one MPOWER measure increased from **44 (2008) to 151 (2022)**. Only **4 countries** (Brazil, Turkey, Netherlands, and Mauritius) have implemented all measures.
- **31st May** is observed as **'World No Tobacco Day'** every year to spread awareness about the deadly effects of tobacco consumption.
- **National Health Policy 2017**: Aims to reduce tobacco use by 30% by 2025 through awareness and preventive measures.
- **Prohibition of Electronic Cigarettes Act, 2019**: Enacted to combat the use of e-cigarettes, aiming to address their health risks.
- **Tobacco cultivation in India**: It is one of the important cash crops. Today, India is the **second-largest crop producer in the world after China**.

Western Tragopan

- **The Western Tragopan, Himachal Pradesh's state bird**, has been **facing habitat loss**, but efforts at a conservation breeding centre, have resulted in a gradual increase in the bird's population.
- **IUCN Status: Vulnerable; CITES– Appendix I.**
- The bird's distribution ranges from **North Pakistan to India, including Himachal Pradesh and parts of Uttarakhand**.
- The Western Tragopan **faces threats from habitat loss, anthropogenic disturbances, and hunting pressure**.

India's first captive breeding success story

In 2011-2012, Himalayan vultures were saved from poisoning incidents in Assam. Despite doubts from veterinarians about surviving the hot and humid weather, most survived and contributed to India's first successful captive breeding of Himalayan vultures at Assam State Zoo.

The Himalayan Griffon vulture, also known as the Himalayan Vulture, is found in the Himalayas and Tibetan Plateau. It ranges from western **China to central China and Mongolia**, with the ability to fly at altitudes of up to 5,500 meters. It's classified as **Near Threatened** by the IUCN.

Aceclofenac and ketoprofen

They are **non-steroidal anti-inflammatory drugs (NSAIDs)** used to relieve pain and reduce inflammation in humans and animals. However, these **drugs are harmful to vultures** and other raptor species when they **feed on carcasses** treated with these drugs.

Actions to protect vultures:

- **India has banned the use of Aceclofenac and ketoprofen to protect vulture populations** (under the Drugs and Cosmetics Act, 1940)
- **The ban on diclofenac for veterinary use was imposed in 2006.**
- India's vulture population faced a drastic decline in the 1990s due to diclofenac use in cattle. Despite the ban, it will take many years before the population is revived. Vultures are slow breeders, and mortality rates could lead to extinction if not controlled.

'Smart Corn' GMO

Smart Corn GMO is a **genetically modified corn varietal developed by Bayer**. It grows **shorter and sturdier than conventional corn** to withstand **high-wind storms** caused by climate change. This adaptation aims to **reduce damage to crops and address** the challenges posed by climate-related events.

Benefits:

- **Increased Resilience:** Shorter, sturdier stalks make the corn more resistant to high-wind storms, reducing crop damage.
- **Addressing Climate Pressures:** Smart corn is designed to adapt to climate change-induced challenges, like extreme weather events.
- **Innovative Solution:** This shows the potential of genetic engineering to create crops that can better withstand climate impacts.

Limitations:

- **Partial Solution:** While smart corn can mitigate some effects of climate change, it doesn't address the root causes of the crisis.
- **Technical Constraints:** Heavy rainfall and other climate-related factors can still impact crop health, regardless of stalk height.
- **Narrow Focus:** Focusing solely on crop adaptations might divert attention from broader efforts like decarbonization and ecosystem preservation.

Other notable recent climate-adapted crops include:

- **HB4 wheat:** FDA-approved **drought-tolerant wheat** with a sunflower gene, developed by Bioceres.
- **ZeaKal soybean:** GMO soybean with enhanced photosynthesis (to capture more CO₂) by ZeaKal Inc., distributed by Nutrien.

5% of birds in India are endemic

A recent publication by the **Zoological Survey of India (ZSI)** reveals that **5% of India's bird species are endemic**, meaning they are **unique to the country and not found elsewhere**.

Titled "**75 Endemic Birds of India**," the publication was released on the **108th foundation day** of the ZSI. Out of **India's total of 1,353 bird species, 78 (5%) are endemic to the country**.

Key Findings:

- Three of these species have not been spotted in decades: **the Manipur Bush Quail, the Himalayan Quail, and Jerdon's Courser**.
- The **Western Ghats have the highest number of endemic species**, with 28 recorded.
- **The Andaman and Nicobar Islands** also have significant endemism, **hosting 25 bird species unique to the region**.
- The publication sheds light on the conservation status of these endemic species, **with 25 classified as 'Threatened' by the IUCN, and a few listed as 'Critically Endangered,' 'Endangered,' 'Vulnerable,' or 'Near Threatened.'**

Deepor Beel

- Deepor Beel, a **vital wetland in Guwahati, Assam**, faces **anthropogenic** threats despite its protected status. Indigenous names like "beel" signify **cultural and ecological connections**, with local livelihoods intertwined with the wetland's resources.
- Efforts to sustainably coexist with the wetland include initiatives by **local women who convert water hyacinths into products**, offering employment and improving the ecosystem's health. Similarly, "**Kumbhi Kagaz**" produces **biodegradable paper** from water hyacinths, enhancing the **wetland's condition and supporting alternative livelihoods**.

- Situated in the **southwest of Guwahati, Assam**, Deepor Beel is not only one of the **largest** freshwater lakes in the region but also holds the **distinction of being the state's sole Ramsar** site. It's recognized as an **Important Bird Area by Birdlife International** and was once a water channel of the Brahmaputra River.

Nuclear Medicine

- India has expressed its support for South Africa's Integrated Early Warning systems and **Russia's BRICS Collaboration in Nuclear Medicine**
- Nuclear Medicine is a **medical speciality** that uses **radioactive substances** to diagnose and treat diseases.
- It involves the **use of small amounts of radioactive materials**, known as **radiopharmaceuticals**, which are introduced into the body.
- These substances **emit gamma rays that can be detected by specialized cameras** to create images of organs and tissues.
- This imaging technique helps in **diagnosing various conditions, such as cancer, heart disease, and bone disorders**, by providing detailed information about the functioning and structure of internal organs.
- Nuclear medicine treatments involve **using radioactive substances** to target and destroy specific cells or tissues, such as cancer cells.

Neerakshi

- India has introduced an **innovative Autonomous Underwater Vehicle (AUV)** named '**Neerakshi**' designed for mine detection (currently in the prototype stage)
- **Developed by:** Garden Reach Shipbuilders and Engineers (GRSE) Ltd and AEPL, an MSME entity.
- **Features:** 2.1-meter-long cylindrical AUV, weighing around 45 kg, can perform various tasks such as mine detection, disposal, and underwater surveys.
- It has an **endurance of four hours and a depth of up to 300 meters**, making it a versatile tool for ensuring coastal safety and protection.
- **Significance:** Important for Indian Navy, Coast Guard, and Army

Havana Syndrome

Havana Syndrome refers to a **set of mental health symptoms experienced by US intelligence and embassy officials in various countries**. These symptoms include **hearing unusual sounds, nausea, vertigo, headaches, memory loss, and balance issues**. The syndrome originated **in Cuba in 2016**, affecting US officials there, and has **since been reported in multiple countries**.

While the exact cause of Havana Syndrome is not certain, it was initially suspected to be related to a **"sonic attack" due to the sudden onset of symptoms**. Later research suggested that high-powered **microwaves might be involved, damaging or interfering with the nervous system**.

The Indian Central government has informed the Karnataka High Court that it will **investigate the matter of the 'Havana Syndrome' in India**, in response to a petition from a Bengaluru resident. The petitioner had requested a writ of mandamus for an inquiry into the syndrome and the **prevention of high-frequency microwave transmission in India**.

WHAT IS HAVANA SYNDROME?

No definitive cause has been found, but scientific studies have noted many of the acute symptoms are consistent with exposure to directed radio frequency energy

Acute symptoms (often occurring suddenly) **may include:**

- Pain in one or both ears
- Tinnitus, hearing loss
- Intense pressure or vibration inside the head
- Difficulty with memory or concentration
- Nausea
- Visual disturbances
- Unsteady gait, loss of balance, vertigo/dizziness

Chronic symptoms (can last weeks, months or longer) **may include:**

- Headache
- Insomnia
- Depression
- Impaired balance
- Impaired concentration, memory loss



Source: National Academy of Sciences

Economics

Vivad se Vishwas 2.0

The "Vivad se Vishwas 2.0" scheme has been launched by the **Department of Expenditure, Ministry of Finance**, with the aim of resolving contractual disputes involving the **government and government undertakings**.

What are contractual disputes?

Contractual disputes are **disagreements or conflicts** that arise between parties involved in a contractual agreement. These disputes occur when one or more parties believe that the terms, conditions, or obligations outlined in the contract have been **violated, misunderstood, or not properly fulfilled**.

How will the scheme help resolve disputes?

The scheme offers a **standardized voluntary (one-time settlement) approach** with **graded terms** based on the **level of dispute pendency**.

Applicability:

- **For all those disputes in which the Court award (passed up to 30th April 2023),** contractors will be offered settlement amounts up to **85% of the net amount awarded** or upheld by the court.
- **For arbitral orders (passed up to 31st Jan 2023),** the settlement amount offered will be up to **65% of the net amount awarded**.

Implementation: By utilizing the **government e-marketplace (GeM) platform** for processing claims.

Significance: The scheme streamlines the **resolution process and aims to expedite** the settlement of contractual disputes.

Maharatna category

The Government of India has **elevated Oil India Limited to the 'Maharatna' category**, granting the company **enhanced decision-making powers in financial matters**.

Oil India has become the **13th Maharatna Central Public Sector Enterprise (CPSE) in India**. Having achieved **Navaratna status in 2010**, Oil India's recent acquisition of **Numaligarh Refinery Ltd.** further **solidified** its position as **an integrated energy company**.

Also, the government elevated **ONGC Videsh Ltd (OVL) to Navratna CPSE**. OVL will be the **14th Navratna amongst the CPSEs**.

Criteria for Maharatna Status

1. Shall have **Navratna status**
2. Listed on the Indian stock exchange with prescribed public shareholding
3. Average annual turnover > Rs. **25,000 crore (last 3 years)**
4. Average annual net worth > Rs. **15,000 crores (last 3 years)**
5. Average annual net profit after tax > Rs. **5,000 crores (last 3 years)**
6. Significant global **presence/international operations**

Restrictions on the import of electronic devices

The Indian government has introduced **immediate restrictions on the imports of personal computers, laptops, and other electronic devices** to promote domestic manufacturing.

India is obligated to its commitment to **zero-duty imports under WTO's Information Technology Agreement (ITA 1)**. Due to this, the government was unable to check the import of electronic goods, thus impacting its domestic manufacturing. Hence it imposed import restriction

What do the new rules say?

- **Directorate General of Foreign Trade (DGFT) (Ministry of Commerce)** issued a notification saying that any import of laptops, tablets, etc., under **Harmonized System of Nomenclature (HSN) 8471** shall be 'restricted' and would be allowed **against a valid license from DGFT** from 'trusted' sources.
- **Exemption for imports under Baggage Rules**, R&D, testing, benchmarking, repair, etc.

Aim: It will likely aim at **boosting local production** and reducing dependence on imports from China, which accounted for over **75% of India's laptop and personal computer imports** in the previous fiscal year.

Significance:

- The decision aligns with the **production-linked incentive (PLI) scheme for IT hardware** and seeks to encourage companies to manufacture within India.
- Protection of **Critical Information Infrastructure** and its security concerns.
- Achievement of the **Make-in-India vision**

Impact: The restrictions are expected to impact **companies like Apple, Samsung, and Acer, potentially leading to increased local manufacturing** and potentially affecting consumer prices based on how licensing norms are enforced.

Aquaculture

Aquaculture involves **cultivating aquatic organisms such as fish, shellfish, and aquatic plants** under controlled conditions. It is a controlled environment where aquatic organisms are **bred, reared, and harvested** for various purposes, including food production, research, and conservation.

Fisheries refer to the activities related to **catching, harvesting, and managing wild fish and other aquatic organisms** from natural water bodies such as oceans, rivers, and lakes. Unlike aquaculture, fisheries rely on capturing organisms **from their natural habitats** rather than cultivating them in controlled environments.

Government Initiatives Related to Fisheries:

- Matsya Setu
- Fisheries and Aquaculture Infrastructure Development Fund (FIDF).
- Blue Revolution
- Marine Products Export Development Authority (MPEDA)
- Kisan Credit Card (KCC)
- Pradhan Mantri Matsya Sampada Yojana

India is the **second largest fish-producing country** in the world accounting for over **7.5 %** of global production. India is the **4th largest exporter** of fish in the world.

Omkareshwar Reservoir (Madhya Pradesh)

- **NTPC Renewable Energy Limited** has successfully secured a **bid for an 80 MW** floating solar project at the **Omkareshwar Reservoir in Khandwa, Madhya Pradesh**.
- The largest floating solar project in India is a **100 MW installation located at NTPC Ramagundam** in Telangana.
- The Omkareshwar Dam is a **gravity dam on the Narmada River just upstream of Mandhata in Khandwa district, Madhya Pradesh**, India. It is named after the Omkareshwar temple located just downstream.

Ethics & Society

What is mental health?

According to the World Health Organization (WHO), mental health is a state of well-being in which the **individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully**, and is able to make a contribution to his or her community.

Why in news? An RPF jawan (on the **Jaipur-Mumbai Superfast Express**) with mental health issues shot and killed passengers, prompting questions about having armed troubled personnel on duty

The government has taken several steps to improve mental health:

- **Constitutional Provision:** Recognized healthcare as a fundamental right under Article 21.
- **Mental HealthCare Act 2017:** Ensured access to mental healthcare from government-funded services, reduced use of **Section 309 IPC** (suicide attempt), and focused on treatment.
- **National Mental Health Program (NMHP):** Addressed mental disorders and the shortage of professionals since 1982, including modernization of mental hospitals and upgrading psychiatric wings.

- **Kiran Helpline:** Launched a 24/7 toll-free helpline to provide support for anxiety, depression, suicidal thoughts, and more.
- **Manodarpan:** Launched under Atmanirbhar Bharat Abhiyan to offer psychosocial support for students, families, and teachers during the Covid-19 pandemic.

The doctrine of 'reasonableness'

The 'reasonableness doctrine is a **legal principle used to evaluate the validity of administrative decisions**. It assesses whether a decision is **extremely unreasonable**, based on factors like the consideration of relevant information, proper balancing of factors, and absence of irrelevant influences.

If a decision lacks these qualities, it can be invalidated.

For instance, if a government decision allocates resources without adequately considering the impact on citizens' well-being, or if a political appointment is made without proper evaluation of the candidate's qualifications, the 'reasonableness' doctrine can be used to challenge and overturn such decisions.

Parliamentary panel findings on Drug abuse in India

Parliament Standing Committee on Social Justice and Empowerment in India has recommended conducting a survey to assess the **impact of drug abuse on society**. In 2018, the ministry commissioned a national survey conducted by the **National Drug Dependence Treatment Centre (NDDTC) AIIMS**, which formed the basis of the **National Action Plan for Drug Demand Reduction (NAPDDR)** to address drug abuse in the country.

Drug abuse refers to the **excessive, inappropriate, or harmful use of legal or illegal** substances, leading to negative physical, mental, social, and behavioural consequences.

Findings of the Panel:

- **No comprehensive study or survey** has been conducted by the Ministry of Social Justice and Empowerment to assess the **impact of drug abuse on society**.
- **Around 37 crore people** in the age groups of **10-17 years (children) and 18-75 years (adults)** are using drugs and alcohol in states like Punjab, Haryana, Delhi, Uttar Pradesh, Odisha, and Maharashtra.
- **Penetration of District De-Addiction Centers (DDAC)** is inadequate.
- **Decrease in financial allocations** for preventive education and awareness programs.
- **Delay in providing training to Master Trainers** under the Navchetna Programme, which focuses on life skills and drug education for school children.

Current Affairs Update (Aug 14-19)

National

Reforms in Indian Criminal Law

Union Home Minister and Minister of Cooperation introduced three bills in the Lok Sabha, namely the **Bhartiya Nyaya Sanhita Bill 2023**, the **Bharatiya Nagarik Suraksha Sanhita Bill 2023**, and the **Bharatiya Sakshya Bill 2023**. These bills replace the British-era Indian Penal Code (IPC) 1860, Criminal Procedure Code (CrPC) 1898, and Indian Evidence Act 1872.

Issues with the previous laws:

- **British Legacy:** The old laws were **remnants of British colonial rule**, designed to maintain their control over India's justice system.
- **Punitive Approach:** The focus of the old laws was punishment rather than ensuring justice for citizens.
- **Outdated:** The laws, enacted in the 19th century, didn't align with modern societal norms, technology, or justice requirements.
- **Low Conviction Rates:** The outdated laws contributed to low conviction rates and delayed justice, eroding public trust in the legal system.
- **Gender Insensitivity:** The old laws inadequately addressed crimes against women and children, reflecting an insensitive approach.
- **Complex Procedures:** Cumbersome procedures and paperwork led to delayed trials and inefficiencies in the criminal justice system.
- **Misuse of Powers:** The laws could be misused by authorities to target individuals and curtail civil liberties, such as the misuse of sedition charges.
- **Lack of Victim Focus:** The focus was often on legal technicalities rather than providing support and justice for victims.
- **Lack of Technological Integration:** The old laws lacked provisions for utilizing modern technology, hindering efficient investigation and evidence presentation.
- **Limited Scope:** The laws failed to address contemporary issues like cybercrimes, terrorism, and organized crime adequately.

Major provisions of **Bhartiya Nyaya Sanhita Bill 2023**

- 356 sections (replacing 511)

- A separate chapter is dedicated to women & children; **Sexual intercourse on the false promise** of marriage, employment, etc., has been made a new offence. **Initiating children into crime** made punishable
- Address newer crimes, cyber offences
- Zero FIR, e-FIR introduced
- Sedition Law repealed
- **New definitions of Terrorism** for 1st time, property confiscation; armed rebellion, separatist activities, organized crimes, etc., have been made separate offences; **Mob lynching** made an **offence explicitly**

Major provisions of Bharatiya Nagarik Suraksha Sanhita Bill 2023

- 533 sections (160 changed)
- Digitization of processes
- **Trial expedited**, Summary trial for petty offences;
- **Fixing the 90-day window for investigation** after filing of chargesheet
- **Witness protection scheme** to be made by states;
- Bail after **serving 1/3rd of the maximum sentence** for first-time offenders.

Major provisions of Bharatiya Sakshya Bill 2023

- 170 sections (23 changed)
- **Video recording**, electronic evidence;
- **Accepted documents** include electronic and digital records, emails, etc;
- Video recording of search and seizure operations by the police
- **Mandatory digitization of FIR**, chargesheets, etc.; **Mandatory use of Forensic services** for offences punishable with 7 or more years

Centre's Bill on Election Commission Appointments

A Bill (Chief Election Commissioner and other Election Commissioners (Appointments, Conditions of Service, Term of Office) Bill) has been proposed by the Centre in the Rajya Sabha to amend the process of **appointing Chief Election Commissioners (CEC) and Election Commissioners (ECs)** in order to address the impact of a Supreme Court verdict.

Background:

In March this year, the Supreme Court ruled that a **committee comprising the Prime Minister, Leader of Opposition in Lok Sabha, and Chief Justice of India** must appoint CEC and ECs until a relevant law is enacted by Parliament. The court noted that the **Constitution lacked provisions for the appointments**. The judgment brought the appointment process **on par with that of the CBI Director**.

The new Bill's Aim: The proposed Bill seeks to **replace the Chief Justice of India** with a nominated Cabinet Minister in the committee for appointments.

Issues with the proposed bill:

- The committee consists of the Prime Minister, the nominated Cabinet Minister, and the Leader of the Opposition. This potentially gives the Executive dominance in appointments, undermining the independence of the Election Commission.
- The Bill replaces the Chief Justice of India with a nominated Cabinet Minister in the appointment process. This reduces judicial representation in the committee and might affect impartiality.
- The rank of Election Commissioner is being reduced in the warrant of precedence. This could impact their stature

CAG Report on Railway Finance

The Comptroller and Auditor General (CAG) reported that in the fiscal year 2021-22, the financial health of Indian Railways entered a **“concern zone.”**

Key findings:

- The railway operator **spent ₹107 to earn ₹100** due to increased pension funding
- Indian Railways couldn't generate a **net surplus in 2021-22**
- Ministry of Railways' total expenditure **increased over 35% more than the previous year.**
- Over **75% of total working expenses** are spent on staff costs, pension payments, and rolling stock lease charges

Interpol Global Academy Network

The Central Bureau of Investigation (CBI) Academy has recently joined the **Interpol Global Academy Network as its 10th member.**

What is Interpol Global Academy Network?

It is an initiative **launched by Interpol in 2019 to enhance global law enforcement** training. It fosters collaboration among law enforcement training institutions through joint programs, research, and knowledge exchange while promoting excellence and innovation in training.

About CBI Academy

The CBI Academy is the training institution of India's premier investigative agency, the Central Bureau of Investigation (CBI). Established in 1996, the academy is in Ghaziabad, Uttar Pradesh, aiming for professionalism, impartiality, and dedication. It offers diverse training on topics like cybercrime, and anti-corruption, and collaborates with foreign agencies and international organizations.

The Central Bureau of Investigation (CBI) was **founded in 1963 to combat corruption and breaches of central laws**. Operating under the **Delhi Special Police Establishment Act**, it investigates bribery, corruption, organized crime, and international cases.

Keralam

The Kerala Assembly has passed a resolution to rename the state as **“Keralam” in both the Constitution and official records**.

While the state has been referred to as **“Kerala” in English**, the name in Malayalam is **“Keralam.”** The resolution aims to **align the English and Malayalam names**.

The term **‘Kerala’** has its **origins in ancient texts**, and **‘Keralam’** is considered a closer reflection of the original Malayalam pronunciation.

Historical Connections:

- **Asoka’s Rock Edict:** The earliest historical reference to the region is in Emperor Ashoka’s **Rock Edict II of 257 BC**, where the local ruler is mentioned as **“Keralaputra,”** meaning **“son of Kerala”** or **“son of Chera,”** referring to the Chera dynasty.
- **Unity of Malayalam-Speaking People:** The demand for a united territory for all Malayalam-speaking communities gained momentum during the **Aikya Kerala movement** in the 1920s. This movement aimed to **integrate the regions of Malabar, Kochi, and Travancore** into a single territory.

To rename a state in India, the following process is followed:

- **State Government Proposal:** The state government drafts a resolution expressing the desire to change the name of the state.
- **Ministry of Home Affairs (MHA) Approval:** Since changing the name of a state involves altering the Constitution, approval from the MHA is required.
- **No Objection Certificates (NOCs):** The MHA seeks No Objection Certificates (NOCs) from various central government agencies such as the Ministry of Railways, Intelligence Bureau, Department of Posts, etc.
- **Constitutional Amendment:** If the MHA finds the proposal acceptable and all the necessary NOCs are obtained, a Constitutional amendment is initiated.
- **Bill in Parliament:** The Bill goes through the usual legislative process in both the Lok Sabha (Lower House) and the Rajya Sabha (Upper House). The Bill requires a **simple majority to be passed**.
- **President’s Assent:** Once the President gives his assent, the Bill becomes law.

- **Implementation:** With the President's assent, the name change becomes official and is implemented.

Impact of the DPDP Bill on the RTI Act

The recently passed **Digital Personal Data Protection Bill** in India has raised concerns among **privacy experts due to its potential impact on the landmark right to information (RTI)** law. The Digital Personal Data Protection Bill 2022 (DPDP) is India's new law aimed at regulating the collection, storage, and processing of personal data, based on the recommendation of the committee led by **retired Justice B N Srikrishna**.

Individual consent is required for collection and Processing. Individuals also have the right to withdraw consent and demand the erasure of data

Seven principles:

1. Usage of personal data must be lawful, fair, and transparent.
2. Personal data should be used only for its intended purposes.
3. Data minimization is emphasized.
4. Data accuracy during collection is crucial.
5. Personal data shouldn't be stored indefinitely; limited storage duration is mandated.
6. Safeguards must prevent unauthorized data collection or processing.
7. Accountability lies with the entity determining data processing purpose and means

The bill offers exemptions (by the government) for businesses based on user numbers and data volume, addressing concerns from startups about compliance burden. National security and government agency exemptions are retained, safeguarding India's interests.

The Digital Personal Data Protection Bill impacts the Right to Information (RTI) Act in the following ways:

- **Exemption of Personal Information:** The new data protection law changes a provision in the RTI Act to exempt "**personal information**" from being disclosed. This affects information sought under the RTI law.
- **Impact on Transparency:** Activists and experts are concerned that the change will reduce transparency and hinder the ability to access information.

- **Blanket Ban on Personal Information:** The new law introduces a blanket ban on personal information, making it difficult to access information even if it relates to **public activities or larger public interest**.
- **Increased Denials:** Officials are expected to deny more RTI requests using the personal information exemption, affecting the availability of crucial information.
- **Exception Burden:** While the change doesn't affect the provision allowing access if **public interest outweighs the harm**, it shifts the burden to individuals seeking information to **prove its public interest**.

Indian Army Dedicates “Bhagat Bridge” on 77th Independence Day

On India's 77th Independence Day, the Indian Army inaugurated the “Bhagat Bridge” in Danna Village, the last village on the Line of Control in the Machhal Sector of Jammu and Kashmir. This 115-foot long bridge is named in memory of Late Major Bhagat Singh, Veer Chakra awardee, who valiantly defended the sector during the 1965 war.

The bridge not only connects the remote village but also symbolizes the Army's commitment to the welfare of the people of Jammu and Kashmir. Despite challenging weather conditions, Indian Army engineers worked tirelessly for two months to build the bridge.

International

Vasudhaiva Kutumbakam

The Ministry of External Affairs has **defended the inclusion of the Sanskrit term “Vasudhaiva Kutumbakam” (The world is one family)** in the G-20 logo. Moreover, India will use the English version of the phrase – **“One Earth, One Family, One Future”** – in summary documents and outcome statements.

Vasudhaiva Kutumbakam is the phrase that finds its origin in the **Maha Upanishad**, essentially meaning **“the world is family”**. It emphasizes the **interconnectedness and unity of all people and nations, promoting** a sense of global harmony, cooperation, and shared responsibility for the well-being of the planet and its inhabitants.

Why has China objected to its use?

China objected to **non-UN languages like Sanskrit** in G-20 texts. The G-20's working language is English. Official languages of the UN: **Arabic, Chinese, English, French, Russian, and Spanish**

Deflation

China has entered a **state of deflation due to challenges** in its post-pandemic recovery efforts, as evidenced by recent data.

Deflation is an economic phenomenon characterized by a sustained decrease in the general price level of goods and services within an economy. It is the opposite of **inflation**, where prices tend to rise over time. Deflation occurs when **the supply of goods and services exceeds demand**, leading to a decrease in consumer spending.

Effects of Deflation: While lower prices might seem advantageous, they can hinder economic growth by causing businesses to cut jobs, freeze hiring, and offer discounts to maintain sales.

Reasons for deflation in China:

- Government intervention in IT, Real state industries
- Crackdown on polluting industries
- Rising wages in China
- Geopolitical tensions leading to the trade war with the USA
- **Challenges to Recovery:** China's post-COVID-recovery momentum has faltered as domestic demand weakens.
- **Consumer Price Index (CPI)** Dropped in China
- **Product Price Index (PPI) Decline:** The product price index, a measure of wholesale prices, continued its downward trajectory

Katchatheevu Island

The island of Katchatheevu is a tiny uninhabited **landmass located in the Palk Strait between India and Sri Lanka**. The island, which was ceded to Sri Lanka by the Indian government in 1974, has sparked **ongoing debates and protests in Tamil Nadu** due to its historical and cultural significance, as well as its **impact on fishermen's livelihoods**. Tamil Nadu continues to call for the retrieval of Katchatheevu from Sri Lanka.

Visa Issuance Suspensions Between France and Mali

- France and Mali have suspended the issuance of visas to each other's citizens, escalating a dispute between the two countries.
- The conflict between France and Mali stems from Mali's 2020 military junta takeover, ousting the elected president over security and political failures. France's concerns about regional tensions increased Russian involvement, and security issues led to a phased withdrawal of its anti-jihadist force.
- **Mali is a landlocked country in West Africa.** Mali is the eighth-largest country in Africa. The country is bordered on the north by Algeria, on the east by Niger, on the south by Burkina Faso and Côte d'Ivoire, and on the west by Guinea and Senegal.
- In the late 19th century, **during the Scramble for Africa, France** seized control of Mali, making it a part of **French Sudan**. French Sudan (then known as the Sudanese Republic) joined Senegal in **1959**, achieving independence in **1960 as the Mali Federation**.

Science-Tech & Environment

How climate change is killing languages?

- Climate change-induced **forced migration is causing language extinction**, particularly in regions rich in languages. Environmental disasters like floods and storms are displacing people, leading to language loss.
- **Migration** for economic benefits also drives language shift, as seen with Indigenous languages in the US and Australia.
- **Environmental-driven migration** in vulnerable regions like South Asia endangers languages in Papua New Guinea, Vanuatu, Indonesia, India, and the Philippines. Small communities dispersing due to migration hinder traditional preservation methods, accelerating language loss.

Asian Elephant

- Union Minister Shri Bhupender Yadav, addressing World Elephant Day, highlighted **India's vital role in conserving wild Asian elephants** due to its largest population.
- India has about **30,000 Asian Elephants**, which is the **world's largest population** of the species (More than 60% of the world's elephant population is in India)
- As per Elephant Census (2017), **Karnataka** has the highest number of elephants (6,049), followed by Assam (5,719) and Kerala (3,054)
- **August 12** is celebrated as World Elephant Day every year. The theme for World Elephant Day 2023 is **"Ending the Illegal Wildlife Trade"**
- India declared **elephants as the National Heritage Animals**, affording them protection under **Schedule I of the Indian Wildlife (Protection) Act, 1972**

MISHTI

- **MISHTI:** Mangrove Initiative for Shoreline Habitats & Tangible Incomes
- **Objective:** Plant mangroves along coastlines and salt pan lands, promote intensive afforestation, and ensure sustainable livelihoods.
- **Approach:** Convergence of MGNREGS, CAMPA Fund, and other sources for mangrove plantation.

Key Features:

- Intensive coastal mangrove afforestation.
- Comprehensive coverage across states and territories.
- Sharing best practices through Public Private Partnership.

- Promotes eco-tourism, agroforestry, and alternative livelihood

Zayed Talwar

The Indian Navy's ships **INS Visakhapatnam** and **INS Trikand** have arrived in Dubai to conduct the bilateral exercise '**Zayed Talwar**' with the UAE Navy.

Aim: The exercise aims to **enhance interoperability and cooperation** between the two naval forces. The visit seeks to **strengthen the maritime partnership**, share best practices, and **foster a common understanding of security challenges** in the region.

Other exercises between India and UAE:

- Exercise Desert Flag (Air Force)
- In-UAE BILAT (bilateral naval exercise)
- Desert Eagle (bilateral air force exercise)

Vaquita porpoise

- The **International Whaling Commission (IWC)** has issued its first-ever extinction alert for the **critically endangered vaquita porpoise, the world's smallest porpoise native to Mexico's Gulf of California.**
- The vaquita's population has dwindled to just **nine or ten individuals due to illegal gill net fishing**, which aims to **catch the totoaba fish for its valuable bladder in the Asian market.**
- The IWC's scientific committee highlighted an **alarming 83% decline in the Vaquita population between 2015 and 2018.** This alert is driven by the need for a new mechanism to voice extinction concerns for various cetacean species and populations.
- The vaquita (*Phocoena sinus*) is the **world's smallest cetacean.** They are **only distant relatives of dolphins.**
- **IUCN Red List status:** Critically Endangered.

Graphene-Aurora Program

The "**Graphene-Aurora Program**" was launched by MeitY Maker Village in Kochi, Kerala. This initiative, led by **Digital University Kerala**, aims to bridge the gap between **graphene research and commercialization.** The establishment of the **India Graphene Engineering and Innovation Centre (I-GEIC)** will play a pivotal role in this effort.

Graphene is a **single layer of carbon atoms arranged in a hexagonal lattice**, forming a two-dimensional structure. It is known for its **remarkable properties**, including exceptional strength, electrical conductivity, and thermal conductivity.

Uses of Graphene: Graphene's unique characteristics make it a **versatile material with various potential applications** across different industries. It is used in **electronics for creating faster and more efficient**

devices, in materials science for reinforcing composites, in energy storage for enhancing battery performance, and in medical fields for drug delivery and biosensors, among other uses.

Prabal Revolver

India is gearing up for the launch of its first-ever long-range revolver, “Prabal,”. Manufactured by **Advanced Weapons and Equipment India (AWEIL)**, this **.32 bore revolver** boasts a firing range of up to **50 meters**, a significant advancement compared to other revolvers available in the country.

Notably, Prabal features a side swing cylinder, a novel design feature that enhances its usability. Weighing only **700 grams** and equipped with user-friendly attributes, Prabal is being hailed as a convenient and safer option, even for women. AWEIL, a government-owned enterprise based in Kanpur, specializes in defense equipment production and has received substantial orders for defense products, signifying its growing influence in the sector.

Preventive Pill for STIs

The United States is set to deploy an existing antibiotic, **DoxyPEP (doxycycline)**, repurposed as a preventive pill to combat sexually transmitted infections (STIs). Recent reports state that DoxyPEP can substantially reduce the risk of **chlamydia, gonorrhea, and syphilis** when taken after unprotected sexual activity.

The Centers for Disease Control and Prevention (CDC) will assess the potential benefits of curbing rising STI rates against the risk of promoting antibiotic-resistant strains. The new approach targets high-risk groups like gay men and transgender women with prior infection histories.

Maya Operating System

- India’s Defence Ministry is taking a significant stride in enhancing its cybersecurity by introducing an indigenously developed operating system, Maya OS.
- Maya OS is an innovative operating system crafted by the Union Ministry of Defence to fortify its computer systems against cyberattacks. It stands on the open-source Ubuntu platform, utilizing freely available software.
- Maya OS is an innovative operating system crafted by the Union Ministry of Defence to fortify its computer systems against cyberattacks. It stands on the open-source Ubuntu platform, utilizing freely available software.
- A collaborative effort involving experts from Defence Research and Development Organisation (DRDO), Centre for Development of Advanced Computing (C-DAC), National Informatics Centre (NIC), Indian software companies, and academic institutions culminated in the creation of Maya OS within six months.

Economics

Aromatic rice 'Mushkbudji'

- An aromatic rice named “Mushkbudji” from Kashmir received a **Geographical Indication (GI) Tag recently**. Mushkbudji rice, which was granted the GI tag along with eight other products from Jammu and Kashmir, **is known for its short, bold grains and rich aroma**.
- In the past, **the consumption of this aromatic rice was restricted to special events due to its limited availability and high cost**.
- The government’s efforts to **revive this rice variety in 2007 after its decline in the 1970s due to blast disease have also contributed to its resurgence**. More farmers are **now drawn to cultivate this unique and fragrant rice variety due to its promising qualities and potential for higher income**.

New Soil Health Card Scheme

The **Soil Health Cards (SHCs) Scheme**, initiated in 2014-15, involves **soil sampling, testing, and issuance of soil health cards to assist all farmers in the country**. These cards provide **insights into soil nutrient status and recommend appropriate nutrient dosages for enhancing soil fertility and health**.

New Developments:

- The **Government of India has introduced technological enhancements to the scheme**. The Soil Health Card portal has been upgraded and integrated with a **Geographic Information System (GIS), allowing test results to be visualized on a map**.
- The **mobile application for the scheme** has been improved, enabling smooth implementation and easy access to soil health cards.
- Notable features include **restricted sample collection regions, automated latitude and longitude selection, and QR code generation for linking samples with test results directly on the portal**.
- The Soil Health Card scheme has been **merged into the Rashtriya Krishi Vikas Yojana (RKVY) cafeteria scheme as a component named ‘Soil Health & Fertility’ from 2022-23**.
- Guidelines for **Village Level Soil Testing Labs (VLSTLs)** were issued recently and these labs can be established by **individual entrepreneurs, rural youth, community-based groups like Self Help Groups (SHGs), schools, and agricultural universities**.
- **VLSTLs educate farmers about soil sampling, testing, generating soil health cards, and provide fertilizer and crop recommendations**.

Remittances

- Remittances are **funds sent by migrants to their families and friends** in their home countries. They serve as **vital income and foreign exchange** for numerous developing nations, particularly in South Asia.
- **Private remittances** significantly contribute to **India's current account**, helping offset the **trade deficit that** often arises from merchandise trade.
- Remittances are typically **classified as part of the current account** in a country's balance of payments.

India's Status:

India has **consistently remained the leading global recipient** of remittances for several years. This is in contrast with FDI inflows, which were lower at about \$71 billion in FY23, down from about \$85 billion in FY22

The top five recipient countries for remittances in 2022 were **India, Mexico, China, the Philippines, and Pakistan**

The top sources for inward remittances to India in 2020-21 were the

- USA (over 23%)
- UAE (18%)
- UK (about 7%)
- Singapore (about 6%)
- Saudi Arabia (about 5%)

Ethics & Society

The NMC Registered Medical Practitioner (professional conduct) Regulations 2023

The National Medical Commission (NMC) has issued comprehensive guidelines for the **professional conduct of registered doctors in India under The NMC Registered Medical Practitioner (professional conduct) Regulations 2023**

Key points:

- **Doctors can use social media** for providing information or announcements. The information **must be verifiable and not misleading**.
- The guideline warns **against soliciting patients through social media**

- **Prohibited:** discussing patient treatment specifics, and sharing patient scans online. **Patient privacy** must be maintained
- Doctors required to **prescribe generic medicines**
- **Doctors have the right to refuse treatment** for abusive, unruly, or violent patients and relatives
- **Must not refuse treatment** in medical emergencies
- Doctors mandated to **undergo continuous learning throughout** active years
- **Doctors prohibited** from participating in **conferences**, CPD sessions sponsored by **pharmaceutical companies**
- **Prohibited from receiving gifts, hospitality, or monetary benefits** from pharmaceutical companies, medical device companies, or corporate hospitals.

“Sponge city”

A “sponge city” is an urban initiative that employs nature-based solutions like permeable surfaces, canals, ponds, and wetland restoration to enhance water absorption, drainage, and flood resilience. The goal is to mitigate waterlogging and urban flooding caused by rapid urbanization and impermeable surfaces.

Issues with the “Sponge City”

Rapid urbanization and concrete development have compromised natural water absorption, leading to waterlogging and floods. Despite the initiative, many cities remain **vulnerable to flooding**. Limitations include the **inability of sponge city infrastructure** to handle extreme rainfall events and the need to catch up with the impacts of climate change in less-developed regions.

Ancient History: Democracy in India

In the context of **India’s 76th year of Independence**, the article highlights the debate surrounding the **origins of democracy and India’s claim to being the “mother of democracy.”**

Democracy is a system of government where power is vested in the hands of the people, allowing them to participate in decision-making through voting and representation.

The debate:

Western narrative claims that **democracy was invented in ancient Athens** before being rediscovered and spreading around the globe in modern times.

While ancient Greece is often associated with the birth of democracy; India’s historical references to democratic practices challenge this narrative.

References in **ancient texts like the Rig Veda and Buddhist scriptures** suggest democratic forms of governance in India. The **Vinay-Pitaka** scripture regulated meetings and voting through a secret ballot system in Buddhist sanghas.

Ancient Indian states like the **Lichhavis, Mallas, and Vajji confederations** were republics with self-governing systems.

State GK (Punjab)

Karnail Singh Isru

- On India's Independence Day, Punjab Chief Minister paid homage to **activist Karnail Singh Isru**, who died on the same day **in 1955 while participating in the Goa Liberation Movement**.
- Karnail Singh Isru was born in 1930 in what is now **Pakistan and was inspired by the freedom movement against colonial rule**. He joined the **Communist Party of India (CPI) and became part of the Goa Liberation Movement**, which aimed to hoist the Indian flag in Goa.
- Isru left his home to join the movement without informing his family and was part of a group of **Satyagarhis led by Sahodrabai Rai**. However, upon entering Patradevi village in Goa, Portuguese forces opened fire, and Isru was fatally shot in the chest at the age of 25.
- **Goa was eventually annexed by India in 1961 through Operation Vijay**.
- In Goa, a **bronze bust of Isru was installed in a primary school in Patradevi village**. The legacy of Karnail Singh Isru serves as a **reminder of the sacrifice made for India's freedom struggle and the Goa Liberation Movement**.

Current Affairs Update (Aug 20-25)

National

Issues with recent reforms in Indian Criminal Law

- The Bharatiya Nyaya Sanhita (BNS) bill reflects gender bias by **treating women as needing protection rather than equals**. **Marital rape** is criminalized only if the wife is under 18, perpetuating the idea of spousal ownership and control.
- Sections like “**outraging modesty**” (**BNS Section 73**) employ regressive terminology, reflecting outdated ideas about women’s behaviour and morality.
- The bills focus on sexual offences against women and **do not adequately address sexual offences perpetrated by men against other men** or women against other women
- The bills grant discretionary powers to law enforcement agencies, such as the “**right to handcuff**,”.
- The new bills seemingly endorse practices like **detention without charges for extended periods (90 days in certain cases)**, raising concerns about the potential erosion of individual liberties and rights.
- The definition of offences like “**subversive activities**” and “**provocation and intimidation of the government**” (exact provisions not specified) is vague and broad, potentially leading to overreach and misuse.

Lily Thomas case and Section 8(4) of RPA

The **Lily Thomas case** pertains to the Supreme Court of India’s judgment that **invalidated Section 8(4) of the Representation of People Act**. This provision allowed a **three-month period for convicted legislators** to appeal before disqualification.

The court’s ruling led to **instant disqualification** upon conviction, impacting the careers of sitting legislators. The judgment was based on the premise that **Article 102(1) doesn’t distinguish between sitting members and candidates** for disqualification.

Disqualification of MPs and MLAs under RPA, 1951:

- **Section 8(3) disqualifies MPs and MLAs** convicted and **jailed for 2+ years**, leading to **6-year disqualification** after release. Convicted individuals on bail with pending appeals are **ineligible for contesting elections**.
- **Section 8(4)** previously allowed convicted legislators to continue if they appealed **within 3 months**. In Lily Thomas’s case, Supreme Court, July 2013, declared 8(4) unconstitutional, disqualifying on the date of conviction.

PM e-Bus Sewa scheme

The Union Cabinet has approved the **PM e-bus Sewa scheme**, aiming to introduce **10,000 electric buses** in city bus services across India.

Features:

- **Objective:** The scheme aims to **introduce 10,000 electric buses (e-buses)** in city bus services across India and enhance urban infrastructure **for green mobility**.
- **Financial Allocation:** Central government will provide ₹20,000 crore in subsidies
- **Duration:** The scheme will support bus operations for a **duration of 10 years**.
- **Implementation Segments:** The scheme will be implemented in two segments: **In 169 cities (selected through challenge mode for cities with a population of 3-40 lakhs)**, 10,000 e-buses will be deployed through a public-private partnership (PPP) model. **For cities with less than 5 lakh population:** 50 e-buses. **For cities with 20-40 lakh population:** 150 e-buses
- **Operation Responsibility:** **States or cities** will be responsible for running the e-bus services and making payments to the bus operators.
- **Employment Generation:** The scheme aims to generate 45,000 to 55,000 jobs and reduce noise, air pollution, and carbon emissions.

Sanchar Saathi Portal

Previously in May this year, DoT introduced the Sanchar Saathi portal and fraud detection mechanisms to identify individuals with more than nine mobile connections.

Indian Department of Telecommunications (DoT) has taken steps to combat **cyber fraud involving SIM cards**

- The DoT now requires **registration and strong verification of SIM card dealers** to reduce fraudulent mobile connections.
- **Around 67,000 SIM dealers** have been blacklisted due to their involvement in cyber fraud schemes.
- Those found complicit in such activities **could face fines of ₹10 lakh**
- **Bulk SIM card provision** to companies is being discontinued, replaced by a business system requiring KYC procedures.

'FloodWatch' app

The Central Water Commission of India has introduced the **'FloodWatch' app**, designed to **forecast floods one day in advance** and provide a **seven-day advisory for flood risk** at various measurement stations across the country.

The app features a **map of India with colour-coded circles** representing flood risk levels:

- Green for normal
- Yellow for above normal
- Orange for severe
- Red for extreme

The app also provides **State-wise/basin-wide flood forecasts for up to 24 hours** or flood advisories, up to seven days, that can be accessed by selecting specific stations.

Offshore wind power projects

The Union Ministry of New and Renewable Energy (MNRE) has invited bids for **surveying sites earmarked for offshore wind power projects** in Tamil Nadu, India.

Offshore wind power projects involve **generating electricity from wind turbines** installed in bodies of water, typically **oceans or seas**. Offshore wind power offers the advantage of **stronger and more consistent wind speeds** compared to onshore locations, potentially leading to higher energy generation.

The government's plan involves **auctioning projects with a capacity of 4 GW** (this year) and an **additional 3 GW capacity** in the subsequent financial year. The projects will be executed using two different models:

- one with **government-backed viability gap funding**
- other involving **competitive bidding for site leasing** and subsequent development **without financial support**

Bengaluru: India's first 3D-printed post office

It has been inaugurated in **Bengaluru's Cambridge Layout**. The post office was constructed in just 43 days, ahead of schedule, with technological support from IIT Madras and guidance from **Professor Manu Santhanam**.

3D printing, also known as **additive manufacturing**, involves creating **three-dimensional objects** layer by layer using a computer-created design. This process is used in various industries, and its popularity has grown due to advancements that have **reduced errors and increased efficiency**.

The technology has been used in sectors **like automotive, aerospace, and healthcare, enabling the creation** of objects ranging from simple items to complex moving parts.

Kalka-Shimla Railway (KSR)

The over 120-year-old Kalka-Shimla Railway (KSR), a UNESCO World Heritage Site, has been **severely damaged by heavy rainfall and landslides** in Himachal Pradesh.

The **Kalka-Shimla railway** line (about 96km line; built between **1898-1903** under the direction of Herbert Septimus Harington and dedicated by **Lord Curzon**), **designated a UNESCO world heritage site in**

2008 under “**Mountain Railways of India,**” has been a popular tourist attraction. This railway network includes two other scenic routes:

- Darjeeling Himalayan Railway in West Bengal
- Nilgiri Mountain Railways in Tamil Nadu.

Goa Offers India’s First Free IVF Treatment Service

Goa has set a groundbreaking precedent by becoming the first Indian state to offer free in vitro fertilization (IVF) treatment, alongside assisted reproductive technology (ART) and intrauterine insemination (IUI). With IVF costs ranging from Rs 70,000 to Rs 3 lakh per cycle in India, this initiative is a significant relief for individuals struggling with fertility issues.

International

Admitting new members to BRICS

India is questioning the criteria for Brics membership and seeks clear guidelines for new entrants. India aims to ensure **consensus on inducting new members**, possibly including countries like Argentina, Saudi Arabia, UAE, and Iran.

The criteria for eligibility in BRICS:

There is **no formal application process** as such to join BRICS, however, certain eligibility features are considered for new members

- **Economic Size:** eg., India had suggested a minimum of \$400bn GDP for new members
- **Trade Volume:** eg., India had suggested minimum BRICS trade of \$50 billion with the new member
- **Emerging Economy Status:** The country should **demonstrate characteristics of an emerging economy**, including growth potential, industrialization, and development trajectory.
- **Political Stability:** Membership often requires the candidate country to have a stable political environment, good diplomatic relations with existing members, and a commitment to democracy.
- **Mutual Consensus:** Existing BRICS members **usually need to reach a consensus** on admitting new members, which is crucial for expansion.

India’s Stance on the Expansion of BRICS:

India has **not been very enthusiastic** about the expansion of **BRICS membership so far**, as it is basically an exercise **initiated by China** to increase its clout in the grouping. “Since almost all other members are now **open to the expansion process**, including Brazil, which wants **Argentina** as a member to increase

the weight of Latin America, India has accepted to go on the BRICS expansion plan even with some relaxation in GDP and Trade criteria.

Niger

- **The African Union has suspended Niger** from its institutions and activities due to the recent coup that overthrew the democratically elected president. The suspension will last until the restoration of constitutional order.
- In Niger, the military coup has led to **the detention of President Mohamed Bazoum**. The coup plotters have named **General Abdourahamane Tchiani** as the new leader, citing security concerns related to jihadist violence.
- Niger or the Niger is a landlocked country in West Africa. It is a unitary state bordered by **Libya to the northeast, Chad to the east, Nigeria to the south, Benin and Burkina Faso** to the southwest, Mali to the west, and Algeria to the northwest. Over 80% of its land area lies in the Sahara (Sahel Region).
- **The African Union (Addis Ababa, Ethiopia; Founder: Muammar Gaddafi)** is a continental union consisting of 55 member states located on the continent of Africa. The AU was announced in the Sirte Declaration in Sirte, Libya, on 9 September 1999, calling for the establishment of the African Union.

Science-Tech & Environment

Tuberculosis (TB)

Tuberculosis (TB) is an infectious disease caused by the **bacterium Mycobacterium tuberculosis**. It primarily affects the lungs but can also affect other parts of the body.

Status of TB in India and the world:

- **As per the WHO Global TB Report 2022:** India's TB incidence for the year 2021 is 210 per 100,000 population (a decline of over 18% from 2020)
- **India has a large burden of the world's TB**, with an estimated economic cost of US\$100 million lost annually due to this disease.
- **As per the WHO Global TB Report 2022**, TB cases are attributable to five risk factors — undernourishment, HIV infection, alcohol use disorders, smoking and diabetes.

New studies published in **The Lancet and The Lancet Global Health journals** provide evidence that **improved nutrition** can significantly **reduce tuberculosis (TB) incidence and mortality** in India. The study is backed by India's ICMR

STEREO (Solar Terrestrial Relations Observatory) mission

- The **STEREO (Solar TERrestrial RELations Observatory)** mission launched **twin spacecraft, STEREO-A and STEREO-B**, in 2006, to **study the Sun**.
- This mission achieved several milestones, **including capturing the Sun as a complete sphere for the first time by reaching a 180-degree separation in their orbits**.
- STEREO-A's recent approach to Earth **offers a unique opportunity for scientific observations**. By combining its views with other spacecraft, **including the Solar and Heliospheric Observatory (SOHO) and Solar Dynamics Observatory (SDO)**, STEREO-A will provide **3D views of the Sun**.
- This stereoscopic vision allows scientists to **gain depth perception and explore features like active regions and coronal loops in unprecedented detail**.
- STEREO-A's passage through Earth's vicinity also **allows for an in-depth study of solar eruptions, known as coronal mass ejections (CMEs), which can impact Earth's technology**.

Aditya-L1

- India's first solar mission, **Aditya-L1**, intended for launch by the end of August or early September, has arrived at the Sriharikota spaceport.
- The Aditya-L1 mission will be launched to the L1 orbit (which is the first Lagrangian point of the Sun-Earth system)
- Aditya-L1 is the **first Indian space mission** to observe the Sun and the solar corona
- **L1 orbit allows** Aditya-L1 to look at the Sun continuously
- It will be launched aboard a **PSLV-XL launch vehicle**

The objective of the mission: To study solar upper **atmospheric (chromosphere and corona) dynamics** and understand the physics of the solar corona and its heating mechanism.

The Lagrange points are points of equilibrium for small-mass objects under the influence of two massive orbiting bodies. At Lagrange points, the **gravitational pull of two large masses precisely equals** the **centripetal force** required for a small object to move with them. These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position.

Pibot

A team from the **Korea Advanced Institute of Science & Technology (KAIST)** is developing a humanoid robot **called 'Pibot'** that can fly aircraft without cockpit modifications.

Pibot is the **world's first humanoid pilot**, using AI and robotics to manipulate cockpit controls, even during turbulence. It incorporates cameras for monitoring, the memory of flight charts for navigation, and the **ability to communicate with air traffic controllers** and humans through voice synthesis (using ChatGPT's language synthesis model). Pibot's innovation lies in its **capability to pilot aircraft like a human**, revolutionizing aviation technology.

Minamata Convention

- The Minamata Convention on **Mercury** is a **global treaty to protect human health and the environment from the adverse effects of mercury and its compounds.**
- It was agreed at **the fifth session of the Intergovernmental Negotiating Committee in Geneva, Switzerland 2013. It entered into force in 2017.**
- Controlling the **anthropogenic releases of mercury throughout its lifecycle is one of the key obligations under the Convention.**
- The Convention also **addresses interim storage of mercury and its disposal once it becomes waste, sites contaminated by mercury as well as health issues.**
- **India has ratified the Convention.**

Gene-edited mustard

Researchers in India have **made significant advancements in the breeding of mustard plants to create varieties with lower levels of glucosinolates**, compounds that contribute to the pungency of mustard oil and meal.

- The low-glucosinolate mustard lines were developed using **gene editing technology known as CRISPR/Cas9.**
- By editing specific genes responsible for **transporting glucosinolates to seeds, researchers were able to produce mustard seeds with glucosinolate content below the 30 ppm threshold**, making them more acceptable for consumption and livestock feed.

These genetically edited mustard lines are **non-genetically modified (non-GM), in contrast to transgenic genetically modified crops.** This research holds the potential to enhance domestic oilseed production in India, thereby **reducing the country's dependence on imported vegetable oils.**

Acoustic Side-Channel Attacks

- An Acoustic Side Channel Attack (ASCA) is a **type of cybersecurity attack that exploits sound or acoustic signals to gather sensitive information.**
- In the context of computer security, **a side channel attack refers to a method where an attacker targets unintended information** leakage or signals emitted by a system, rather than directly attacking the cryptographic algorithms themselves.
- Despite being around for decades, **the advancement of AI and deep learning has heightened the risks associated with ASCAs.**
- The accuracy of **ASCAs has been demonstrated through experiments, achieving up to 95% accuracy in recognizing keystrokes** from various sources like **nearby phones and laptop keyboards.**
- A research paper titled **"A Practical Deep Learning-Based Acoustic Side Channel Attack on Keyboards"** published with the support of **Durham University's ethics committee reveals that**

Artificial Intelligence (AI) can be utilized to **decipher passwords by analysing the sound produced by keystrokes.**

Pig kidney in a human body

- Surgeons at NYU Langone Health have **successfully transplanted a pig’s kidney into a brain-dead man, and the kidney has functioned normally for over a month.**
- This achievement represents the **longest duration a pig kidney has survived and worked inside a human recipient,** even though the patient was deceased.
- In contrast to **past challenges where human immune systems rejected animal organs, genetically modified pigs are now being used to address this issue.**
- In 2022, surgeons at the University of Maryland transplanted a **gene-edited pig heart into a terminally ill man, which lasted for two months before failing.**

Demon particle

- Researchers at the University of Illinois have discovered a **massless particle,** often referred to as a **“demon particle,”** which could pave the way for the **development of superconductors capable of functioning at room temperature.**
- Superconductors, which can **conduct electricity without resistance,** currently require extremely low temperatures, **often below 100 degrees Fahrenheit.**
- This new discovery could **potentially lead to the creation of superconductors that work at room temperature,** revolutionizing various **fields, including computing and medical imaging.**
- The team identified the potential existence of the demon particle while **investigating the properties of the metal strontium ruthenate,** which is similar to high-temperature superconductors.

About Demon Particle:

The prediction of the demon particle was first made by **theoretical physicist David Pines in 1956.** Pines theorized that electrons passing through a solid would exhibit unique behaviours. **This particular particle is intriguing because it lacks mass, making it possible for it to exist and form plasmons (collective units of electrons) at room temperature,** where larger particles wouldn’t typically form plasmons.

Why it is named a ‘Demon’ particle?

This name was chosen because the particle’s properties, including being massless, chargeless, and not interacting with light, seemed to **defy conventional understanding,** much like a mythical or supernatural entity. The term “demon” was used metaphorically to convey the **unusual and counterintuitive nature of this theoretical particle.**

Namoh 108

- The Lucknow-based **CSIR-NBRI (National Botanical Research Institute)** has reportedly developed a **new variety of lotus flowers called 'Namoh 108,'** characterized by **having 108 petals.** The name "Namoh 108" is a combination of the **religious significance of the 'lotus flower' and the digit '108,' which holds importance in Hinduism.**
- The lotus variety flowers from March to December and is rich in nutrients.
- It's the first lotus variety in India to have its **genome completely sequenced for its characteristics.**
- The release also included products derived from the lotus, **such as apparel made from lotus fibre and a perfume called 'Frotus' extracted from lotus flowers.**

DRDO's UAV Tapas

The **Defence Research and Development Organisation (DRDO)** announced that there were no casualties or collateral damage resulting from **the crash of the Tapas unmanned aerial vehicle (UAV) during an experimental flight trial in Karnataka, India.**

The UAV was undergoing a **trial flight from ATR Challakere when it encountered a technical snag and crashed in nearby farmland.** DRDO assured that investigations into the technical issue are ongoing.

About TAPAS UAV:

- The Tapas UAV, **previously known as Rustom-2,** is a **Tactical Airborne Platform for Aerial Surveillance-Beyond Horizon-201.** It's a long-endurance drone developed by the **Aeronautical Development Establishment in India.**
- With a wingspan of 20.6 meters and a top speed of 225 kmph, **the drone can cover a range of over 250 km using the C Band frequency data link developed by DRDO.**
- The UAV has the capability to **fly autonomously or via remote control, making it suitable for pre-programmed missions.** It boasts a **compact and lightweight design**

Economics

SHGs: 'Lakhpati Didi' scheme

The Indian government is initiating the **'Lakhpati Didi' scheme,** aiming to provide skill development training to **two crore women** to encourage them to establish micro-enterprises through **Self-Help Groups (SHGs)**

The 'Lakhpati Didi' scheme is an initiative to **empower women in rural areas** by encouraging them to **start micro-enterprises** and become economically self-sufficient.

Features:

- **Aim:** The goal of the scheme is to create **two crore women millionaires (“lakhpati didis”)** in villages using SHGs
- **Fostering women-led development** and promoting their active participation in the workforce and economic growth.
- **Providing skill development** training to women through Self Help Groups (SHGs)
- Enabling them to **earn at least Rs 1 lakh annually**
- **Skills covered:** plumbing, LED bulb making, and operating and repairing drones, among others.

Committee recommendation on stalled housing projects

A committee (chaired by former **NITI Aayog CEO Amitabh Kant**) formed by the Union Housing and Urban Affairs Ministry has suggested reviving stalled real estate projects by requiring all stakeholders, including developers, financiers, and land authorities, to accept “**haircuts**” (reduced amounts) to make the projects financially viable.

Status of Housing projects:

- The Indian Banks’ Association (IBA) has estimated that over **4 lakh stressed** dwelling units involving over Rs 4 lakh crore are impacted in these stalled real estate projects
- The committee reported that **44% of stalled projects** are in the National Capital Region and **21% in the Mumbai Metropolitan**

What are Haircuts?

A haircut refers to the **lower-than-market value** placed on an asset being used as collateral for a loan. In the context of the article, it refers to the **acceptance of reduced amounts or losses by stakeholders**, such as developers and financiers, to make financially troubled projects viable.

Advisory board on bank frauds

The **Central Vigilance Commission (CVC)** has reconstituted the **advisory board on Banking and Financial Frauds (ABBFF)**, responsible for **conducting initial examinations of bank frauds** before recommending further investigation by agencies like **the Central Bureau of Investigation (CBI)**.

The ABBFF’s authority **encompasses examining the roles of officials and whole-time directors in public sector banks, insurance companies, and financial institutions when frauds amounting to ₹3 crores and above occur.**

The CVC now requires all these entities to refer matters involving such fraud amounts to the ABBFF for **advice before initiating criminal investigations**. The ABBFF is also authorized to **conduct periodic**

fraud analysis within the financial system, providing inputs for **fraud-related policy formulation to the RBI and CVC**.

The ABBFF, headquartered in New Delhi, is mandated to **provide advice within a month of receiving initial references from the Ministry, Department, CVC, or investigative agencies**. Notably, the suggestion from **the Indian Banks Association (IBA) for introducing a “sunset clause” to limit actions against bankers for credit decisions after a specific period hasn’t been accepted by the CVC**.

Ethics & Society

SC guidelines for eliminating gender stereotypes

The Supreme Court has **released a 30-page handbook aimed at eliminating gender stereotypes from legal language and proceedings**.

The **“Handbook on Combating Gender Stereotypes”** addresses unjust gender-based terms frequently used in **Indian courts and offers accurate alternatives**. It emphasizes the **importance of using language** that respects the **rights and dignity of all individuals**.

Stereotype promoting language (INCORRECT)	Alternative language (PREFERRED)
Adulteress	Woman who has engaged in sexual relations outside of marriage
Affair	Relationship outside of marriage
Bastard	Non-marital child or, a child whose parents were not married
Biological sex / biological male / biological female	Sex assigned at birth
Born a girl / boy	Assigned female / male at birth
Career woman	Woman
Carnal intercourse	Sexual intercourse
Chaste woman	Woman
Child prostitute	Child who has been trafficked
Concubine / keep	Woman with whom a man has had romantic or sexual relations outside of marriage

Casteism

Casteism is a social system **characterized by the hierarchical division of society** based on caste, resulting in discrimination, inequality, and unequal access to opportunities for individuals belonging to different castes.

Efforts to eliminate caste-based discrimination in India:

- **Constitutional Provisions:** Articles 15 and 17 specifically address the prohibition of discrimination based on caste.
- **Reservation Policies:** have been implemented to provide historically disadvantaged castes with better access to education, jobs, and political representation. E.g. **Article 330 and Article 332**
- **Legal Framework:** Laws like the **Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989**, provide protection against violence and discrimination faced by marginalized communities.
- **Awareness Campaigns:** Public awareness campaigns, workshops, and seminars are conducted to sensitize society.
- **Social Movements:** Various social reform movements, led by activists, organizations, and leaders, have aimed to challenge and change traditional caste-based norms and practices.

Personalities in news

New Prime Minister of Thailand

Srettha Thavisin, formerly the chief of a prominent real estate development firm in Thailand, has become the country's prime minister amidst a political deadlock following recent elections.

New PM of Cambodia

Following a controversial election, Cambodia's parliament has appointed **Hun Manet**, the eldest son of outgoing Prime Minister Hun Sen, as the new prime minister, solidifying a dynastic transfer of power in the nation.

Election Commission's National Voter Awareness Ambassador

Indian cricket legend **Sachin Tendulkar** is set to embark on a new role as the national icon for voter awareness and education under the Election Commission of India (ECI). The ECI announced its intention to sign a memorandum of understanding with Tendulkar, appointing him as the voter awareness ambassador for a three-year term.

Current Affairs Update (Aug 26-31)

National

Why did CJI recently call the Basic Structure Doctrine a “North Star”?

- The **Chief Justice of India D. Y. Chandrachud** called **Basic Structure Doctrine** a **North Star**. This is because it **guides and gives directions to law-makers, implementers and interpreters**.
- **The doctrine acts as a “North Star”** because it **provides a fixed reference point** or guiding light for constitutional interpretation.
- It helps **prevent any arbitrary or excessive exercise of power** by the government and ensures that constitutional amendments **do not violate or undermine the essential features of the Constitution**.
- It maintains constitutional supremacy by **preventing lawmakers from undermining the essence of the Constitution**.
- Limiting the powers of lawmakers **prevents the rise of any authoritarian regime**.
- **The core values and goals** of the Constitution **remain intact**. For instance, secularism was identified as a ‘basic feature’ in *R. Bommai v. State of Karnataka*.
- It acts as an **effective system of checks and balances** and avoids any concentration of power in any one organ of the government.
- The doctrine has been **instrumental in safeguarding the fundamental rights** of citizens.
- The Doctrine ensures **consistency and stability in the interpretation** of the Constitution itself.

India Smart Cities Award Contest, 2022

- **Indore** has been named the **best Smart City** and **Madhya Pradesh** as the **top State** for their outstanding performance in the **Smart Cities Mission**.
- The second and third positions among cities were secured by **Surat and Agra**, while **Tamil Nadu, Rajasthan, and Uttar Pradesh** were ranked second, third, and fourth respectively in the State category of the **India Smart Cities Award Contest (ISAC) 2022**.
- **Chandigarh** won the award for the **best Union Territory**. The awards, are **organized by the Ministry of Housing and Urban Affairs under the Smart Cities Mission**.
- The awards celebrate **cities, projects, and ideas that promote sustainable development in the 100 smart cities, aiming to create inclusive, safe, healthy, and collaborative urban spaces**.

Lead poisoning in India

Lead poisoning poses a **hidden threat in India**, with **over half of children** having blood lead levels above **5 micrograms per deciliter (µg/dL) (WHO safe level)**, according to studies.

Lead is a **heavy metal element that is toxic to humans** and can cause serious health problems when ingested or inhaled, especially in high amounts. Major sources of lead exposure include **lead-based paints, lead batteries, contaminated soil and water**, and occupational exposure in industries such as mining, smelting, and battery recycling.

It is a condition that **occurs when a person's body accumulates high levels of lead**, a toxic metal. It can lead to various health issues, especially in children, including learning disabilities, neurological problems, stunted growth, and organ damage.

Factors contributing to lead poisoning:

- **Informal and substandard recycling** of lead-acid batteries.
- **Increase in vehicle ownership**, combined with the lack of **vehicle battery recycling** regulation and infrastructure.
- **Workers in dangerous and often illegal recycling** operations break open battery cases, and spill acid and lead dust into the soil.

India's fiscal federalism

India's fiscal federalism refers to the division of financial powers and responsibilities between the central government and state governments within the framework of a federal system. It involves **how revenue is generated, shared, and utilized to fund public services** and governance across different levels of government in the country.

Issues with the India's fiscal federalism:

- Replacement of **Planning Commission with NITI Aayog**.
- **Authority of GST Council** under Goods and Services Act.
- **Impact of widespread cess and surcharges** on divisible pool size.
- Neglect of integrating the **third tier of governance**.
- **Lack of consistent financial reporting** across all government tiers.
- No comprehensive review of **off-budget borrowing practices**.
- **States are subject to restraint through Article 293(3)** under the oversight of the Union and the FRBM Act, but the Union frequently evades such checks.
- The substantial **use of the National Small Saving Fund (NSSF)** for financing central PSUs through loans is not **included in the Union's fiscal deficits**.

Project 'AMBER'

- The **Ministry of Skill Development and Entrepreneurship (MSDE)**, in partnership with **Generation India Foundation (GIF)** and **Amazon Web Services India Private Limited (AWS India)**, is implementing **project AMBER to provide cloud skills training to 1,500 learners**.

- PROJECT AMBER (**Accelerated Mission for Better Employment and Retention**) is a joint initiative of the **National Skill Development Corporation (NSDC) and Generation India Foundation (GIF)** under the aegis of the Ministry of Skill Development and Entrepreneurship (**MSDE**).
- This project is co-funded by **MSDE (under the SANKALP programme)** and private philanthropy and aims to train 30,000 youth, 50% of whom will be women trainees.

Minority Communities in India

- **Recognized under the National Commission for Minorities Act, 1992:** Muslims, Sikhs, Christians, Buddhists, Parsis; and Jains added in 2014.
- **19.3%** of the total population as per the 2011 Census.
- **Major groups:** Muslims (about 14%), Christians (about 2%), Sikhs (1.7%), Buddhists (0.7%), Jains (0.4%), Parsis (0.006%).
- The term “**minority**” is **not defined in the Indian Constitution**. However, the Constitution recognizes **only religious and linguistic minorities**.
- **Constitutional Provisions:** Article 29 preserves distinct language, script, and culture; Article 30 grants education institution rights.
- **Article 350-B:** Special Officer for Linguistic Minorities established by the Seventh Constitutional Amendment Act of 1956.
- **Parliamentary Provision:** The National Commission for Minorities Act, 1992 defines minorities as notified by the Central government.

International

Northern Sea Route (NSR)

It is the **shortest shipping route** connecting Europe and the Asia-Pacific region. Spanning 5,600 km, it passes through **four seas of the Arctic Ocean**. The route starts at the boundary between the **Barents and Kara seas (Kara Strait)** and concludes at the **Bering Strait (Provideniya Bay)**. The NSR offers potential distance **savings of up to 50% compared to existing shipping lanes via Suez or Panama**.

How is Russia making the NSR navigable?

Russia ensures the navigability of the **Northern Sea Route (NSR)** by using **icebreaking assistance**, as the Arctic Ocean remains icebound for most of the year. Russia maintains the world’s only **nuclear-powered icebreaker fleet**.

India’s participation in NSR development is driven by:

- **Growing Cargo Traffic:** NSR cargo traffic increased by about **73% during 2018-2022**.

- **Strategic Transit Route:** India's geographical location and reliance on sea transportation make the NSR a crucial transit route.
- **Chennai-Vladivostok Maritime Corridor (CVMC):** This project, stemming from a 2019 memorandum of intent, **shortens transport time to 12 days** (almost reduced by a third). It allows efficient trade through the **Sea of Japan, the South China Sea, and Malacca Strait.**
- **Cargo Potential:** A study by **Chennai Port Trust** shows CVMC can import items like coking coal, crude oil, LNG, and fertilizers from Russia to India efficiently
- **Geopolitics:** India would like to complement China and Russia's potential collective influence over NSR.

Grand Cross of the Order of Honour

- **The Greek President** has awarded the **Indian Prime Minister** with **The Grand Cross of the Order of Honour.**
- The **Order of Honour, established in 1975,** features the head of **goddess Athena** on its front side, along with the inscription **"ONLY THE RIGHTEOUS SHOULD BE HONOURED."**
- The citation recognizes PM's **efforts in promoting global awareness of India, advancing economic growth and reforms, and prioritizing environmental protection and climate change.**

Denmark

- Denmark's justice minister has announced the **intention to ban the burning of religious texts, including Islam's holy book, the Quran.**
- The proposed legislation seeks to **prevent the inappropriate treatment of significant religious objects in public places.** The move follows incidents of Quran burnings in both **Denmark and Sweden,** which have triggered widespread outrage and calls for a ban in Nordic countries.

"Global South"

The term "Global South" refers to **countries and regions that are economically and socially less developed** in comparison to the **more affluent and developed "Global North."**

Examples of Global South countries include **India, Brazil, Nigeria, and Indonesia,** which often face economic challenges and are considered to be part of the developing world.

Issues with this terminology:

- **Geographically,** the division between **Global North and Global South based on the 30-degree north latitude line is arbitrary** and excludes countries like Australia, New Zealand, and developed countries within the Global South.
- **Economically,** the term is inconsistent as nations like **China,** with high per capita income, are categorized as part of the Global South.

- Issues arise due to key **allies of the Global North situated in the Southern Hemisphere**, which contradicts the categorization.

China-Bhutan Boundary Dispute

- **China and Bhutan** recently held boundary talks to expedite efforts to resolve their disputed border issue.
- This development is significant considering **India and China's ongoing military standoff on the Line of Actual Control (LAC)** and **China's claims on Bhutanese territory**, which have implications for India's north-eastern region.
- The China-Bhutan border dispute involves **territorial claims and tensions between the two countries over parts of Bhutan's territory**, particularly in areas bordering Tibet. The disputed regions between China and Bhutan **include Doklam, Gamochoen, Batangla, Sinchela, Sakteng and Amo Chhu. Bhutan and China lack formal diplomatic relations.**

Expansion of BRICS

The alliance of Brazil, Russia, India, China, and South Africa invited **six more countries (Iran, UAE, Saudi Arabia, Argentina, Egypt, and Ethiopia) to join**, starting in January 2024.

India's stance on expansion:

- India welcomed the **consensus-based expansion** of the BRICS grouping during the **15th BRICS summit** in Johannesburg.
- The move strengthens **BRICS as a representative of developing countries**
- India has proposed creating a **BRICS space consortium**, investing in skill mapping, technology, and education, and emphasising cooperation for conservation efforts.
- The expansion is aimed at making **BRICS future-ready** by enhancing cooperation, digital solutions, and development initiatives.

Kampala Declaration

- A total of **48 African countries have agreed to adopt the Kampala Ministerial Declaration on Migration, Environment, and Climate Change (KDMECC)** in order to tackle the connection between **human movement and climate change on the continent**.
- This initiative aims to **provide African states with a unified position** for the upcoming **Africa Climate Summit and the Conference of Parties (COP 28)**.
- Originally signed by **15 African nations in July 2022**, the KDMECC has evolved into **KDMECC-AFRICA** and is anticipated to be formally adopted during the **Africa Climate Summit**.
- Africa is **highly vulnerable to climate change impacts**, which directly influence migration due to more frequent and severe extreme weather events.
- According to the **Internal Displacement Monitoring Centre**, over **7.5 million people faced internal displacement due to disasters in the past year alone**.

Science-Tech & Environment

Global Biodiversity Framework Fund (GBFF) Ratified

The Global Biodiversity Framework Fund (GBFF) has been ratified and launched **during the 7th Assembly of the Global Environment Facility (GEF)** in Vancouver, Canada.

Global Biodiversity Framework Fund: GBFF (1st approved in July this year under the Global Environment Facility (GEF)) aims to support the **Kunming-Montreal Global Biodiversity Framework's goals by 2030**. Contributions from countries, non-profits, and the private sector are welcome.

Fund Allocations:

- 20% will be allocated to **Indigenous Peoples and local communities (IPLCs)**
- 25% to **GEF agencies**
- 36% to **SIDS (Small Island Developing States)**
- 3% to **LDCs (Least Developed Countries)**

The allocation for **IPLCs will be reviewed for two years** and the allocations for SIDS and LDCs will be **reviewed for three years**.

What is the Kunming-Montreal Global Biodiversity Framework?

Adopted at COP15 (2022), it includes **4 goals and 23 targets** for achievement by 2030. It **aims to restore ecosystems**, conserve areas, **prevent species extinction**, reduce pollution risks, tackle climate change, and more.

- Signatories committed to channelling USD 200 billion per year for conservation.
- Companies to report biodiversity impacts.
- Focus on reducing harmful subsidies and enhancing monitoring

Positives and negatives of the impact of AI at the workplace

Positives of AI at the Workplace

- Efficiency and Productivity
- **Data Analysis and Insights:** AI can analyze large datasets quickly and extract valuable insights for better decision-making.
- **Improved Customer Experience:** AI-powered chatbots and virtual assistants enhance customer support by providing instant and accurate responses.

- **Innovation and New Opportunities:** AI drives innovation by enabling the development of new products, services, and business models.
- **Cost Savings and ROI:** Implementing AI technologies can lead to cost savings and higher return on investment in the long run.

Negatives of AI at the Workplace

- Fear of Job Displacement
- **Privacy Concerns:** The use of AI may involve the collection and analysis of personal data, raising concerns about privacy and data security
- **Bias and Fairness Issues:** AI algorithms can inherit biases present in the data they are trained on, leading to discriminatory outcomes
- **Skill Gap and Training:** There may be a gap in required skills as jobs evolve, necessitating continuous training and upskilling
- **Ethical Dilemmas:** AI applications raise ethical concerns regarding transparency, accountability, and the potential misuse of technology.

Digital Agriculture

Digital Agriculture refers to the **use of Information and Communication Technologies (ICT)** and data ecosystems to provide **timely, targeted information and services** to enhance the profitability, sustainability, and efficiency of farming practices. Examples of digital agriculture include:

- **Agricultural Biotechnology:** E.g., developing microorganisms for specific agricultural purposes.
- **Precision Agriculture (PA):** It relies on the use of ICT to optimize resource application.
- **Digital and Wireless Technologies:** e.g., weather monitoring systems, robotics, drones, and other wireless devices

Challenges for Digital Agriculture:

High Capital Costs discourage many farmers, especially those with limited resources, due to substantial initial investments. **Small Land Holdings in India** complicate adopting large-scale digital technologies, as smaller plots are less conducive to certain solutions. **Renting and Sharing equipment**, common due to financial constraints, hinder individual technology adoption as not all farmers have timely access. **Illiteracy in Rural Areas** is a significant barrier, as many rural farmers lack computer literacy, impeding their effective use of digital tools.

Nabhmitra

- **ISRO's Space Applications Centre in Ahmedabad** has developed a device called '**Nabhmitra**', which has been successfully tested.
- This device is aimed at **enhancing the safety of fishermen**. It operates through **satellite-based communication and enables two-way messaging between boats at sea and authorities on land**.
- The system can convey **weather alerts, cyclone warnings, and other information in the local language**.
- In cases of emergencies like **boat accidents or fires, fishermen can activate the device to alert the control centre**. The control centre receives the boat's location and the crew onboard gets a response from the control centre.
- Additionally, the device provides **details about shipping routes, maritime boundaries, and fishing areas**.

Pragyan rover confirms sulphur

- India's **Chandrayaan-3 mission's Pragyan rover** has confirmed the **existence of sulphur on the moon's surface near the south pole**.
- This discovery was enabled by the **Laser-Induced Breakdown Spectroscopy (LIBS) instrument** onboard the rover, **marking the first in-situ measurements of the lunar surface's elemental composition in this region**.

Hollongapar Gibbon sanctuary

- Primatologists have proposed a solution to **address the division caused by a 1.65-km long railway track** within the **Hollongapar Gibbon Sanctuary in eastern Assam**, dedicated to the **western hoolock gibbon**.
- The sanctuary, **home to about 125 hoolock gibbons**, is facing **habitat fragmentation due to the track's presence**, which has **separated gibbon populations on either side**.
- To counter this, **scientists from the Wildlife Institute of India (WII)** have **suggested constructing an artificial canopy bridge to enable the gibbons to move across the railway line**. This would help **maintain genetic diversity and support the survival of the endangered gibbons**, which are **highly sensitive to disruptions in their canopy habitat**.
- International Union for Conservation of Nature's Red List: **Western Hoolock Gibbon: Endangered & Eastern Hoolock Gibbon: Vulnerable**.

Significance of Aditya-L1 mission

- **Scientific Understanding:** The mission's primary objective is to deepen our understanding of the Sun, its radiation, magnetic fields, and the flow of particles.

- **Space Weather Forecasting:** By studying the Sun's behaviour, the mission can contribute to predicting space weather events, such as solar flares, that can disrupt satellite communications and other technologies on Earth.
- **Technological Advancement:** Developing a space-based observatory to study the Sun demonstrates India's technological prowess in space exploration and adds to its reputation in the global space community.
- **International Collaboration:** Participating in solar research aligns with international efforts to understand the Sun and its effects.
- **Education and Inspiration:** The mission inspires future scientists, engineers, and researchers by showcasing India's achievements in space science and encouraging the pursuit of space-related careers.
- **Data for Innovation:** The collected data can lead to innovations in technology, materials science, and various other fields that can benefit India's technological landscape.

National Space Day

- The Prime Minister visited the **ISRO Telemetry Tracking and Command Network (ISTRAC)** in Bengaluru and **addressed the ISRO team about the success of Chandrayaan-3.**
- The Prime Minister celebrated the achievement of Chandrayaan-3 as a **significant scientific milestone that demonstrates India's prowess in space exploration.** He also announced that the point of Chandrayaan-3's landing would be known as **'Shiv Shakti.'**
- He acknowledged the **contribution of women scientists** and referred to the **Chandrayaan-2 landing site as 'Tiranga,'** highlighting its significance in **inspiring efforts and overcoming failures.**
- He announced that **August 23rd will be observed as 'National Space Day' to celebrate science, technology, and innovation.**

SeamlessM4T

- Meta has introduced an **advanced AI model called SeamlessM4T** that can translate and transcribe nearly **100 languages across text and speech.** This model aims to break language barriers and facilitate **communication across diverse languages.**
- It has the ability **to recognize when a speaker is code-switching** or when someone moves between two or more languages in one sentence. It also recognizes **gender bias in languages.**

Indigenous ASTRA

- The **Light Combat Aircraft (LCA) LSP-7,** known as **"Tejas,"** successfully launched the **indigenous Beyond Visual Range (BVR) air-to-air missile called ASTRA.**
- The missile was **fired from the aircraft at an altitude of approximately 20,000 feet and achieved all test objectives flawlessly.**

- ASTRA is an advanced **BVR air-to-air missile developed by various DRDO laboratories**, including the **Defence Research and Development Laboratory (DRDL) and Research Centre Imarat (RCI)**.

Brain-Computer Interface (BCI)

- Researchers have created a **breakthrough Brain-Computer Interface (BCI)** that enables a severely paralyzed woman to **communicate using a digital avatar**. This marks the first instance of **synthesizing speech and facial expressions** directly from brain signals.
- Brain-computer interfaces (BCIs) establish a **direct communication pathway** between the **human brain and external devices**. They interpret brain signals using advanced technology, allowing individuals to control devices or computers through their thoughts, bypassing traditional physical inputs or movements.
- **Importance of the technology:** They hold potential in **assistive technology, neurorehabilitation, research, and enhanced control applications** like gaming.
- **Concerns:** Concerns include cyberattacks on brain data, unequal access due to costs, and the need for accurate translation of brain signals to speech to avoid unintended consequences.

Economics

Magic rice

- **Chokuwa rice**, also known as **Magic rice**, is a **distinctive part of Assam's culinary heritage** and has recently been granted a **Geographical Indication (GI) tag for its uniqueness**.
- This rice was a **staple for the troops of the Ahom dynasty in Assam** and is cultivated in various parts of the region, **especially around the Brahmaputra area**.
- Chokuwa rice is a **semi-glutinous winter rice, categorized as Sali rice**. It comes in sticky and glutinous varieties, known as **Bora and Chokuwa, based on their amylose content**.
- The low-amylose Chokuwa rice is used **to make soft rice, which can be consumed after soaking in cold or lukewarm water**.

Protectionist measures

- It refers to **economic policies and actions** taken by a country to **protect its domestic industries, businesses, and workers** from foreign competition.
- These measures can include **tariffs, quotas, subsidies, and other barriers** that make imported goods more expensive or difficult to access, thereby promoting domestic production and consumption.
- The goal is to **shield domestic industries** from foreign competition and support local economic growth.

Rail-Sea-Rail (RSR) Initiative

- The **Ministry of Coal** is driving a transformative initiative known as **Rail-Sea-Rail (RSR) to revolutionize coal transportation in India.**
- This strategy **integrates rail and sea transportation** to create an **efficient movement of domestic coal, connecting mining sites, ports, and end-users.**
- The goal is to **enhance logistical efficiency, reduce transportation costs, and reshape the coal transportation landscape.**

Stats regarding Coal:

- Major coal-producing states like **Odisha, Chhattisgarh, Jharkhand, and parts of Madhya Pradesh contributed around 75% of domestic raw coal dispatch in FY'23.**
- The Ministry **envisions doubling India's coal production** by FY'30, with a projected **Compound Annual Growth Rate (CAGR) of approximately 7.7%.**
- Currently, **railways handle about 55% of coal evacuation, with a target of increasing it to 75% by FY'30.** The committee is promoting **RSR coal evacuation with the aim of reaching 112 million tons by 2030, a significant increase from the current 40 million tons.** This approach aims to **reduce congestion, explore export opportunities, and minimize the carbon footprint.**

Benefits of RSR Initiative:

- The **Rail-Sea-Rail initiative aims to transform logistics through an eco-friendly coastal shipping mode.**
- Opting for RSR **could result in substantial cost savings for end-users in Southern India, potentially cutting logistics costs.**
- Over the past four years, **Rail-Sea-Rail coal transportation has seen impressive growth of around 125%.**

Ethics & Society

Reason for High Unemployment in India despite High Economic Growth

- **Lop-Sided Development Policies:** India's growth and unemployment coexist due to imbalanced policies that create fewer jobs for new labour force entrants.
- **Demographic Composition:** Over 50% of India's population is below 25, and over 65% is below 35. Despite high growth, job creation hasn't kept pace with this demographic.
- **Less Focus on Human Infrastructure:** India's progress in physical infrastructure hasn't been matched in education and skills. The absence of strong human infrastructure limits job growth.
- **Shift to Rural Manufacturing:** Urban-centric physical infrastructure investments conflict with manufacturing's move to rural areas for cost competitiveness.

- **Constrained Growth in Rural Areas:** Poor physical and human infrastructure in rural areas hinders growth drivers and limits the size of the manufacturing sector.

What is Human Infrastructure?

Human infrastructure refers to the **development and investment in the education, skills, and capabilities of a population**. It encompasses efforts to improve literacy, vocational training, healthcare, and other factors that enhance the human capital and productivity of a society.

Nikah halala

- The Law Commission has asked the **All India Muslim Personal Law Board (AIMPLB) to clarify its stance on nikah halala and muta**, contentious forms of marriage, **as well as the Islamic law's stance on the minimum age for marriage**.
- This inquiry arises due to **Supreme Court petitions filed by Muslim women seeking to ban these forms of marriage**.
- Nikah halala involves a **woman marrying and divorcing another man before remarrying her original husband**, while muta refers to **short-term consensual marriages**.
- AIMPLB expressed **opposition to the prevalent practice of nikah halala and deemed muta an inconsequential issue**. The delegation also **defended the minimum marriage age, stating that Islam allows marriage when individuals are of age and can fulfil marital responsibilities**.

Spamouflage

- Spamouflage is a **Chinese influence campaign that has been active on over 50 platforms and forums**, including Facebook, Instagram, TikTok, YouTube, and X (formerly Twitter).
- **The accounts in the campaign have a tendency to intersperse political posts**.
- The campaign has **pushed positive narratives about China and negative commentary about the United States, Western foreign policies, and critics of the Chinese government**.

Sports

Suspension of Wrestling Federation of India (WFI)

- The United World Wrestling (UWW) has provisionally suspended the Wrestling Federation of India (WFI) due to the delay in conducting its elections.
- The suspension comes in the wake of allegations of sexual harassment, intimidation, financial irregularities, and administrative lapses brought forth by prominent wrestlers against the former WFI president, Brij Bhushan Sharan Singh, and others.

- The UWW took this action due to the absence of an elected president and board, which goes against UWW regulations and membership conditions. The suspension is expected to last for at least six months
- The UWW has also considered the protection of athletes and the need to restore the federation's functioning as reasons for the suspension

FIDE Chess World Cup

In the FIDE World Cup finals, **Magnus Carlsen** secured his first-ever title, defeating Indian chess prodigy **R. Praggnanandhaa** in Baku, Azerbaijan. Praggnanandhaa has become the second Indian after Viswanathan Anand to reach a World Cup final

The FIDE World Cup, established in 2000 by the International Chess Federation (FIDE), encompasses various iterations. Since 2005, it's been a 128-player single-elimination chess tournament, a vital part of the World Chess Championship qualification. The format includes 7 rounds of "mini-matches" with 2 games each, followed by rapid and blitz tiebreaks if needed. The final consists of 4 games before tiebreaks.

FIFA Women's World Cup 2023

The ninth FIFA Women's World Cup was **co-hosted by Australia and New Zealand**, marking the first time it was held in the Southern Hemisphere. **Spain** won the event by defeating England in the final. The USA has won the **Women's World Cup title four times**.