



GEO IAS

**MONTHLY  
CURRENT  
AFFAIRS  
MAGAZINE  
MARCH 2022**

# Table of Contents

## Economy

1. Market Infrastructure Institutions .....	5
2. Sagar Parikrama.....	5
3. Minimum Assured Return Scheme.....	6
4. e-Bill.....	6
5. Monetary Policy Committee.....	7
6. Donate a Pension initiative.....	7
7. SAMARTH.....	8
8. Start-Up Village Entrepreneurship Programme .....	9
9. Virtual Smart Grid Knowledge Center .....	9
10. UPI123Pay .....	10
11. Amendment to Mines and Minerals (Development and Regulation) Act .....	10
12. National Land Monetization Corporation.....	11
13. MSME Innovative Scheme .....	11
14. Rural Self Employment Training Institutes(RSETIs) Programme .....	12
15. New Microfinance Lending Norms:RBI .....	12
16. National Rail Plan Vision – 2030.....	13
17. Export Preparedness Index 2021.....	13
18. Bharatiya Prakritik Krishi Paddhati(BPKP) Scheme .....	14
19. Pradhan Mantri Garib Kalyan Anna Yojana..	14
20. Shrinkflation.....	15
21. Animal Disease Free Zone .....	15

## Environment

1. Periyar Tiger Reserve .....	17
2. Working Group II's Sixth IPCC Report .....	17
3. Indian Grey Hornbill.....	18
4. Facility for Low Carbon Technology Deployment(FLCTD) Project.....	18
5. SIMBA: Software to Identify Asiatic Lion .....	18
6. India's First Dugong Reserve in Palk Bay.....	19
7. Glycosmis albicarpa .....	19
8. Tiger Density .....	20
9. Northern River Terrapin .....	20
10. Amazon Rainforest .....	20
11. Syllipsimopodi Bideni.....	21
12. Halari Breed of Donkey .....	22

13. Heatwave .....	22
14. Project Dolphin .....	22
15. Flood Plain Zoning.....	23
16. Toyota Mirai .....	24
17. Detailed Project Reports.....	24
18. Vedanthangal Bird Sanctuary.....	25
19. Boma Capturing Technique.....	25
20. Himalayan Griffon Vulture.....	26
21. Arsenic Pollution.....	26
22. BBNJ Treaty .....	27
23. Mercury Pollution .....	27
24. Lead Poisoning.....	28
25. Frontiers 2022: Noise, Blazes and Mismatches .....	29
26. Olive Ridley Turtles .....	29
27. Coral Bleaching .....	30
28. National Dolphin Day .....	30
29. Earth Hour .....	31
30. Kaziranga National Park and Tiger Reserve..	31
31. Guidelines for Groundwater Regulation.....	32
32. IUCN Green List of Protected and Conserved Areas .....	32
33. Pola Vatta .....	33
34. Lakshya Zero Dumpsites .....	34

## Science and Technology

1. Ischemic Stroke.....	35
2. SARAS 3 Radio Telescope.....	35
3. Daylight Harvesting .....	36
4. Fusobacterium .....	36
5. Silicosis.....	36
6. Jets of Plasma .....	37
7. Side-channel attacks .....	37
8. PARAM Ganga.....	38
9. Gallium Nitride Ecosystem Enabling Centre and Incubator .....	39
10. Blockchain Gaming.....	39
11. INSPIRE Faculty fellowship.....	40
12. ExoMars .....	40
13. Artemis Mission .....	41
14. PACER Initiative .....	41
15. Mange Disease.....	42
16. Dare2eraD TB program.....	42
17. Conversion therapy .....	43

18. Bone Ossification Test.....	43
19. Common Antibiotic Manufacturing Framework (CAMF).....	43

## Geography

1. Katchatheevu Island.....	45
2. Belarus .....	45
3. Karewas .....	45
4. Aluminium.....	46
5. Deep Ocean Mission .....	46
6. Par Tapi Narmada link project .....	47
7. Asani Cyclone .....	48
8. Chechnya.....	48
9. Zoji La.....	49
10. Saraswati River.....	49

## Polity

1. National Commission for Protection of Child Rights.....	51
2. Supplementary Demands For Grants .....	51
3. Fundamental Rights of Foreigners .....	52
4. Sealed Cover Jurisprudence.....	52
5. National eVidhan Application .....	53
6. Competition (Amendment) Bill, 2022.....	53
7. Section 144 CrPC.....	54
8. National Commission for Scheduled Tribes..	55
9. Principle of Reasonable Accommodation.....	56
10. Foreigners' Tribunals.....	56
11. Article 355 .....	57
12. Central Bureau of Investigation (CBI) to investigate.....	57
13. Legal Aid Clinic.....	58

## International Relations

1. Council of Europe.....	59
2. Operation Ganga .....	59
3. Court of Arbitration of Sports .....	59
4. International Monsoons Project Office.....	60
5. Montreux Convention .....	60
6. Asian Infrastructure Investment Bank.....	61
7. UN Human Rights Council.....	62
8. International Election Visitors Programme...	62

9. Motor Vehicles Agreement (MVA) .....	63
10. International Fund for Agricultural Development .....	63
11. Most Favoured Nation.....	64
12. 1954 Hague Convention.....	64
13. Geneva Conventions .....	65
14. Organisation for Economic Co-operation and Development .....	66
15. India's Arctic Policy .....	66
16. Finlandization .....	67
17. Bucharest Nine (B9).....	68
18. BRICS Media Forum.....	68
19. BIMSTEC .....	69

## Society

1. Rashtriya Vayoshree Yojana .....	70
2. Compensation to Victims of Hit and Run Motor Accidents Scheme, 2022.....	70
3. Stree Manoraksha Project .....	70
4. Pradhan Mantri Jan-Aushadhi Yojana .....	71
5. Kanya Shiksha Pravesh Utsav.....	71
6. Maternal Mortality in India.....	72
7. PM-Daksh Yojana .....	73
8. Pradhan Mantri Ujjwala Yojana .....	73
9. World Happiness Report 2022 .....	74
10. POSH Act .....	74
11. National Drug De-Addiction Programme ....	75
12. Common University Entrance Test .....	75
13. SHRESTHA.....	76
14. Rashtriya Yuva Sashaktikaran Karyakram (RYSK).....	76

## Security

1. Hermetic Wiper.....	77
2. INS Visakhapatnam .....	77
3. Cluster Bombs and Vacuum Bombs.....	77
4. Defence Acquisition Procedure .....	78
5. HANSA-NG.....	79
6. Central Industrial Security Force .....	79
7. Ex Vayu Shakti 2022 .....	80
8. SLINEX .....	80
9. Colombo Security Conclave.....	80
10. Biological and Toxin Weapons Convention..	81
11. White Phosphorus.....	81

12. Man-Portable Air-Defence Systems (MANPADS) .....	82
13. Kamikaze drones .....	83
14. Kinzhal hypersonic missile.....	83
15. Exercise LAMITIYE-2022 .....	84
16. INS Shivaji .....	84
17. DUSTLIK Exercise .....	85
18. Demand for the Ahir Regiment .....	85
19. INS Valsura .....	86
20. Central Equipment Identity Register .....	86
21. MRSAM Missiles .....	87
22. Criminal Procedure (Identification) Bill, 2022 .....	87
23. Articulated All Terrain Vehicles.....	88
24. DRDO's Corner-Shot Weapon System .....	88
25. Condors.....	88
26. National Maritime Security Coordinator.....	89
27. Weaponization of Space.....	89

## History and Culture

1. Vinayak Damodar Savarkar .....	91
2. Konark Sun Temple.....	91
3. Perini Dance .....	92
4. Agni Kandakarnan Theyyam .....	92
5. Swadesh Darshan Awards .....	93
6. Savitribai and Jyotirao Phule .....	93
7. The fort of Halebidu .....	94
8. Pal-Dadhav massacre .....	94
9. Jharokha.....	95
10. Sahityotsav.....	95
11. Nari Shakti Puraskar.....	96
12. Santhali Sohrai murals .....	96
13. Dandi March.....	97
14. Ol Chiki script .....	97
15. Navroz.....	98
16. Biplobi Bharat Gallery .....	98
17. Bappanadu Sri Durgaparameshwari Temple .....	98
18. City of Literature.....	99
19. Mapilla rebellion of 1921 .....	99
20. Karakattam Dance .....	100
21. Panruti Cashews .....	100

## Miscellaneous

1. Pickleball .....	101
2. ECGC Ltd .....	101
3. Mriya.....	101
4. Armed Forces Preparatory School .....	101
5. FIFA .....	102
6. International Intellectual Property Index.....	102
7. Co-location .....	102
8. Kavach.....	103
9. Zaporizhzhia Nuclear Power Station.....	103
10. Humanitarian Corridors.....	104
11. Democracy Report 2022 .....	104
12. Boltzmann medal .....	104
13. WHO Global Centre for Traditional Medicine .....	105
14. Age of sexual consent.....	105
15. Mankading .....	105
16. Temporary Protection Directive .....	106
17. Away From Reactor (AFR) Facility .....	106
18. National Youth Parliament Festival.....	107
19. India Water Pitch-Pilot-Scale Start-up Challenge.....	107
20. Rashtriya Raksha University .....	108
21. Rashtriya Indian Military College .....	108
22. Touch-less touch screen technology.....	108
23. International Day to Combat Islamophobia.....	109
24. Bahini Scheme .....	109
25. Mina Swaminathan .....	109
26. Man Booker International Prize .....	110
27. World Sparrow Day .....	110
28. Mahatma Gandhi Green Triangle .....	110
29. Women Transforming India (WTI) Awards.....	111
30. Delhi Municipal Corporation (Amendment) Bill, 2022.....	111
31. All India Digital Nation-Wide Pension Adalat.....	111
32. Abel Prize 2022 .....	112
33. World Water Day .....	112
34. Wings India 2022.....	113
35. H2Ooooh .....	113
36. TEJAS Skilling Project.....	113
37. Herbal Formulation for Tick Infestation.....	113

# Economy

## 1. Market Infrastructure Institutions

### Why in News?

The Securities and Exchange Board of India (SEBI) has fined the National Stock Exchange (NSE) for laxity in governance pertaining to actions taken during the tenure of its former MD and CEO Chitra Ramkrishna.

### About

- **Stock exchanges, depositories** and **clearing houses** are all Market Infrastructure Institutions (MIIs).
- They constitute a **key part of the nation's vital economic infrastructure**.
- In 2010, a panel was set up under the chairmanship of former **RBI Governor Bimal Jalan to examine the issues** arising from the ownership and governance of MIIs.
- In its 2010 report, the panel said that the term '**infrastructure**' would mean the basic, **underlying framework** or **features of a system**.
- It also said that the term '**market infrastructure**' denotes such fundamental facilities and systems serving this market.
- Which institutions in India qualify as MIIs? →
  - Stock Exchanges → SEBI **lists seven including** BSE, NSE, Multi Commodity Exchange of India and the Metropolitan Stock Exchange of India as MIIs.
  - Depositories → They are **charged with the safekeeping of securities** and **enabling their trading and transfer**. Central Depository Services Ltd. and the National Securities Depository Ltd has been listed as MIIs.
  - Clearing houses → They **help validate and finalise securities trades** and ensure that both buyers and sellers honour their obligations. SEBI lists **seven clearing houses** including the Multi Commodity Exchange Clearing Corporation as MIIs.
- Why are governance norms critical in the regulation of MIIs? →
  - Any failure of MIIs could result in an **overall economic downfall** that **could potentially extend** beyond the boundaries of the securities market. Hence, the governance and oversight of MIIs are **absolutely critical**, and they **need to be of the highest standards**.
  - For instance, SEBI has **set out norms stipulating timelines** within which a stock exchange has to take action if its technology fails, including rules for a switchover to back up servers as part of the disaster recovery in an institution that enables transactions running into thousands of crores of rupees daily.

## 2. Sagar Parikrama

### Why in News?

Recently, the Union Minister for Fisheries will inaugurate the 'Sagar Parikrama'.

### About

- It was organized by **Ministry of Fisheries, National Fisheries Development Board** along with Government of Gujarat, Indian Coast Guard, Fishery Survey of India and Gujarat Maritime Board.
- Purpose → It is a **navigation journey to be conducted in all coastal states/UTs** through a pre-decided sea route to demonstrate solidarity with all fisherfolk, fish farmers and concerned stakeholders.
- The journey shall **focus on the sustainable balance** between the utilization of marine fisheries resources for food security of the nation and livelihoods of coastal fisher communities and protection of marine ecosystems.
- Part of → This initiative has been launched as a **part of 'Azadi Ka Amrit Mahotsava'** (Azadi Ka Amrit Mahotsava is one of the significant initiatives of the Government of India to celebrate and commemorate 75 years of independence and the glorious history of its people, culture and achievements).

- Note → Oceans are **vital to the economies**, **security** and **livelihoods** of Indian coastal states. India has a coastline of 8118 km covering 9 maritime States/4 UTs and providing livelihood support to millions of coastal fisherfolk.

### 3. Minimum Assured Return Scheme

#### Why in News?

The Pension Fund Regulatory and Development Authority (PFRDA) has appointed EY Actuarial Services LLP as a consultant to design the Minimum Assured Return Scheme (MARS) under the National Pension System (NPS).

#### About

- MARS is a guaranteed return scheme that can offer a **guaranteed minimum rate of return** to NPS subscribers.
- [Currently, the NPS gives returns annually, based on prevailing market conditions.]
- MARS will provide savers and people from the salaried class an **option for their investments**.
- Returns → The actual returns will **depend on the market conditions**.
  - This guaranteed return may be applicable **only to future contributions** (prospectively).
  - Any **shortfall** will be made good by the sponsor, and the surplus will be **credited to the subscribers' account**.
- Two options are likely to be on offer →
  - Under the **fixed guarantee option**, the guaranteed return is **fixed along the accumulation phase**.
  - Under the **floating guarantee option**, the guaranteed rate of return is **not fixed** along the savings phase. The guarantee depends on the development of the 1-year interest rate until retirement.
- **Lock-in period** may be **applicable on each contribution**, and will be applied based on the period since that contribution has been made.
  - It may also consider **multiple lock-in period options** (or staggered guarantee periods) for flexibility.
  - The subscriber may have the **option to withdraw** or **to stay invested** after the lock-in period. However, there won't be any guarantee applied on the investment after lock-in.

#### 🔑 National Pension System

- Introduced in **2004** (except for armed forces).
- NPS was made **available to all Citizens** of India from 2009.
- NPS is based on a **unique individual pension account** viz. Permanent Retirement Account Number (**PRAN**) created for each subscriber.
- A citizen of India **aged between 18-70 years** can join NPS either in their individual capacity or in association with their Employer.
- NPS is structured into two tiers →
  - **Tier-I account** - Non-withdrawable permanent retirement account.
  - **Tier-II account** - Voluntary withdrawable account.
- Contributions to the Individual Pension Account can be made during **one's working life**.
  - This can be done either by the **individual or employer** or **by the employer and employee together** in equal or unequal proportion.
  - The accumulated corpus under the scheme is **utilized to procure a pension** upon retirement/superannuation of the subscriber.
- **PFRDA**, which is the **pension regulator**, **operates** the National Pension System (NPS).
- **National Pension System Trust (NPST)** established by PFRDA is the registered owner of all assets under NPS.

### 4. e-Bill

#### Why in News?

Nirmala Sitharaman, Union Finance Minister, will launch the electronic bill (e-Bill) processing system under the Digital India eco-system and ease of doing business.

## About

- Developed by → **Public Financial Management System (PFMS) Division** in the office of the Controller General of Accounts in the Department of Expenditure, Ministry of Finance.
- Aim → To make the entire process of submission and backend processing of bills **completely paperless and transparent** for Central Government Ministries.
- Objectives of the System →
  - Provide **convenience to all vendors/suppliers** of the government to submit their bills/claims at any time, from anywhere.
  - **Eliminate physical interface** between suppliers and government officers.
  - Enhance efficiency in processing bills/claims.
  - **Reduce discretion** in the processing of bills through the “First-In-First-Out”(FIFO) method.
- Significance → Under this e-Bill system, vendors/suppliers can **upload their bills online** along with supporting documents at any time through **digital signature**. For those **not having a digital signature**, the **facility of e-sign using the Aadhaar** has also been provided.

## 5. Monetary Policy Committee

### Why in News?

Jayant Varma, Member of the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI), who has been opposing the RBI's accommodative policy stance.

## About

- Origin → It has been instituted by the Central Government of India under **Section 452B of the RBI Act that was amended in 1934**.
- Functions → The MPC is entrusted with the responsibility of **deciding the different policy rates** including MSF, Repo Rate, Reverse Repo Rate, and Liquidity Adjustment Facility
- Composition of MPC →
  - The committee will have **six members**. Of the six members, the **government will nominate three**. No government official will be nominated to the MPC.
  - The **other three** members would be **from the RBI with the governor being the ex-officio chairperson**. Deputy governor of RBI in charge of the monetary policy will be a member, as also an executive director of the central bank.
- Selection and term of members →
  - Selection: The government nominees to the MPC will be selected by a **Search-cum-Selection Committee** under Cabinet Secretary with RBI Governor and Economic Affairs Secretary and three experts in the field of economics or banking or finance or monetary policy as its members.
  - Term: Members of the MPC will be appointed for a **period of four years** and shall **not be eligible for reappointment**.
- How decisions are made? →
  - Decisions will be taken by **majority vote** with each member having a vote.
  - RBI governor's role: The RBI Governor will **chair the committee**. The governor, however, will **not enjoy a veto power** to overrule the other panel members, but will have a casting vote in case of a tie.

## 6. Donate a Pension initiative

### Why in News?

Ministry of Labour and Employment launched the “donate a pension” scheme under the Pradhan Mantri Shram Yogi Maan-Dhan Scheme (PM-SYM).



## About

- “Donate a pension” scheme **allows a citizen to donate the premium contribution** of their immediate support staff such as domestic workers, drivers, helpers, care givers, nurses, in their household or establishment.
- The donor can pay the contribution for a **minimum of one year**, with the amount ranging **from Rs. 660 to Rs. 2,400 a year**, depending on the age of the beneficiary.
- The premium amount can be paid **through maandhan.in** or by visiting a **Common Service Centre** anywhere in the country.

## PM-SYM:

- It is a **50:50 voluntary** and **contributory pension scheme** in which the beneficiary makes a stipulated age-specific contribution and the Central Government matches it.
- Implementation → The Ministry of Labour and Employment will oversee PM-SYM, which will be implemented by **Life Insurance Corporation of India** and **CSC eGovernance Services India Limited (CSC SPV)**.
- Eligibility → Workers working in the **unorganised sector** in the age group of **18-40 years** can register themselves and deposit a minimum of Rs 660 to 2400 every year depending on their age.
- They should **not be covered under New Pension Scheme (NPS)**, Employees’ State Insurance Corporation (ESIC) scheme or Employees’ Provident Fund Organisation (EPFO). Further, he/she should not be an income tax payer.
- Benefits → After **attaining the age of 60 years** they will receive the minimum assured pension of **Rs 3,000 per month**.
- Beneficiaries → The **unorganised workers mostly engaged as** home based workers, street vendors, mid-day meal workers, head loaders, brick kiln workers, cobblers, rag pickers, domestic workers, washer men, rickshaw pullers, landless labourers, own account workers, agricultural workers, construction workers, beedi workers, handloom workers, leather workers, audio- visual workers and similar other occupations whose monthly income is Rs 15,000/ per month or less.

## 7. SAMARTH

### Why in News?

Recently, on the occasion of International Women’s Day 2022, the Union Minister for Micro, Small and Medium Enterprises (MSMEs), launched a Special Entrepreneurship Promotion Drive for Women - “SAMARTH”.

## About

- Launched by → **Ministry of Micro, Small & Medium Enterprises**.
- Purpose → It is a **Special Entrepreneurship Promotion Drive for Women** to provide them with an opportunity to be self-reliant and independent by undertaking self-employment opportunities.
- Key features of the scheme → Under the initiative, the following benefits will be available to aspiring and existing women entrepreneurs:
  - **20% of Seats in free Skill Development Programs** organized under skill development schemes of the Ministry will be allocated for Women.
  - **20% of MSME Business Delegations sent** to domestic & international exhibitions under the schemes **for Marketing Assistance** implemented by the Ministry will be dedicated to women-owned MSMEs.
  - **20% Discount** on **annual processing fee** on National Small Industries Corporation’s (NSIC) Commercial Schemes such as Single Point Registration Scheme, Raw Material Assistance and Bill Discounting, Tender Marketing among others.
  - **Special Drive for registration** of women-owned MSMEs under Udyam Registration.
- Significance of the Scheme → Through this initiative, the Government is planning to **train more than, 7500 women candidates from rural and sub-urban areas in FY 2022-23**. Besides, women will also be getting marketing opportunities to showcase their products in domestic and international exhibitions.



## 8. Start-Up Village Entrepreneurship Programme

### Why in News?

The Union Ministry of Rural Development (MoRD) and the National Institute of Entrepreneurship and Small Business Development (NIESBUD) have signed a memorandum understanding (MoU) to develop a sustainable model for promoting entrepreneurship at the grass roots by initiating the 'start-up village entrepreneurship programme' (SVEP).

### About

- It was launched in **2016** by the Ministry of Rural Development as a **sub-scheme under** the Deendayal Antyodaya Yojana – National Rural Livelihoods Mission(**DAY-NRLM**).
- Objective → To **support the rural poor** come out of poverty by supporting them to **set up enterprises** and **provide support** till the enterprises stabilize.
  - It also focuses on providing self-employment opportunities with financial assistance and training in business management and soft skills while creating local community cadres for promotion of enterprises.
- Pillars → It addresses **three major pillars** of rural start-ups namely – **finances, incubation** and **skillecosystems**.
- Features →
  - SVEP **promotes both individual and group enterprises** set-up and promotes enterprises majorly in manufacturing, trading and service sectors.
  - Community resource persons – enterprise promotion (**CRP-EP**): These are **certified local persons** who provide business support services to the entrepreneurs.
  - Block resource center(BRC): It has been set up to **monitor and manage the community resource persons**, appraise SVEP loan application and acts as the repository of enterprise related information in the concern block.
- Technical Support → **Entrepreneurship Development Institute of India (EDII), Ahmedabad** is the technical support partner of SVEP.

## 9. Virtual Smart Grid Knowledge Center

### Why in News?

The Union Minister for Power has launched the Virtual Smart Grid Knowledge Center (Virtual SGKC) and Innovation Park.

### About

- Established by → **PowerGrid** with support from the Ministry of Power and National Smart Grid Mission(NSGM) and technical assistance from United States Agency for International Development(USAID).
- Location → The centre is located **within thePOWERGRID**.
- Purpose of the Center → To **become a global leader in fostering innovation, entrepreneurship and research** in smart grid technologies and create capacities in the power distribution sector.

### 🔑 National Smart Grid Mission

- It was launched in **2015** by **Ministry of Power**.
- Objective → To **address key issues of Smart Grid Initiatives** on a large scale in the country and to make the Indian Power infrastructure cost-effective, responsive and reliable.

### 🔑 Smart Grid

- Smart Grid is an **Electrical Grid with Automation, Communication** and **IT systems** that can monitor power flows from points of generation to points of consumption and control the power flow or curtail the load to match generation in real-time or near real-time.
- Some smart grids include **various energy measures** such as smart meters, smart appliances, renewable energy resources, and energy-efficient resources.

- These **measures can contribute to** a reduction of T&D losses, Peak-load management, improved quality of Service, increased reliability, better asset management, renewable integration, better accessibility to electricity and also lead to self-healing grids.

## 10. UPI123Pay

### Why in News?

On March 8, the Reserve Bank of India launched a new Unified Payments Interface (UPI) payments solution for feature phone users dubbed 'UPI123Pay'.

### About

- UPI '123PAY' is a **three-step method** to initiate and execute services for users which will work on simple phones.
- It will allow customers to **use feature phones** for almost all transactions **except scan and pay**.
- It **doesn't need an internet connection** for transactions. Customers have to link their bank account with feature phones to use this facility.
- The new UPI payments system offers users **four options** to make payments without internet connectivity:
  - Interactive Voice Response (IVR) → Users would be required to **initiate a secured call** from their feature phones to a predetermined IVR number and complete UPI on-boarding formalities to be **able to start making financial transactions** like money transfer, mobile recharge, EMI repayment, balance check, among others.
  - App-based functionality → One could also **install an app** on feature phone through which **several UPI functions**, available on smartphones, will be available on their feature phone, except scan and pay feature which is currently not available.
  - Missed call facility → The missed call facility will allow users to **access their bank account** and **perform routine transactions** such as receiving, transferring funds, regular purchases, bill payments, etc., by giving a missed call on the number displayed at the merchant outlet. The customer will receive an incoming call to authenticate the transaction by entering UPI PIN.
  - Proximity sound-based payments → One could utilise the proximity sound-based payments option, which **uses sound waves to enable contactless, offline, and proximity data communication** on any device.

### Unified Payments Interface (UPI)

- It is an **advanced version of Immediate Payment Service (IMPS)**- round-the-clock funds transfer service to make cashless payments faster, easier and smoother.
- UPI is a system that **powers multiple bank accounts into a single mobile application** (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- The top UPI apps today include **PhonePe, Paytm, Google Pay, Amazon Pay** and **BHIM**, the latter being the Government offering.

## 11. Amendment to Mines and Minerals (Development and Regulation) Act

### Why in News?

The Union Cabinet has approved the proposal of the Ministry of Mines for amendment of Second Schedule of the Mines and Minerals (Development and Regulation) Act, 1957.

### About

- The amendment specifies the **rate of royalty in respect of certain minerals** like Glauconite, Potash, Emerald, Platinum Group of Metals (PGM), Andalusite, Sillimanite and Molybdenum.
- The approval would **ensure auction of mineral blocks** in respect of Glauconite, Potash, Emerald, Platinum Group of metals, Andalusite and Molybdenum for the first time in the country.

## Use of these minerals

- Minerals like **Glauconite and Potash** are used as **fertilizer** in agriculture.
- Platinum Group of Metals**(PGM) are **high-value metals** used in various industries and new innovative applications.
- Minerals like **Andalusite, molybdenum** are vital minerals **used in industrial applications**.
- Hence, encouraging indigenous mining of these minerals would **lead to a reduction in imports** in potash fertilizers and other minerals, thereby reducing the country's foreign dependency.

## 12. National Land Monetization Corporation

### Why in News?

The Union Cabinet, chaired by Prime Minister, has approved the setting up of the National Land Monetization Corporation (NLMC).

### About

- National Land Monetization Corporation (NLMC) will be set up as **a wholly owned Government of India company** with an initial authorized share capital of Rs 5000 crore and paid-up share capital of Rs 150 crore.
- NLMC will be set up and administered by the **Department of Public Enterprise, Ministry of Finance**.
- NLMC will undertake **monetization of surplus land and building assets of**
  - Central Public Sector Enterprises (CPSEs) and
  - Other Government agencies.
- Key functions of NLMC →
  - NLMC is expected **to own, hold, manage** and **monetize surplus land and building assets of CPSEs** under closure and the surplus non-core land assets of Government owned CPSEs under strategic disinvestment.
  - This will **speed up the closure process of CPSEs** and smoothen the strategic disinvestment process of Government owned CPSEs.
  - These **assets may be transferred to NLMC** to hold, manage and monetize these assets.
  - NLMC will also **advise and support other Government entities** (including CPSEs) in identifying their surplus non-core assets and monetizing them in a professional and efficient manner to generate maximum value realization.
  - In these cases, NLMC will **undertake surplus land asset monetization** as an agency function.
  - It is expected that **NLMC will act as a repository of best practices in land monetization**, assist and provide technical advice to Government in implementation of asset monetization programme.
- Composition →
  - NLMC will have necessary **technical expertise** to professionally manage and monetize land assets on behalf of CPSEs and other Government agencies.
  - The Board of Directors of NLMC: will comprise **senior Central Government officers** and **eminent experts** to enable professional operations and management of the company.
  - The **Chairman**, and **non-Government Directors** of the NLMC will be appointed through a merit-based selection process.

## 13. MSME Innovative Scheme

### Why in News?

Recently, the Ministry of MSME (Medium, Small and Micro Enterprises) has launched the MSME Innovative Scheme (Incubation, Design and IPR) along with the MSME IDEA HACKATHON 2022.

### About

- Aim →
  - To **promote and support** untapped creativity of the MSME sector and

- To **act as a hub for innovation activities, facilitating and guiding** the development ideas into a viable business proposition that benefits society directly.
- The three sub-schemes under this scheme include:
  - Incubation → It aims to promote and support untapped creativity and to promote the **adoption of the latest technologies in MSMEs** that seek the validation of their ideas at the proof-of-concept level. Financial assistance up to **Rs 15 lakh per idea** and **up to Rs one crore** for relevant plants and machines will be provided.
  - Design → It aims to bring the Indian manufacturing sector and design expertise/design fraternity onto a **common platform**. Financial assistance up to **Rs 40 lakh for design projects** and **up to Rs 2.5 lakh for student projects** will be provided.
  - IPR (Intellectual Property Rights) → It aims to **improve the IP culture** in India with a view to **enhance the awareness** of Intellectual Property Rights(IPRs) amongst the MSMEs and to **encourage** creative intellectual endeavour in the Indian economy. Financial assistance upto **Rs 5 lakh for a foreign patent, Rs one lakh for a domestic patent, Rs two lakh for GI registration**, Rs 15,000/- for design registration, Rs.10,000/- for a trademark in the form of reimbursement.

Revised Classification as per MSME Act, 2013	
Composite Criteria: Investment in Plant & Equipment	
Classification	Micro
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore

## 14. Rural Self Employment Training Institutes(RSETIs) Programme

### Why in News?

To mark International Women's Day 2022, new batches of women-centric courses were started by RSETIs (Rural Self Employment Training Institutes) across the country.

### About

- It is a **three-way partnership** between the Ministry of Rural Development (MoRD), State Governments and the Sponsor Banks.
- Under the programme, **banks** are mandated to **open at least one RSETI in their lead district** to provide **training to rural youth** to take up self-employment/entrepreneurship ventures.
- RSETI program runs with an approach of **short-term training & long-term handholding of entrepreneurs**.
- Eligibility → Rural poor youth between the **age group of 18-45 years** are eligible to join the training.
- Significance → The RSETIs have become established as **pioneers in capturing the aspirations of the rural poor youth** and **turning them into profitable entrepreneurs** by training them in the domain and entrepreneurial skills.
  - The programme is currently being implemented in **28 States and 7 UTs** with 585 functioning RSETIs sponsored by 23 leading Banks.

## 15. New Microfinance Lending Norms: RBI

### Why in News?

RBI has released new microfinance lending norms.

### As per these norms

- All entities, banks, non-banking financial companies (NBFCs), and microfinance institutions (MFIs) are **subject to the same regulations**.

- A microfinance loan is defined by the RBI as a 'collateral-free' loan granted to a household with an annual household income of up to Rs 3 lakh.
- All collateral-free loans offered to low-income households, regardless of the end-use and mode of application/processing/disbursal, are considered microfinance loans.
- The financial entities should have a board-approved policy to provide the flexibility of repayment periodicity on microfinance loans as per borrowers' requirements. They should also have a board-approved policy for the assessment of household income.

### Microfinance

- Microfinance is a form of financial service which provides small loans and other financial services to poor and low-income households.
- MFIs are financial companies that provide small loans to people who do not have any access to banking facilities.
- The definition of "small loans" varies between countries. In India, all loans that are below Rs. 1 lakh can be considered as microloans.
- Microcredit is delivered through a variety of institutional channels viz →
  - Scheduled commercial banks (SCBs) (including small finance banks (SFBs) and regional rural banks (RRBs)).
  - Cooperative banks.
  - Non-banking financial companies (NBFCs).
  - Microfinance institutions (MFIs) registered as NBFCs as well as in other forms.

## 16. National Rail Plan Vision – 2030

### Why in News?

Indian Railways have prepared a National Rail Plan (NRP) for India - 2030. The National Rail Plan (NRP) is to create a 'future ready' Railway system by 2030.

### About

- Formulate strategies based on both operational capacities and commercial policy initiatives to increase the modal share of the Railways in freight to 45%.
- Reduce transit time of freight substantially by increasing the average speed of freight trains to 50Kmph.
- As part of the Plan, Vision 2024 has been launched for accelerated implementation of certain critical projects by 2024 such as 100% electrification, multi-tracking of congested routes, up-gradation of speed to 160 kmph on Delhi-Howrah and Delhi-Mumbai routes and elimination of all Level Crossings on Golden Quadrilateral- Golden Diagonal (GQ/GD)
- Identify new Dedicated Freight Corridors and High-Speed Rail Corridors.
- Assess rolling stock requirement for passenger traffic as well as wagon requirement for freight.
- Assess Locomotive requirements to meet twin objectives of 100% electrification (Green Energy) and increasing freight modal share.
- Sustained involvement of the Private Sector in areas like operations and ownership of rolling stock, development of freight and passenger terminals, development/operations of the track infrastructure.

## 17. Export Preparedness Index 2021

### Why in News?

Export Preparedness Index 2021 was recently released.

### About

- Released by → NITI Aayog, in collaboration with the Institute of Competitiveness.
- History → The first Index was launched in August 2020.

- The Export Preparedness Index is a **comprehensive analysis of India's export achievements**.
- It aims to **identify the fundamental areas** critical for subnational export promotion.
- The **coastal states** have been adjudged as the **best performers** in the index.
- Parameters → The index ranked states on four key parameters – **policy; business ecosystem; export ecosystem; export performance**.
  - The index also took into consideration **11 sub-pillars** — export promotion policy; institutional framework; business environment; infrastructure; transport connectivity; access to finance; export infrastructure; trade support; R&D infrastructure; export diversification; and growth orientation.

#### Key Finding

- **Gujarat has topped** NITI Aayog's Export Preparedness Index (EPI) 2021 for the second consecutive time.
- **Maharashtra** has been ranked second and **Karnataka** has been ranked third.

### 18. Bharatiya Prakritik Krishi Paddhati(BPKP) Scheme

#### Why in News?

The Union Minister of Agriculture and Farmers Welfare has informed Rajya Sabha about the Bharatiya Prakritik Krishi Paddhati(BPKP) Scheme.

#### About

- It is launched by **Ministry of Agriculture & Farmers Welfare** during 2020-21
- It is a **sub-mission** under the centrally sponsored scheme – Paramparagat Krishi Vikas Yojana(PKVY).
- Aim → To **promote traditional indigenous practices** which give freedom to farmers from externally purchased inputs.
- Key Features →
  - The scheme mainly focuses on the **exclusion of all synthetic chemical inputs** and **promotes on-farm biomass recycling** with major stress on biomass mulching, use of cow dung-urine formulations and other plant-based preparations.
  - Under BPKP, financial assistance of **Rs. 12200/ha for 3 years** is provided for cluster formation, capacity building and continuous handholding by trained personnel, certification and residue analysis.
- Achievements of the Scheme → Until now, under natural farming, **an area of 4.09 lakh ha area** has been covered. The Government of Andhra Pradesh is leading in terms of **1.0 lakh ha area** under natural farming under BPKP.

### 19. Pradhan Mantri Garib Kalyan Anna Yojana

#### Why in News?

The Union Cabinet has extended the Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY) scheme for another six months, i.e., till September 2022. This will be the sixth phase of PM-GKAY. The Phase V of the scheme was to end in March 2022.

#### About

- Launched by **Department of Food and Public Distribution** under the Ministry of Consumer Affairs, Food and Public Distribution in **April 2020**.
- Aim → To **ensure sufficient food** for the poor and needy during the coronavirus crisis.
- Key features →
  - Under the scheme, each beneficiary will get an **additional 5 kg free ration per person per month** in addition to his normal quota of foodgrains under the National Food Security Act(NFSA). This means that every poor household would get nearly **double** the normal quantity of ration.

- The scheme will cover nearly **80 crore beneficiaries** across India and would be **fully funded** by the Government of India.
- The benefit of the free ration can also be availed through portability by any migrant labour or beneficiary under **One Nation One Ration Card (ONORC) plan** from nearly **5 lakh ration shops** across the country.

## 20. Shrinkflation

### Why in News?

Recently, Due to rising costs many companies are practising “Shrinkflation”.

### About

- What is it? → Shrinkflation is the **practice of reducing the size of a product** while maintaining its sticker price.
  - It is a form of **hidden inflation**.
- Raising the price per given amount is a strategy employed by companies, mainly in the food and beverage industries, to **stealthily boost profit margins** or **maintain them in the face of rising input costs**.
- Shrinkflation is also referred to as **package downsizing in business and academic research**.
- A less common usage of this term may refer to a **macroeconomic situation** where the economy is contracting while also experiencing a rising price level.
- Nowadays, shrinkflation is a **common practice among producers**. The number of products that undergo downsizing increases every year.
  - Large producers in the European and North American markets rely on this strategy to maintain the competitive prices of their products without significantly reducing their profits.
- At the same time, shrinkflation can frequently **lead to customer frustration and deteriorating** consumer sentiment regarding the producer’s brand.

## 21. Animal Disease Free Zone

### Why in News?

In order to boost exports of value-added meat products, the Government of India has called on stakeholders to work towards the creation of region-specific animal disease-free zones in the country.

### About

- According to the World Organisation for Animal Health (OIE), zoning is a **risk management strategy** for achieving the progressive control and eradication of animal diseases, and for providing guarantees for international trade.
- Animal Disease Free Zone is one in which the **absence of a specific infection in an animal population** has been demonstrated in accordance with the relevant requirements.

### 🔑 Significance

- Animals are the **life support system for the rural economy**, they provide sustenance in difficult times and a great source of nutrition, particularly proteins, for the rural folk. There is a **need to work to increase animal productivity**.
- Moreover, India is the **largest exporter of frozen and bovine meat**. Hence, there is a need to create **region-specific animal disease-free zones** in the country.

### 🔑 Steps taken by the Government to help this initiative

- National Animal Disease Control Programme → It aims to control and **eradicate Foot & Mouth Disease (FMD) and Brucellosis** amongst the livestock in the country.
- National Livestock Mission (NLM) → It envisages **setting up animal farms** for their rearing in order to produce good quality meat and thereby quality value-added products.



- Agricultural and Processed Food Products Export Development Authority(APEDA) → It **promotes exports of agriculture and animal fresh and processed products** by setting standards and specifications, suggesting and supporting improvement in packaging, marketing strategies, facilitating the development of products for export, setting export zones, and organizing.

# Environment

## 1. Periyar Tiger Reserve

### Why in News?

Recently, The Kerala Forest Department said that the new airstrip near Periyar Tiger Reserve is likely to affect the wildlife and ecology of the Reserve.

### About

- The Periyar Tiger Reserve (PTR) in Thekkady located in the southern region of the **Western Ghats in Tamil Nadu and Kerala**.
- This spectacular stretch of greenery gets its **name from the River Periyar** which has its origin deep inside the reserve.
- It was declared as a **Sanctuary in 1950** and declared as **Tiger Reserve in 1978**.
- Habitat → The terrain is **Hilly and undulating**. Two major rivers namely **Periyar and Pamba** drain the area.
  - **Mullaperiyar Dam** is located within the PTR.
  - The vegetation comprises of **Tropical evergreen forests, semi- evergreen forests, Moist deciduous Forests**, Transitional fringe ever green forests, grass lands and eucalyptus plantations.
- Fauna → In addition to **Tiger**, Periyar is an important **elephant habitat**.
  - **Gaur, sambar deer, leopard, sloth bear, wild dog, Lion tailed monkey, Nilgiri langur, barking deer** and **Nilgiri tahr** are found here.
- Tribes → **Paliyans, Mannans, Malayarayans, Mala Pandarams, Uralis** and **Ulladans**.

## 2. Working Group II's Sixth IPCC Report

### Why in News?

India has welcomed the release of the Working Group II (WG2) contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC).

### About

- IPCC Assessment Reports are the **most comprehensive evaluations** of the state of the earth's climate. So far, 5 assessment reports have been produced, the first one was released in **1990**.
- IPCC has been releasing the **Sixth IPCC Assessment Report**. The report was created by three working groups of scientists.
- The **Working Group I** report was released in August 2021. Now the **Working Group II** report has been released with the title **"Climate Change 2022: Impacts, Adaptation and Vulnerability"**.

### 🔑 Key highlights

- **Cities**, which house more than half of the world's population, are **at the highest risk** from climate change.
- Climate impacts do **not distinguish between borders**, but the **poorest are hit the hardest**. Low-income populations face the largest gap in adaptation action, in terms of what is happening versus what is needed.
- The adverse impacts, as well as related losses and damages, **escalate with every increment of global warming**.
- Some climate change-driven losses, such as the **extinction of species, are irreversible**. Others are approaching irreversibility with accelerating climate change. These include the retreat of glaciers and thawing of permafrost, particularly in the Arctic region.
- Climate change has conclusively **affected the physical and mental health of people** around the world. Human society will increasingly **face heat stress, water scarcity, threats to food security** and **flood risks** as the crisis worsens.

### 🔑 Intergovernmental Panel on Climate Change

- It is the **international body** for assessing the science related to climate change.

- It was set up in **1988** by the **World Meteorological Organization (WMO)** and **United Nations Environment Programme (UNEP)** to provide policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation.
- IPCC assessments provide a **scientific basis for governments at all levels** to develop climate related policies, and they underlie negotiations at the UN Climate Conference – the United Nations Framework Convention on Climate Change (UNFCCC).

### 3. Indian Grey Hornbill

#### Why in News?

Gujarat Forest Department is reintroducing the Indian grey hornbill(IGH) in Gir Forest after almost ninety years when they vanished from this largest contiguous forest tract in western India.

#### About

- Indian Grey Hornbill (*Ocyrceros birostris*) is a fairly common hornbill species **found only in the Indian subcontinent**. It is a medium-sized hornbill with a **brownish-grey body**.
- Diet → They feed on **fruits and berries from fig trees, insects, reptiles** (snakes, lizards), small birds (mostly fledglings) but on occasion can go after slightly bigger adult birds as well.
- IUCN Status → **Least Concern**.
- Significance → It plays an **essential role in the ecosystem** as prime dispersers of seeds. It is also one of the few hornbill species found in urban areas in many cities, where they are able to make use of large trees in avenues.
- These birds are known to be **arboreal**, i.e. **spend most of their time on tall trees** but may descend for food and to collect mud pellets for nesting.
- Threats → They are threatened primarily by **habitat loss in the city** and the **cutting down of large trees**, which is important for both food and nesting.

### 4. Facility for Low Carbon Technology Deployment(FLCTD) Project

#### Why in News?

The Bureau of Energy Efficiency (BEE), commemorated its 20th Foundation Day by organising the National Innovation Conclave on Low Carbon Technologies. On this occasion, a compendium of the FLCTD Accelerator was released.

#### About

- Launched in **2016** with an objective to **identify innovative energy efficiency and low carbon technology solutions** that address the existing technology gaps in Indian industrial and commercial sectors.
- Funded by → **Global Environment Facility(GEF)**.
- Implemented by → **United Nations Industrial Development Organisation (UNIDO)** in collaboration with the Bureau of Energy Efficiency(BEE).
- Under the Project, annual innovation challenges are conducted in the following six areas → **Waste Heat Recovery, Space Conditioning, Pumps, Pumping Systems and Motors, Industrial IoT, Industrial Resource Efficiency** and **Electrical Energy Storage**.
- The winners of the challenge receive **financial assistance of up to US\$50,000** to validate their innovation and demonstrate its efficacy (performance) in actual field conditions – a necessary step before commercialization.

### 5. SIMBA: Software to Identify Asiatic Lion

#### Why in News?

Recently, Gujarat Forest Department has decided to use SIMBA software to identify the Asiatic lions for their proper management and conservation.

## About

- SIMBA or Software with Intelligent Marking Based identification of Asiatic lions is a **photo-identification software**, specifically designed to distinguish patterns or marks.
- Through this software, forest department will **assign different names** to the lions by identifying marks on their body parts.
- The **veterinary record** will also be maintained using this database.
- The SIMBA works with a **deep machine learning technique** that matches a point-pattern for pairwise comparisons and that automates the individual identification, based on the variability in the individual's whisker spot pattern, the presence of scars on the face, notches on the ears and other metadata of the photograph.
- The software also **extracts the uniqueness** from the photograph and can **cluster similar patterns**.

## 6. India's First Dugong Reserve in Palk Bay

### Why in News?

Recently, the Tamil Nadu government has decided to go ahead with the establishment of India's first conservation reserve for the Dugong in Gulf of Mannar, Palk Bay.

## About

- It would be established in the **Gulf of Mannar, Palk Bay** between India and Sri Lanka, for the conservation of the animals.
- The reserve will spread over an **area of 500 km in Palk Bay** on the southeast coast of Tamil Nadu.
- Dugongs are on the **verge of extinction**, as in the Andaman and Nicobar Islands their population is less than 100.
- Both in the **Gulf of Mannar and the Gulf of Kutch**, there are very few sporadic records.

## Dugong

- Dugong (Dugong dugon) also called '**Sea Cow**' is one of the four surviving species in the Order Sirenia and it is the only existing species of **herbivorous mammal that lives exclusively in the sea** including in India.
- Dugongs are an **important part of the marine ecosystem** and their depletion will have effects all the way up the food chain.
- Distribution and Habitat → They are found in **over 30 countries** and in India are seen in the **Gulf of Mannar, Gulf of Kutch, Palk Bay, and the Andaman and Nicobar Islands**.
- Conservation Status →
  - IUCN Red List status: **Vulnerable**
  - Wild (Life) Protection Act, 1972: **Schedule I**
  - CITES: **Appendix I**.

## 7. Glycosmis albicarpa

### Why in News?

A team of scientists from the Botanical Survey of India (BSI) have discovered a new gin berry species from the Kanyakumari Wildlife Sanctuary in Tamil Nadu.

## About

- Glycosmis albicarpa is a **gin berry species**. It belongs to the **Orange family, Rutaceae**.
- The species, Glycosmis albicarpa, with a distinct **large white fruit**, is endemic to the **southern Western Ghats**.
- Uses → The Berries of Glycosmis species have gained popularity as **edible fruit**. They are also being utilized for their **medicinal values and food**.
- Moreover, these species also **act as a larval host plants** for butterflies
- Threats → **Habitat modification** causes a major threat to the survival of this species.

- Significance of this discovery → This discovery not only re-emphasises the uniqueness and endemism in Western Ghats' flora, but also adds to the **growing inventory** of the region's flora.
- The species, an **evergreen small tree**, was found as undergrowth in the Tirunelveli semi-evergreen forests at the **Panagudi forest section** of the wildlife sanctuary.

## 8. Tiger Density

### Why in News?

Preliminary findings of a study by the Wildlife Institute of India (WII) suggest that the density of tigers in the Sunderbans may have reached the carrying capacity of the mangrove forests, leading to frequent dispersals and a surge in human-wildlife conflict.

### About

- Availability of **food and space is the primary factor** that determines how many tigers a forest can hold. And often, food is space for the tiger.
- In the **Terai and Shivalik hills habitat** — think Corbett tiger reserve, for example — **10-16 tigers can survive in 100 sq km.**
- This slides to **7-11 tigers per 100 sq km** in the **reserves of north-central Western Ghats** such as Bandipur, and to 6-10 tigers per 100 sq km in the dry deciduous forests, such as Kanha, of central India.
- The **correlation** between prey availability and tiger density is fairly established. There is even a simple linear regression explaining the relationship in the 2018 All-India Tiger report that put the carrying capacity in the Sunderbans **"at around 4 tigers" per 100 sq km.**
- A joint Indo-Bangla study in 2015 pegged the **tiger density at 2.85 per 100 sq km** after surveying eight blocks spanning 2,913 sq km across the international borders in the Sunderbans.
- The ongoing WII study indicates a **density of 3-5 tigers in the Sunderbans.**
- Given that 88 (86-90) tigers were estimated in 2,313 sq km of the Sundarbans in 2018, the population has been **close to its so-called saturation point** in the mangrove delta for some time.

## 9. Northern River Terrapin

### Why in News?

Experts and forest officials had installed GPS transmitters on Northern River Terrapin in Indian Sundarbans.

### About

- Northern River Terrapin (Batagur baska) is a **species of riverine turtle** native to Southeast Asia. It is one of **Asia's largest freshwater and breakwater turtles.**
- Distribution → The species is currently found in **Bangladesh and India**(in the Sunderbans), **Cambodia, Indonesia** and **Malaysia.** It is regionally extinct in Myanmar, Singapore, Thailand and Vietnam.
- Habitat → They spend **most of their time in water** and **only come on land to lay eggs.** They are even known to undertake **long seasonal migrations** to the sandbanks where they were hatched.
- Diet → They have an **omnivorous diet,** taking waterside plants and small animals such as clams.
- Protection status →
  - IUCN Red List: **Critically Endangered.**
  - CITES: **Appendix I.**
  - Wildlife (Protection) Act, 1972: **Schedule I.**

## 10. Amazon Rainforest

### Why in News?

The scientists recently found white cheeked macaque in Arunachal Pradesh. The discovery adds a new species to the mammal list of India.

### About

- It is a **moist broadleaf tropical rainforest** in the Amazon biome that covers most of the Amazon basin of South America.
- The majority of the forest is contained within **Brazil (60%)**, followed by **Peru**, **Colombia with 10%**, and with minor amounts in **Venezuela**, **Ecuador**, **Bolivia**, **Guyana**, **Suriname** and **French Guiana**.
- Significance →
  - Amazon's rainforest is **home to 30% of the world's species**, comprising 40,000 plant species, 16,000 tree species, 1,300 birds and more than 430 species of mammals.
  - The rainforest is also a **carbon sink** — a place that absorbs more carbon dioxide than it releases. It plays an **essential role in combating climate change**.



### Recent Study

- The Amazon Rainforest is getting **impacted by activities** such as Deforestation, increase in temperature and other human-induced activities.
- Due to this, it is **losing its ability to bounce back** from damage caused by droughts, fires and deforestation.
- The study has also warned that the rainforest **may become a dry savanna-like ecosystem**. This means that it could transform into a carbon source: Places that release more CO<sub>2</sub> than they absorb.

### Savannah-Like Ecosystem

- The Savannah ecosystem is a **tropical grassland with warm temperatures year-round** and with its highest seasonal rainfall in the summer.
- The savanna is **characterized by grasses** and **small** or **dispersed trees** that do not form a closed canopy, allowing sunlight to reach the ground.
- The largest areas of savanna are found in **Africa**, **South America**, **Australia**, **India**, the **Myanmar (Burma)–Thailand region in Asia**, and **Madagascar**.

## 11. Syllipsimopodi Bideni

### Why in News?

Recently, Scientists have discovered fossils of a species in Central Montana, USA. They have named it Syllipsimopodi bideni.

### About

- Syllipsimopodi Bideni belongs to a group of species called **vampyropods** that includes octopuses.
- The species may have **lived approximately 328 million years ago** during the Carboniferous period, making it the oldest known vampyropod and extending the fossil record of the group by about 82 million years.
- Named After → It has been named after the **US president, Joe Biden**.
- Physical Features → It was about **12 cm long** and had a **torpedo-shaped body**. Its fins were large enough to perhaps function as stabilizers and to help it swim.
  - It is the only known vampyropod to have **10 functional arms**, all with preserved suckers.
  - It likely used its **long arms to capture prey** — smaller, shelled animals, perhaps — and its shorter arms to confine and manipulate prey.

- Significance → This discovery greatly **changes the human understanding** of how octopuses evolved and indicates that the earliest members of the group superficially resembled living squids.

## 12. Halari Breed of Donkey

### Why in News?

Recently, the Union Minister of Fisheries, Animal Husbandry and Dairying has addressed the Saurashtra Maldhari Sammelan. The sammelan deliberated upon the conservation of threatened breeds of livestock, particularly the Halari breed of Donkey.

### About

- Halari Donkey is one of the important livestock in the **semi-arid landscape** of Saurashtra's Jamnagar and Dwarka district of the **state of Gujarat**.
- The **Bharwad and Rabari pastoralists** are the main communities that use this donkey as a **pack animal to carry luggage** during migration with small ruminants.
- The **Kumbhar (potter) community** also uses this animal **for pottery work** in the Jamnagar region.
- The Halari donkey's **milk** is also said to be **one of the most expensive** in the world which can go upto Rs 1000 for its medicinal values.
- Threatened Species → Halari Donkey is currently in a **threatened state** and requires **immediate steps towards conservation** to reverse the declining trend in the population.
  - The reasons for their decline are the **unavailability of Halari Donkey males for breeding, disincentives** to Halari Donkey rearers with no avenues associated with streamlining the livelihoods (based on donkey milk).

## 13. Heatwave

### Why in News?

The Konkan region, including Mumbai, has been experiencing sweltering heat in recent days, with the maximum temperatures touching the 40 degrees mark.

### About

- Heatwaves occur over India **between March and June**.
- IMD declares a heatwave event when the maximum (day) temperature for a location in the **plains crosses 40 degrees Celsius**.
- Over the **hills**, the threshold **temperature is 30 degrees Celsius**.
- Following criteria are used to declare heatwave → To declare heatwave, the below criteria should be **met at least in 2 stations** in a Meteorological subdivision for **at least two consecutive days** and it will be declared on the second day.
  - a) **Based on Departure from Normal**
    - Heat Wave: Departure from normal is 4.5°C to 6.4°C
    - Severe Heat Wave: Departure from normal is >6.4°C
  - b) **Based on Actual Maximum Temperature** (for plains only)
    - Heat Wave: When actual maximum temperature ≥ 45°C
    - Severe Heat Wave: When actual maximum temperature ≥ 47°C.
- How long can a heatwave spell last? →
- A heatwave spell generally **lasts for a minimum of four days**. On some occasions, it can extend up to seven or ten days.
- The longest recorded heatwave spell, in recent years, was **between 18 – 31 May 2015**.

## 14. Project Dolphin



### Why in News?

Ministry of Jal Shakti expressed his displeasure over the slow pace of the approval process for Project Dolphin.

### About

- Project Dolphin initiative got **in-principle approval in 2019** at the first meeting of the National Ganga Council (NGC), headed by the Prime Minister.
- Project Dolphin is one of the activities planned **under Arth Ganga**, an ambitious inter-ministerial initiative of the government approved in 2019.
- Project Dolphin will be **on the lines of Project Tiger**, which has helped increase the tiger population.
- It is expected to be implemented by the **Ministry of Environment, Forest and Climate Change**.
- A Special Conservation program needs to be taken up for Gangetic Dolphin which is a **national aquatic animal** and **also indicator species** for the river Ganga spread over several states.
- Indicator species, organisms—often a microorganism or a plant—that serves as a **measure of the environmental conditions** that exist in a given locale.

### 🔑 Gangetic Dolphin

- Gangetic Dolphin (*Platanista gangetica gangetica*) was officially discovered in **1801**.
- Habitat → They live in the **Ganges-Brahmaputra-Meghna** and **Karnaphuli-Sangu river systems** of Nepal, India, and Bangladesh.
  - The Ganges river dolphin can only live in **freshwater** and is **essentially blind**.
  - They hunt by emitting **ultrasonic sounds**, which bounces off of fish and other prey, enabling them to “**see**” an image in their mind. They are also called ‘**susu**’.
- Conservation Status →
  - Indian Wildlife (Protection), Act 1972: **Schedule I**.
  - International Union for the Conservation of Nature (IUCN): **Endangered**.
  - Convention on International Trade in Endangered Species (CITES): **Appendix I** (most endangered).
  - Convention on Migratory Species (CMS): **Appendix II**.

## 15. Flood Plain Zoning

### Why in News?

The Ministry of Jal Shakti recently informed the Rajya Sabha that the states of Rajasthan, Manipur, Uttarakhand, and the erstwhile state of Jammu and Kashmir had enacted National Floodplains Zoning Policy.

### About

- Flood Plain Zoning has been recognized as an **effective non-structural measure for flood management**.
- Flood-plain zoning measures aim at **demarcating zones or areas likely to be affected by floods** of different magnitude or frequencies and probability levels and **specify the types of permissible developments** in these zones so that whenever floods actually occur, the damage can be minimized.
- The action for demarcation of flood plain areas and regulating the activities therein is to be undertaken by **respective state governments**.
- Assessment of Flood Prone Area of the Country: The assessment of flood-prone areas of the country has been **carried out by different expert committees**:
  - 1) The **Rashtriya Barh Ayog**(RBA) had in the year 1980 estimated the total area liable to floods in the country as **40 Million hectares** (Mha), 2) The extent of the maximum area affected by floods as per the **Working Group(WG) Report on Flood Management and Region Specific** Issues in **2011 is 49 Mha**.

### 🔑 Model Draft Bill for Flood Plain Zoning

- A **Model Draft Bill** for Food Plain Zoning Legislation was circulated by the Union Government to all the States.
- The Bill talks about **flood zoning authorities, surveys** and **delineation of flood plain area**, notification of limits of flood plains, prohibition of the use of the flood plains, **compensation** and most importantly **removing obstructions to ensure free flow of water**
- The states of **Manipur, Rajasthan, Uttarakhand** and the erstwhile State of **Jammu & Kashmir** had enacted the legislation.

## 16. Toyota Mirai

### Why in News?

Recently, the Union Minister for Road Transport and Highways launched the world's most advanced technology, Green Hydrogen Fuel Cell Electric Vehicle (FCEV) Toyota Mirai.

### About

- Toyota Mirai ('Mirai' in Japanese means '**future**'). is **India's first** green hydrogen-based advanced Fuel Cell Electric Vehicle (FCEV).
- The car is capable of providing a range of up to **650 km in a single charge**, with a **refuelling time of five minutes**.
- Significance →
  - This is a first of its kind project in India which aims to **create a Green Hydrogen based ecosystem** in the country by **creating awareness** about the unique utility of Green Hydrogen and FCEV technology.
  - Fuel Cell Electric Vehicle (FCEV) **powered by Hydrogen** is one of the best Zero-Emission solutions. It is completely **environment friendly** with no tailpipe emissions other than water.

### Fuel Cell Electric Vehicle

- The Fuel Cell Electric Vehicle (FCEV) is a device that **uses a source of fuel, such as hydrogen, and an oxidant to create electricity** by an electrochemical process.
- Put simply, the fuel cell **combines hydrogen and oxygen** to generate an electric current, water being the only byproduct.
- Does FCEV a conventional vehicle or an electric vehicle (EV)? →
  - Fuel cells generate electricity through an **electrochemical process**. But unlike a battery-electricity vehicle, it does not store energy and, instead, **relies on a constant supply of fuel and oxygen**. In that sense, it may be seen as being similar to a conventional internal combustion engine.
  - However, unlike combustion engine cars, there are **no moving parts in the fuel cell**, so they are **more efficient and reliable** by comparison. Also, there is no combustion on board, in the conventional sense.

## 17. Detailed Project Reports

### Why in News?

Union Minister for Environment Forest and Climate Change and Union Minister of Jal Shakti has released the Detailed Project Reports (DPRs) on Rejuvenation of thirteen Major Rivers through Forestry Interventions.

### About

- The rivers identified for forestry interventions include **Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Luni, Narmada, Godavari, Mahanadi, Krishna, and Cauvery**.
- The 13 rivers collectively represent **45% of the geographical area** of the country.
- Funded by → The project will be funded by the **National Afforestation and Eco-development Board**.
- The focus of the Project → The Project focuses on the **rejuvenation of rivers through protection, afforestation, catchment treatment, ecological restoration, moisture conservation, livelihood improvement, income generation,**

**ecotourism** by developing river fronts, eco-parks and bringing awareness amongst the masses. **Research and monitoring** have also been included as a component.

- Under the Project, rivers along with their tributaries are proposed for forestry interventions in the riverscape under different landscapes namely **natural landscape**, **agricultural landscape** and **urban landscape**.
- The **different models of forestry plantations** including timber species, medicinal plants, grasses, shrubs and fuel fodder and fruit trees are aimed to augment water, groundwater recharge and contain erosion.
- **Site-specific treatments** in terms of soil & moisture conservation and plantations of grasses, herbs, forestry and horticultural trees have also been proposed for treatment of prioritized sites in the riverscape supported by the **GIS technique** based on consultations with various stakeholders.

## 18. Vedanthangal Bird Sanctuary

### Why in News?

The Environment Ministry's Expert Appraisal Committee has recommended grant of environment clearance for Sun Pharmaceuticals Industries Ltd.'s expansion project in Tamil Nadu's Madurantakam taluk, around 3.7 km from the Vedanthangal Bird Sanctuary.

### About

- Vedanthangal Bird Sanctuary is a 74-acre protected area located in the Madurantakam taluk of the Chengalpattu District in the **state of Tamil Nadu**.
- Vedanthangal is home to migratory birds such as **pintail**, **garganey**, **grey wagtail**, **blue-winged teal**, **common sandpiper** and **the like**.
- Vedanthangal is the **oldest water bird sanctuary** in the country. Vedanthangal in Tamil language means '**hamlet of the hunter**'.

## 19. Boma Capturing Technique

### Why in News?

An uncommon experiment with Africa's Boma technique undertaken at Keoladeo National Park in Rajasthan for capturing and translocating spotted deer to Mukundara Hills Tiger Reserve.

### About

- The Boma capturing technique, which is **popular in Africa**, involves **luring of animals into an enclosure** by chasing them through a funnel-like fencing.
- The **funnel tapers into an animal selection-cum-loading chute**, supported with grass mats and green net to make it opaque for animals, which are then herded into a large vehicle for transport to another location.
- This old technique was earlier utilised to **capture wild elephants for training and service**.
- Significance of this transfer → This transfer will lead to herbivores populating the Mukundara Hills Tiger Reserve ahead of the **proposed shifting of two tigers to Mukundara**.

### 📍 Keoladeo National Park

- Located in **Bharatpur, Rajasthan**.
- It is a **man-made** and **man-managed** wetland. It was declared as a protected sanctuary in 1971. It is also a **World Heritage Site**.
- One-third of the Park is a wetland with **mounds**, **dykes** and **open water with** or **without submerged** or emergent plants.

### 📍 Mukundra Hills Tiger Reserve(TR)

- Located near **Kota, Rajasthan**.

- The Mukundra Hills was declared a **Wildlife Sanctuary in 1955** and a **National Park** (Mukundra Hills (Darrah) National Park) **in 2004**.
- The reserve is located on the **eastern bank of the Chambal River** and is drained by its tributaries.
- The park is situated in a valley formed by two parallel mountains viz. **Mukundra and Gargola**.
- The Tiger Reserve constitutes 3 Wildlife Sanctuaries viz; **Darrah, Jawahar Sagar, and Chambal**.

## 20. Himalayan Griffon Vulture

### Why in News?

About 100 Himalayan griffon vultures have died of suspected poisoning in Assam.

### About

- Scientific Name → **Gyps himalayensis**.
- It is a **rare and largest bird** native to the Himalayas.
- Habitat →
  - It lives mainly in the higher regions of the **Himalayas and the Tibetan Plateau** at the elevation of above 1500 metres.
  - This species is distributed from **western China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan and Pakistan**, east through the Himalayan mountain range in **India, Nepal and Bhutan**, to central China and Mongolia.
- Description →
  - This is a huge vulture and the adult is **sandy brown** with a **pale, featherless head**. When in flight, the bird has black primaries and a small-headed, squared-winged appearance.
  - Usually seen **singly** or **in small groups**; gathers in **large flocks at a carcass**.
- IUCN Red List → **Near Threatened (NT)**.

## 21. Arsenic Pollution

### Why in News?

Under Jal Jeevan Mission (JJM), while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants including Arsenic.

### About

- Arsenic is a **natural semi-metallic chemical component** of the earth's crust. It is widely distributed throughout the environment in the **air, water and land**.
- Inorganic arsenic compounds are **more harmful than organic ones**.
- Source → **More than 90%** of arsenic pollution is **inferred to be geogenic**.
  - **Alluvial sediments** are the major source for arsenic contamination in groundwater and there is a **relation with plate tectonic processes, mountain building, erosion and sedimentation**.
  - The **groundwater extracted** from unconsolidated sedimentary aquifers, particularly those which are located within the younger orogenic belts of the world, **are the worst affected**.
- Impacts → Arsenic poisoning is caused by the **ingestion, absorption, or inhalation of dangerous amounts of arsenic**.
  - Long-term exposure to arsenic-contaminated groundwater results in **severe health issues** like skin, lung, kidney and bladder cancer; coronary heart disease; bronchiectasis; hyperkeratosis and arsenicosis.
  - [Treatment involves bowel irrigation, medication and chelation therapy.]
- **Remedial Measures** are to be designed based on the source mineral, climatological and hydrogeological scenario of the affected region.
- The corrective measures available include →

- Substituting high-arsenic sources, such as groundwater, with low-arsenic, microbiologically safe sources such as rain water and treated surface water.
- Removing arsenic from groundwater using filters,
- Exploring deeper or alternative aquifers,
- Treatment of the aquifer itself,
- Dilution method by artificial recharge to groundwater,
- Conjunctive use, and
- Installation of nano-filter, among other procedures.

## 22. BBNJ Treaty

### Why in News?

The fourth Intergovernmental Conference (IGC-4) meeting was recently held in New York to conclude the draft of the instrument on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (BBNJ). The IGC-4 is convened under the United Nations Convention on the Law of the Sea (UNCLOS).

### About

- The BBNJ Treaty also known as the “Treaty of the High Seas”, is an international agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction currently under negotiation at the United Nations.
- This treaty is being developed within the framework of the UNCLOS, the main international agreement governing human activities at sea.
- The treaty will cover the high seas beyond the exclusive economic zones or national waters of countries.
- The negotiations under the treaty are centred around a package of elements namely →
  - the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits
  - area-based management tools, including marine protected areas
  - environmental impact assessments
  - capacity-building and the transfer of marine technology

### 🔗 High Seas Alliance

- High Seas Alliance was founded in **2011**. It is a partnership of organizations and groups aimed at building a strong common voice and constituency for the conservation of the high seas.
- The Alliance is currently made up of 40+ NGOs plus the International Union for the Conservation of Nature (IUCN).

## 23. Mercury Pollution

### Why in News?

Consensus is building among various stakeholders meeting in Bali, Indonesia, to adopt a non-binding declaration that will enhance international cooperation and coordination for combating illegal trade in mercury, a major pollutant globally.

### About

- Mercury is a naturally occurring element that is found in air, water and soil. Released into the atmosphere through natural processes such as weathering of rocks, volcanic eruptions, geothermal activities, forest fires, etc. Mercury is also released through human activities.
- Mercury may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.
- Chemical of major public health concern → Mercury is considered by the World Health Organisation (WHO) as one of the top ten chemicals or groups of chemicals of major public health concern.

- Minamata Disease → A disorder **caused by methylmercury poisoning** that was first described in the inhabitants of Minamata Bay, Japan and resulted from their eating fish contaminated with mercury industrial waste.

#### 📖 More on News

- The Government of Indonesia as well as the United Nations have sought support and commitment from parties to the Minamata Convention for a Bali Declaration on combating Global Illegal Trade of Mercury.
- The **non-binding declaration** calls upon parties to:
- Develop practical tools** and notification and information-sharing systems for monitoring and managing trade in mercury.
- Exchange experiences and practices** relating to combating illegal trade in mercury, including reducing the use of mercury in artisanal and small-scale gold mining.
- Share examples** of national legislation and data and information related to such trade.

#### 📖 Minamata Convention:

- It is a **UN treaty**.
- 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.

## 24. Lead Poisoning

### Why in News?

Recently, high levels of lead were found in the blood of thousands of children living around the Kabwe mine in Zambia.

### About

- Lead is a naturally occurring toxic metal **found in the Earth's crust**.
- Lead in the body is distributed to the **brain, liver, kidney** and **bones**. It is stored in **the teeth and bones**, where it accumulates over time.
- Human exposure is usually assessed through the **measurement of lead in blood**.
- Lead in bone is **released into blood during pregnancy** and becomes a source of exposure to the **developing fetus**.
- There is **no level** of exposure to lead that is known to be **without harmful effects**.
- Lead exposure is **preventable**.

#### 📖 How lead affects children?

- Lead is a **potent neurotoxin** that causes irreparable harm to children's brains.
- It is particularly destructive to babies and children under the age of 5 as it **damages their brain** before they have had the **opportunity to fully develop**, causing them **lifelong neurological, cognitive** and **physical impairment**.



- Childhood lead exposure has also been linked to **mental health and behavioural problems** and an increase in crime and violence.
- Older children suffer **severe consequences**, including **increased risk of kidney damage** and cardiovascular diseases in later life.
- How it costs countries? → Childhood lead exposure is estimated to cost lower- and middle-income countries **almost USD \$1 trillion** due to lost economic potential of these children over their lifetime.

#### 🔑 Sources of Lead Poisoning

- People can become exposed to lead through **occupational and environmental sources**. This mainly results from:
  - Inhalation of lead particles generated by **burning materials containing lead**, for example during smelting, recycling, stripping leaded paint and using leaded aviation fuel, and
  - Ingestion of **lead-contaminated dust, water** (from leaded pipes) and **food** (from lead-glazed or lead-soldered containers).

## 25. Frontiers 2022: Noise, Blazes and Mismatches

### Why in News?

In the UNEP Annual Frontier Report 2022 which is titled 'Noise, Blazes and Mismatches', Dhaka has been ranked as the noisiest city in the world.

### About

- Released by → **UN Environment Programme** (UNEP).
- The report measured noise levels in **61 cities** of the world.
- Permissible sound levels?
  - According to the WHO's recommendations, the permissible noise level limits are **55 dB for outdoor residential areas** and **70 dB for commercial areas** and where there's traffic.
  - WHO says that a sound with noise **above 70 dB** over a prolonged period of time can **increase the risk of hearing loss**.

### 🔑 Key finding

- Noisiest City → All the **top three** noisiest cities are **from South Asia**. Bangladesh's capital **Dhaka** is the noisiest city in the world, with a noise level of **119 decibels (dB)**.
- India → **Moradabad** in Uttar Pradesh has emerged as the second noisiest city in the world.
- Other Indian cities which recorded a higher decibel than the permissible levels were **Delhi** (83 dB), **Kolkata** and **Asansol** (both 89 dB) in **West Bengal** and **Jaipur** (84 dB).
- Quietest City → The report found that **Irbid (Jordan) at 60 dB** is the world's quietest city in the world, followed by **Lyon (France)**.

## 26. Olive Ridley Turtles

### Why in News?

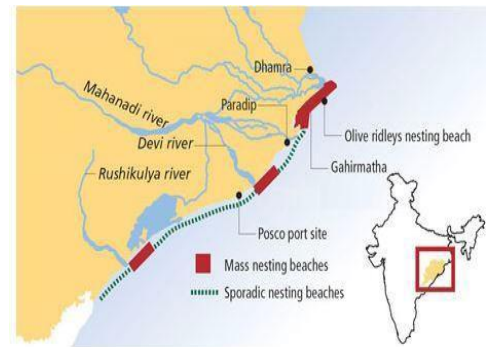
About 2.45 lakh Olive Ridley sea turtles crawled ashore on the Nasi-II beach of the Gahirmatha Marine Sanctuary along the Odisha coast for laying eggs, marking one of the largest opening day arrivals of turtles at the site.

### About

- The Olive ridley turtles are the **smallest and most abundant** of all sea turtles found in the world.
- These turtles are **carnivores** and get their name from their **olive-colored carapace**.



- They are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs.
- Habitat →
  - They are found in warm waters of the Pacific, Atlantic and Indian oceans.
  - The Odisha's Gahirmatha Marine Sanctuary is known as the world's largest rookery (colony of breeding animals) of sea turtles.
- Protection Status →
  - Wildlife Protection Act, 1972: Scheduled 1
  - IUCN Red List: Vulnerable
  - CITES: Appendix I.



## 27. Coral Bleaching

### Why in News?

The management authority of the world's largest coral reef system, Australia's Great Barrier Reef, confirmed on March 25 that the reef is experiencing a mass coral bleaching event.

### About

- Corals are marine invertebrates or animals not possessing a spine. Each coral is called a polyp and thousands of such polyps live together to form a colony, which grows when polyps multiply to make copies of themselves.
- Corals share a symbiotic relationship with single-celled algae called zooxanthellae.
- The algae provides the coral with food and nutrients, which they make through photosynthesis, using the sun's light. In turn, the corals give the algae a home and key nutrients. The zooxanthellae also give corals their bright colour.
- Australia's Great Barrier Reef is the world's largest reef system stretching across 2,300 km. It hosts 400 different types of coral, gives shelter to 1,500 species of fish and 4,000 types of mollusc.

### 👉 Coral Bleaching

- Coral Bleaching happens when corals experience stress in their environment due to changes in temperature, pollution or high levels of ocean acidity.
- Under stressed conditions, the zooxanthellae or food-producing algae living inside coral polyps start producing reactive oxygen species, which are not beneficial to the corals.
- So, the corals expel the colour-giving zooxanthellae from their polyps, which exposes their pale white exoskeleton, giving the corals a bleached appearance. This also ends the symbiotic relationship that helps the corals to survive and grow.

## 28. National Dolphin Day

### Why in News?

The Union Minister for Environment, Forest and Climate Change has chaired the 67th meeting of the Standing Committee of the National Board for Wild Life.

#### About

- The committee has recommended celebrating **October 5th** as **National Dolphin Day** every year as a historic step in creating awareness for the conservation of Dolphins.
- October 5 is currently celebrated as '**Ganga River Dolphin Day**', but its re-designation as a National Day for Dolphin will encompass all rivers and oceans' Dolphins beyond the Gangetic ones.

#### 📖 Significance of Dolphins

- Dolphins act as ideal **ecological indicators** of a healthy aquatic ecosystem. Hence, conservation of the dolphins will benefit the survival of the species and also the people dependent on the aquatic system for their livelihood.
- Gangetic River Dolphins were declared **National Aquatic Animal in 2010**.

## 29. Earth Hour

#### Why in News?

Every year, Earth Hour is observed on the last Saturday of March at 8:30 pm.

#### About

- Earth Hour is a global movement for environmental conservation. The **World Wide Fund for Nature (WWF)** **started it in 2007**.
- It is an annual event, that takes place on the **last Saturday of March**. Millions of people in over 180 countries and territories participate in it by turning off their lights.
- Aim → It aims to **call attention to** global warming, loss of biodiversity, and climate change.
- During the Earth Hour, **people turn off their lights for an hour** as a sign of global solidarity.
- Significance → This hour showcases the **need to take action** on the pressing issue of global climate change. Further, it **promotes awareness** about environmental issues on a public platform.
- The topic for Earth Hour 2022 will be "**Shape Our Future**."

#### 📖 World Wildlife Fund for Nature(WWF)

- World Wildlife Fund for Nature(WWF) is an **international non-governmental organization founded in 1961**.
- It is the **world's largest** conservation organization.
- Aim → It **aims to stop the degradation** of the planet's natural environment. Furthermore, it also aims to **build a future** where humans live in harmony with nature.
- Headquarters → **Gland, Switzerland**.

## 30. Kaziranga National Park and Tiger Reserve

#### Why in News?

The latest census of the UNESCO World Heritage Site's flagship animal - greater one-horned or Indian rhinoceros - has revealed that their population has increased in the Kaziranga National Park and Tiger Reserve.

#### About

- Kaziranga National Park and Tiger Reserve is a protected area in the **northeast Indian state of Assam**.
- It is the **oldest park in Assam** that covers the floodplains of the river Brahmaputra on the North and the Karbi Anglong hills on the South.
- Its **forests, wetlands** and **grasslands** are home to Indian one-horned rhinoceroses, tigers and elephants.
- The forest region of Kaziranga Park is home to **world's largest population** of Indian Rhinoceros.

- Over the time, the tiger population has **increased in Kaziranga**, and that's the reason why Kaziranga was declared as **Tiger Reserve in 2006**.
- Also, the park is recognized as an **Important Bird Area** by BirdLife International for the conservation of avifaunal species.
- **Ganges River dolphins** swim in the park's waters.
- Kaziranga National Park a **UNESCO World Heritage Site** is famous for the Great Indian one horned rhinoceros.

#### **Key findings from the 14th Rhino Census 2022 at KNP**

- The population of the Greater One-horned or Indian Rhinoceros in the Kaziranga National Park and Tiger Reserve has been **estimated at 2,613** which is 200 more than the number recorded in 2018. (The 2018 Rhino Census had put the number at 2,413).
- Note: This census was special as this was the **first time drones were used** to survey the animals in three compartments of the park.

#### **Indian rhinoceros**

- The Indian rhinoceros (*Rhinoceros unicornis*), also called the Indian rhino, greater one-horned rhinoceros or great Indian rhinoceros, is a rhinoceros species **native to the Indian subcontinent**.
- It is listed as **Vulnerable** on the IUCN Red List.

## **31. Guidelines for Groundwater Regulation**

### **Why in News?**

According to National Green Tribunal (NGT) the new guidelines issued in 2020 are insufficient to address groundwater crises.

### **About Guidelines**

- **Mandatory requirement of applying for NOC** for new and existing industries, group housing societies, and private water supply tankers.
- NOC holders to pay **groundwater charges based on quantum extraction** unlike old provision where they had to pay a nominal lump-sum.
- **No NOC to industries in over exploited areas.**
- **Installation of Sewage treatment plants;** rooftop rainwater harvesting and recharge systems and wells for groundwater level monitoring in NOC areas.
- **Categories exempted** from NOC requirements include Domestic consumers; rural drinking water supply schemes; Armed Forces Establishments and Central Armed Police Forces; agricultural activities; MSMEs drawing 10 cubic metre/day.
- **Penalty** between Rs 50,000 and Rs 10 lakh for noncompliance.

### **Central Ground Water Board (CGWB)**

- It is the **National Apex Agency** entrusted with the responsibilities of providing scientific inputs for management, exploration, monitoring, assessment, augmentation and regulation of ground water resources of the country.
- It was established in **1970** and is a **subordinate office of the Ministry of Jal Shakti**.
- Various activities related to **regulation of ground water development** in the country are being looked after by the Central Ground Water Authority (CGWA), constituted under the Environmental (Protection) Act, 1986.

## **32. IUCN Green List of Protected and Conserved Areas**

### **Why in News?**

In 2021, 10 protected areas in Switzerland, France and Italy entered IUCN Green List of Protected and Conserved Areas.

## About

- It is the **first global standard of best practice for area-based conservation**.
- It is a **programme of certification for protected and conserved areas** – national parks, natural World Heritage sites, community conserved areas, nature reserves etc. that are effectively managed and fairly governed.
- Its objective is to provide a **global benchmark to assess whether protected and conserved areas are achieving successful conservation outcomes** through effective and equitable governance and management.
- It aims to **increase the number of natural areas** delivering long-lasting conservation results for people and nature.
- The sites admitted to the IUCN Green List have distinguished themselves **through exemplary management, fair governance, and a long-term commitment** to successful conservation
- Presently, 59 sites in 16 countries have made it to the list. **No Indian site is currently part of this list.**
- The IUCN Green List Standard is organized into 4 components of successful nature conservation in protected and conserved areas. The baseline components concern: **Good Governance; Sound Design & Planning; and Effective Management.**
- Together, these **support the component on Successful Conservation Outcomes** attesting to the successful achievement of an area's goals and objectives.

### International Union for Conservation (IUCN)

- IUCN is the world's leading provider of conservation data, assessments and advice.
- It was created in 1948.
- It is a membership Union composed of government and civil society organizations.
- It is headquartered in Switzerland.
- India is its member.
- Private for-profit organisations cannot become Members even if their objectives are in line with IUCN's.

## Green Status of Species

- Prepared by: **IUCN.**
- It is a global standard for **measuring species recovery and assessing conservation impact.**
- The Green Status **assesses species against three essential facets of recovery** –
  - A species is fully recovered if it is **present in all parts of its range**, even those that are no longer occupied but were occupied prior to major human impacts/disruption; AND
  - It is **viable** (i.e., not threatened with extinction) in all parts of the range; AND
  - It is **performing its ecological functions** in all parts of the range.
- These factors contribute towards a **"Green Score" ranging from 0–100%**, which shows how far a species is from its "fully recovered" state.
  - A value of 0% means the species is Extinct or Extinct in the Wild, and 100% means it is Fully Recovered.
- The significance of the Green Status is its potential to **tell the story of a species by calculating Green Scores at different time intervals.**
- Green Status assessments are **not an alternative to extinction risk assessments** through the IUCN Red List, but provide complementary information.
  - Red List is the global standard for **assessing the risk of extinction** that individual species of animal, fungus, and plant faces.
  - It consists of **Nine categories** - Not evaluated, Data deficient, least concern, near threatened, vulnerable, endangered, critically endangered, extinct in wild, extinct.

## 33. Pola Vatta

### Why in News?

Central Marine Fisheries Research Institute has identified a new species of fish carangid (Vatta) species from the Indian coast.

### About

- Locally known as **polavatta**, fish belongs to '**queen fish**' group and is available **across coasts in the country.**

- There are **over 60 species of carangids** in the Indian seas and four of them belong to the 'queen fish' category.
- The finding would help **improve Indian marine biodiversity status**.

### 34. Lakshya Zero Dumpsites

#### Why in News?

Ministry of Housing and Urban Affairs approved ₹ 235 crore Legacy Waste Remediation Proposal of Andhra Pradesh with goal of LZD.

#### About

- LZD under SBM-U 2.0 seeks to **remediate 16 crore metric tonnes (MT)** of legacy waste dumpsites that occupy nearly 15,000 acres of city land.
- Legacy dumpsites pose a **major threat** to the environment and contribute to air pollution and water pollution.

# Science and Technology

## 1. Ischemic Stroke

### Why in News?

A 22-year-old student from Punjab who had suffered an ischemic stroke and was undergoing treatment for about a month died in Ukraine.

### About

- An ischemic stroke is the **more common type of stroke**. It's also referred to as **brain ischemia and cerebral ischemia**.
- Causes → It is usually **caused by a blood clot** that blocks a blood vessel in the brain. This interrupts or reduces blood from flowing to the brain.
  - This, in turn, will **prevent brain tissue from getting oxygen and nutrients**. Brain cells begin to die in minutes.
  - Another cause is **stenosis**, or **narrowing of the artery**.
  - This can happen because of **atherosclerosis**, a disease in which plaque builds up inside your arteries.
  - Transient ischemic attacks (TIAs) also known as a **ministroke**, occur when the blood supply to the brain is **interrupted briefly**.
  - Having a TIA can mean you are at **risk for having a more serious stroke**.
- Symptoms → **Trouble speaking & understanding** what others are saying.
  - **Paralysis** or numbness of the face, arm or leg.
  - **Problems seeing** in one or both eyes.
  - A **sudden, severe headache**, which may be accompanied by vomiting, dizziness or altered consciousness.
  - **Trouble walking**.

## 2. SARAS 3 Radio Telescope

### Why in News?

SARAS 3 radio telescope refutes the recent claim of the discovery of a radio wave signal from cosmic dawn.

### About

- It was invented and built by the **astronomers at Raman Research Institute (RRI)**.
- SARAS is a **precision radio telescope** that is used to detect extremely faint radio wave signals from the depths of time, from our "**Cosmic Dawn**" when the first stars and galaxies formed in the early Universe.
- The SARAS radio telescope was deployed by the RRI team in **isolated sites in India** to **gather celestial radio waves** with minimum terrestrial man-made radio interference.
- It is the first telescope worldwide to **reach the required sensitivity**.
- Cosmic dawn → Cosmic dawn is the time in the infancy of our Universe when the **first stars and galaxies came into existence**.
- The signal from Cosmic Dawn is **expected to arrive on Earth stretched** in **wavelength to metres** and **lowered in frequency** by the expansion of the Universe to lie in the radio frequency band 50-200MHz.
- Background →
  - In **2018** a team of researchers from **Arizona State University (ASU)** and **MIT** in the US **detected a signal** from stars emerging in the early universe using data from the EDGES radio telescope.
  - The study **published in the journal Nature** created much excitement in the astronomy community around the world.
  - ASU/MIT team had claimed the discovery of a radio wave **signalling the birth of the First Stars**, which was also hailed by Harvard astrophysicist Avi Loeb as worthy of two Nobel prizes. However, the **world awaited confirmation** from independent researchers.

### 3. Daylight Harvesting

#### Why in News?

The Ministry of Science & Technology has decided to promote a unique Start-up in Daylight Harvesting Technology.

#### About

- Daylight Harvesting is a **method of saving the energy costs associated with lighting**. It makes use of the available sunlight.
  - The solar energy spectrum has **45% energy as visible light** and **this can be used** to harvest building illumination for about 9-11 hours a day.
- It is one of the **most advanced techniques** used in sustainable lighting designs for contemporary buildings.
- It **automatically dims** or **adjusts the brightness** of light in response to the amount of natural light available in a space.
- Utilising natural daylight** coming through the windows or skylights minimises the amount of energy used in artificial lighting.
- The daylight harvesting system **employs light sensors**, also known as **photocell sensors**, to detect the prevailing light level in the environment.
- It then **sends the intensity of light** received to a controller, which is connected to the lighting control system. The control system in turn **adjusts the electric lights automatically** according to the measured light level.
- Benefits → a) **Reduced carbon footprint**, b) **Improve building energy efficiency** and c) **reduces electrical lighting energy consumption**.

#### What is the Government doing to promote Daylight Harvesting?

- The Technology Development Board (TDB) under the Ministry of Science and Technology will **provide Rs 5 crore as support** to a startup called **Skyshade Daylight Private Limited** for developing Daylight Harvesting Technologies.
- This startup has already developed several technologies which harvest huge quantities of sunlight for a building. This helps in **reducing electrical lighting energy consumption by 70-80 per cent**, besides reducing air-conditioning needs.

### 4. Fusobacterium

#### Why in News?

Several groups have corroborated the finding that oral tumours among Indian patients are not driven by HPV infection but by the Fusobacterium.

#### About

- Fusobacterium species is a **genus of anaerobic, elongated, Gram-negative, non-sporeforming bacteria**, similar to Bacteroides.
- They are **common obligately anaerobic bacteria of the oral cavity** that may act as a bridge between early and late colonizing bacteria in dental plaque and have a role in oral and extra-oral infections.
- There are multiple species of Fusobacterium, but the one most associated with human disease is **F. Necrophorum**.
- F. Necrophorum is a **cause of periodontal disease, tonsillitis, peritonsillar abscess**, and thrombophlebitis of the jugular vein (Lemierre syndrome).
- Fusobacterium nucleatum has a **crucial role in oral biofilm structure and ecology**, as revealed in experimental and clinical biofilm models.

### 5. Silicosis

#### Why in News?

Silicosis is ravaging mine and factory workers in several villages of Jharkhand.



## About

- Silicosis is a **type of pulmonary fibrosis, a lung disease** caused by breathing in tiny bits of silica, a common mineral found in sand, quartz and many other types of rock.
- It **usually happens in jobs** where you breathe in dust that contains silica.
- [High-risk jobs are construction work, stone countertop fabrication, foundry work, ceramics manufacturing, mining and hydraulic fracturing (fracking).]
- Over time, exposure to silica particles causes **scarring in the lungs**, which **can harm your ability to breathe**.
- Symptoms of silicosis usually appear after many years of exposure.
  - In **early stages, symptoms are mild** and include cough, sputum and progressive shortness of breath.
  - As the scarring continues to worsen, the first real signs of a problem may be an **abnormal chest X-ray** and a **slowly developing cough**.
  - **Complications** from silicosis can include **tuberculosis, lung cancer, chronic bronchitis, autoimmune disorders** and **kidney disease**.
- Treatment → There is **no cure** for silicosis, but **treatment is available**, and employers and workers can take steps to prevent it.
  - **Medications** (Inhaled steroids reduce lung mucus; Bronchodilators help relax your breathing passages; Oxygen therapy)
  - **Lung transplant surgery**
  - **Cigarette smoking adds** to the lung damage caused by silicosis. **Quitting** smoking is an important part of managing the disease.

## 6. Jets of Plasma

### Why in News?

Recently, Scientists have unravelled the science behind the jets of plasma.

## About

- Plasma is often called the **fourth state of matter** (beyond the conventional solids, liquids and gases).
- Jets or spicules appear as **thin grass-like plasma structures** that constantly shoot up from the surface of the sun and are then brought down by gravity.
- The amount of energy and momentum that these spicules can carry is of **fundamental interest in solar and plasma astrophysics**.
- However, the processes by which plasma is supplied to the solar wind and the solar atmosphere is **heated to a million degrees Celsius still remain a puzzle**.

### What did the scientists find out about these Jets of Plasma?

- Scientists have explained the **origin of 'spicules' or 'jets'** on the Sun.
- They explained that the plasma right below the visible solar surface (photosphere) is perpetually in a **state of convection, much like boiling water in a vessel heated at the bottom**. This is ultimately powered by the nuclear energy released in the **hot-dense core**.
- The convection serves **almost periodic** but strong kicks to the plasma in the solar chromosphere, the **shallow semi-transparent layer right** above the visible solar disk.
- The chromosphere is **500 times lighter** than the plasma in the photosphere.
- Therefore, these strong kicks from the bottom shoot the chromospheric plasma outward at **ultrasonic speeds in the form of spicules or jets**.

## 7. Side-channel attacks

### Why in News?

Indian researchers have built a low-energy security chip that is designed to prevent Side-channel attacks(SCAs) on IoT (Internet of Things) devices.

#### About

- SCA is a **security exploit** that aims to gather information from the **indirect effects** of the functioning of the system hardware rather than attacking a programme or software directly.
- They basically aim to **extract sensitive information** like cryptographic keys, proprietary machine learning models and parameters by **measuring things like timing information, power consumption** and **electromagnetic leaks of a system**.
- For example, it can be used on a **smartwatch** to **extract ECG and heart rate signals** that one wants to keep secret.

#### What have the researchers done to prevent SCA attacks?

- Researchers have developed a **low-energy security chip** that is designed to **prevent Side-channel attacks(SCAs)** on IoT (Internet of Things) devices.
- The chip uses near-threshold computing, a computing method where the **data is split into separate, unique** and **random components**. The chip then conducts **operations separately** on each component in a random order before aggregating the results for a final result.
- Due to this method, the information leak from the device through power-consumption measurements are **random** and would **reveal nothing** but gibberish in an SCA.
- Significance of New Architecture → It is **smaller than the size of a thumbnail** and **uses much less power** than traditional security measures against SCAs. It has also been built to be **easily incorporated** into smartwatches, tablets, and a variety of other devices.

## 8. PARAM Ganga

#### Why in News?

The National Supercomputing Mission (NSM) has deployed PARAM Ganga-a High-Performance Computational (HPC) facility at IIT Roorkee, with a supercomputing capacity of 1.66 Petaflops.

#### About

- It has been established by the **Centre for Development of Advanced Computing (C-DAC)** under the approach of NSM.
- It has a supercomputing capacity of **1.66 Petaflops** (1 petaflop equals a quadrillion or 10<sup>15</sup> operations persecond).
- This supercomputer will accelerate the research and development activities with a focus on providing computational power to the user community of IIT Roorkee and neighbouring academic institutions.

#### 🔗 Supercomputer in India

- India's first supercomputer was **PARAM 8000**.
- **PARAM Shivay**, the first supercomputer assembled indigenously, was installed in IIT (BHU), followed by **PARAM Shakti**, **PARAM Brahma**, **PARAM Yukti**, **PARAM Sanganak** at IIT-Kharagpur, IISER, Pune, JNCASR, Bengaluru and IIT Kanpur respectively.
- In 2020, **PARAM Siddhi**, the High-Performance Computing-Artificial Intelligence (HPC-AI) supercomputer, achieved global ranking of 62nd in Top 500 most powerful supercomputer systems in the world.

#### 🔗 National Supercomputing Mission(NSM)

- Launched in → **2015**
- Aim → To **empower national academic and R&D institutions** spread over the country by installing a vast supercomputing grid comprising more than 70 high-performance computing facilities.

- Nodal Ministries → The mission is being steered **jointly by** the Ministry of Electronics & Information Technology (**MeiTY**) and the Department of Science and Technology (**DST**).
- Implemented by → **Centre for Development of Advanced Computing (C-DAC)** and **Indian Institute of Science (IISc)**, Bangalore.
- Pillars of the mission → The **four major pillars** of the mission are: Infrastructure, Applications, R&D, HRD. These pillars have been functioning efficiently to realise the goal of developing indigenous supercomputing ecosystem of the nation.
- Under the mission, C-DAC has designed and developed a computer server “**Rudra**” and high-speed interconnect “**Trinetra**” which are the major sub-assemblies required for supercomputers.

## 9. Gallium Nitride Ecosystem Enabling Centre and Incubator

### Why in News?

The Union Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship visited the Gallium Nitride Ecosystem Enabling Centre and Incubator (GEECI) facility.

### About

- GaN is a **semiconductor** commonly used in blue light-emitting diodes (LEDs).
- The ability to **operate at much higher temperatures and voltages** than gallium arsenide (GaAs) transistors makes GaN an ideal power amplifier for microwave and terahertz (THz) devices, such as imaging and sensing.
- Gallium Nitride Technology is of **strategic importance** with its application in the **field of 5G, space and defense**.
- Gallium Nitride (GaN) plays a key role in **enabling e-vehicles and wireless communication**.
- Specific transistors called **HEMTs** made of **aluminium gallium nitride/ gallium nitride (AlGaN/GaN)** provides an edge over silicon-based transistors as they allow the systems to operate at very high voltages, switch ON and OFF faster, and occupy less space
- The GaN ecosystem will **drive innovations** by encouraging startups and entrepreneurs.
- The GaN technology provided **various benefits** such as **reduced energy consumption, higher switching frequency** and **lower system cost**.

### 🔑 Gallium Nitride Ecosystem Enabling Centre and Incubator (GEECI) Facility

- GEECI is present at the **Indian Institute of Sciences (IISc), Bengaluru**.
- The facility has been **established jointly by** the Ministry of Electronics and Information Technology and IISc Bengaluru.
- Aim → Establishing **GaN based Development Line Foundry facility**, especially for RF and power applications, including strategic applications.

## 10. Blockchain Gaming

### Why in News?

The vast scope and potential of blockchain technology has attracted the gaming industry over the past few years. In India too, gaming industries are exploring this option.

### About

- Blockchain Gaming are **online video games** that are developed by **integrating blockchain technology** into them.
- It includes elements that **use cryptography-based blockchain technologies** like Cryptocurrency or Non-Fungible Tokens (NFTs).
- These elements are used by players to **buy, sell, or trade with other players**, with the game publisher taking a fee from each transaction as a form of monetization.

- Example of Blockchain Game → In **2017**, **Dapper Labs** had developed the first-ever blockchain game called **Crypto Kitties**. In the game, people can **virtually experience the joy** of adopting and breeding a cat (CryptoKittie) without taking up the responsibility of bringing one home. Each CryptoKittie is a **Non-Fungible Token** ("NFT").
- Elements of Blockchain Gaming →
  - NFTs → NFTs represent **in-game virtual assets** that can be owned by players, such as maps, armor or land.
    - These NFTs act as **asset tags, identifying ownership of the in-game assets**, and are stored on the blockchain.
    - Being on the blockchain allows the player to have a **secure record of ownership** of the in-game assets, and also gives the assets the **ability to outlive the game itself**.
    - It also **creates transparency**, since ownership records can independently be verified by any third party as well.
    - In doing so, it makes **in-game assets marketable** and creates a **decentralized market**, where they can be bought and sold by people.
  - Cryptocurrency → Cryptocurrency, such as **tokens** based on the **Ethereum blockchain**, may be **used** for the purchase of in-game assets.
    - These in-game purchases usually enable gamers to **buy items like extra lives, coins** and **so on directly from the game**.

## 11. INSPIRE Faculty fellowship

### Why in News?

A recipient of the INSPIRE Faculty fellowship is working on two-dimensional (2D) semiconductors.

### About INSPIRE Faculty fellowship

- Nodal Ministry → **Department of Science and Technology**.
- Purpose → The scheme **offers postdoctoral fellowships** to young achievers with an opportunity for independent research.
- Eligibility → The candidate should be an **Indian citizen** or **a person of Indian origin with PIO status** having a **PhD degree** (in science, mathematics, engineering, pharmacy, medicine and agriculture-related subjects) from any recognised university.
- Candidates should possess a **minimum of 60%** (or equivalent CGPA) marks throughout their academic profile starting from the higher secondary examination (class 12 onwards).
- Those who have **submitted their PhD theses** and are **awaiting the award of the degree** shall also be eligible. However, selection for the fellowship will be **confirmed only after the PhD degree** is awarded.
- Age Limit → The upper age limit at the time of awarding the offer should be **32 years** for considering support.
- Prize → Each selected INSPIRE faculty fellow will be eligible to receive a consolidated amount of **Rs 1,25,000 per month** as a fellowship.
- In addition, a **research grant of Rs 7 lakh every year for 5 years** will also be provided to each successful candidate including the carryforward amount, if any, from the previous year.

### 🔗 More on News

- Due to the continual **shrinking of the dimension of transistors**, silicon (Si) technology has reached its limit. Therefore, **new materials systems and device designs** have been explored to carry on Moore's law.
- Researchers are working on the **exceptional and tunable nature of two-dimensional(2D) semiconductors**. They look very promising due to their stability and high device performance.

## 12. ExoMars

### Why in News?

The European Space Agency's ExoMars 2022 mission has been delayed after the agency suspended all cooperation with Russia's space program Roscosmos.

#### About

- It was a joint endeavour between ESA and the Russian space agency, Roscosmos.
- Aim → To check if there has ever been life on Mars and also understand the history of water on the planet.
- Stages → It is a two-stage mission:
- First Stage → Its first mission launched atop a Proton-M rocket in 2016 and consisted of the European Trace Gas Orbiter and test lander called Schiaparelli. The orbiter was successful, while the test lander failed during its descent to Mars.
- Second Stage → It comprises a rover and surface platform: This second part of the mission was originally planned for July 2020. But it was postponed until this September due to technical issues.

### 13. Artemis Mission

#### Why in News?

Recently, the National Aeronautics and Space Administration (NASA) rolled out its Artemis I moon mission to the launchpad for testing at the Kennedy Space Centre in Florida, United States.

#### About

- Named after → The mission is named after the twin sister of Apollo from Greek mythology. Artemis is also the goddess of the moon.
- Aim → To land the first female astronaut and the first astronaut of colour on the Moon's the South Pole by 2024.
- Other space agencies involved in the mission are → Canadian Space Agency, European Space Agency and Japan Aerospace Exploration Agency.
- Significance → With this mission, NASA aims to contribute to scientific discovery and economic benefits and inspire a new generation of explorers.

#### Artemis I

- Artemis I will be the first integrated test of NASA's deep space exploration systems.
- It will be an uncrewed flight test that will provide a foundation for human deep space exploration and demonstrate commitment and capability to extend human existence to the Moon and beyond.
- During this flight, Orion spacecraft will be launched on Space Launch System(SLS) — the most powerful rocket in the world — and travel 2,80,000 miles from the earth for over four to six weeks during the course of the mission.
- The Orion spacecraft is going to remain in space without docking to a space station, longer than any ship for astronauts has ever done before.

#### Artemis I Mission

- After Artemis-I, the second flight under the Artemis programme will be launched.
- It will have a crew on board and will test Orion's critical systems.
- Eventually, the learnings from the Artemis programme will be utilized to send the first astronauts to Mars. NASA plans on using the lunar orbit to gain the necessary experience to extend the human exploration of space farther into the solar system.

### 14. PACER Initiative

#### Why in News?

The Minister of Earth Sciences has informed Rajya Sabha about the Polar Science and Cryosphere Research(PACER) Initiative.

## About

- Initiative of → **Ministry of Earth Sciences**.
- Objective → To **study various aspects** relating to Polar and the Cryosphere with special emphasis on the Antarctic, Arctic and Glaciers of the Himalayas.
- Programmes → The important programmes under the initiative include: the **Antarctic program**, **Indian Arctic program**, **Southern Ocean program** and **Cryosphere and Climate program**.
- Implementing Agency → **National Centre for Polar and Ocean Research** (NCPOR)
- Duration of the Initiative → The initiative has been approved for continuation during **2021-2026**.
- Major achievements of the PACER Initiative →
  - Executed 39th & 40th **Indian Scientific Expedition** to Antarctica. The 41st Indian Scientific Expedition to Antarctica is ongoing.
  - **Ten sediment cores** were collected from lakes to reconstruct the past climate associated with the ice-sheet dynamics.
  - **Clear-air atmospheric observatories** containing automatic weather stations, a suite of sensors to measure aerosol and greenhouse gas concentrations has been established at Maitri and Bharati stations.
  - The **IndARC mooring system** along with the **Hydrophone system** was successfully retrieved and deployed in Kongsfjorden, Svalbard.
  - **Glaciological field campaigns** were carried out in six benchmark glaciers in Chandra basin of Lahaul-Spiti region of Western Himalaya.
  - The 11th Indian **Southern Ocean Expedition** was executed successfully.

## 15. Mange Disease

### Why in News?

Digital services company Jio Platforms has formed a joint-venture with Luxembourg-based satellite-linked content connectivity solutions provider SES to deliver satellite broadband services across India.

### About

- It is a **type of skin disease** of animals caused by parasitic mites.
- The disease is characterized by **inflammation**, **itching**, **thickening** of the skin and hair loss.
- Caused by → The most severe form of mange is caused by the **parasitic mite *Sarcoptes scabiei***, which also causes human scabies.
- Transmission → The disease is transmitted between animals by **direct contact and by objects** that have been in contact with infected animals.
- Humans can also catch sarcoptic mange from dogs, but the mites involved cannot complete their life cycle in human skin. As a result, the issue can cause some **skin irritation in humans**, but it does **not last long**.
- Treatment → The treatment of mange requires both **oral medicines** as well as the application of **skin medicine**.

## 16. Dare2eraD TB program

### Why in News?

“Dare2eraD TB” initiative was launched by the Department of Biotechnology on the occasion of World TB Day.

### About

- Full-Form → Dare2eraD TB stands for **Data-Driven Research to Eradicate TB**.
- “Dare2eraD TB” will be an **umbrella TB programme** of DBT.
- Components → The programme consists of key initiatives such as:

- **InTGS – Indian Tuberculosis Genomic Surveillance Consortium** → It is proposed on lines of the Indian SARS-CoV-2 Genomic Consortia (INSACOG). It aims to monitor the genomic variations in Mycobacterium tuberculosis (Mtb) on a regular basis through a multi-laboratory network
- **InTBK Hub-Indian TB Knowledge Hub- Webinar Series** → It will be a Webinar series starting from World TB Day that will create Academia-Industry connect to discuss challenges and exchange ideas and carry forward open innovations between all TB stakeholders.
- **Host Directed therapies** against TB and developing an evidence-based regimen for treating extra-pulmonary Tuberculosis.

#### 🔑 Other initiatives related to Tuberculosis (TB)

- Regional Prospective Observational Research in Tuberculosis (RePORT) India initiative → It is a **bilateral, multi-organizational, collaborative research effort** established in 2013 under the Indo-US Vaccine Action Program (VAP). It aims to **advance tuberculosis (TB) research** in India.
- Department of Biotechnology has initiated a major network programme on “**MDR-TB in Northeast India: a genomic driven approach**” involving 22 North East Region (NER) institutes from 8 states and 14 other Institutes.

## 17. Conversion therapy

### Why in News?

National medical commission held that conversion therapy is banned in India.

### About

- Conversion therapy - sometimes called “**reparative therapy**” or “**gay cure therapy**” - tries to change someone's sexual orientation or gender identity.
- Several countries (Brazil, Ecuador, Malta, Switzerland, Germany, Chile etc.) have introduced criminal bans for those found to be practicing conversion therapy.

## 18. Bone Ossification Test

### Why in News?

It is an age determination test of a person on the basis of assessment of his or her bony framework done through X-Rays/CT-scans.

### About

- The test is required to **determine the age in order to fix the criminal liabilities** based on which the law treats the persons differently based on their age.
- Recently, Supreme Court has said the **test can't be said to be an infallible** and cannot be the sole basis to decide the age of an accused who claims to be a juvenile.

## 19. Common Antibiotic Manufacturing Framework (CAMF)

### Why in News?

Recently, the third progress report of the Antimicrobial Resistance (AMR) Industry Alliance released.

### About

- AMR Industry Alliance is a private-sector coalition working to tackle AMR, bringing together research and development **pharmaceutical, generic, biotechnology** and **diagnostics companies together**.
- In order to **mitigate the environmental risks** associated with antibiotic production, Alliance manufacturing members had developed CAMF in 2018.



## About CAMF

- CAMF provides a **methodology** and **set of minimum requirements** needed to conduct a site risk evaluation of both macro and micro controls in our supply chains.
- It provides certain:
  - **Minimum expectations** such as compliance with local laws and regulations, environment permits, no untreated discharge of manufacturing waste containing antibiotic etc.
  - **Minimum requirements for environmental programs** (such as water management program, solid waste management program, audits of antibiotic manufacturers) to focus on environmental compliance and appropriate antibiotic discharge management.

# Geography

## 1. Katchatheevu Island

### Why in News?

Recently, eight fishermen from Tamil Nadu were arrested by the Sri Lankan Navy near Katchatheevu Island for crossing the International Maritime Boundary Line (IMBL).

### About

- Katchatheevu is an **uninhabited islet in the Palk Strait** that was formed due to volcanic eruption in the 14th century.
- This **285-acre land** was owned by the **Raja of Ramanathapuram**.
- Later, it became **part of the Madras Presidency** after the delimitation of Gulf of Mannar and Palk Strait during British rule between the then governments of Madras and Ceylon.
- During the British rule, it was administered **jointly by India and Sri Lanka**.
- This island is **strategically important** for fishing activities.
- In **1921**, both Sri Lanka and India claimed this piece of land for fishing and the **dispute remained unsettled**.
- In **1974**, then Prime Minister of India, Indira Gandhi **ceded Katchatheevu to Sri Lanka** under the **"Indo-Sri Lankan Maritime agreement"**
- Another agreement signed in **1976 restricted both the countries' fishermen from fishing** in the other's exclusive economic zones.



## 2. Belarus

### Why in News?

Belarus, the largest landlocked European country bordering the two warring nations has found itself in a precarious position amid its political proximity with Russia.

### About

- Belarus is a **landlocked country** in Eastern Europe.
- It is bordered by **Russia** to the northeast, **Ukraine** to the south, **Poland** to the west, and **Lithuania** and **Latvia** to the northwest.
- Its capital is **Minsk**.
- After the disintegration of the Soviet Union in **1991**, Belarus became a **sovereign nation**, and its first presidential elections were held in 1994.
- Alexander Lukashenko** has served as the country's **first president since 1994**. Belarus has been labelled **"Europe's last dictatorship"** by some Western journalists, on account of the country's poor human rights record and Lukashenko's self-described authoritarian style of government.



## 3. Karewas

### Why in News?

In the name of development, Kashmir's highly fertile alluvial soil deposits called 'karewas' are being destroyed.

### About

- Karewas are **lacustrine deposits** (deposits in lake) in the Valley of Kashmir and in Bhadarwah Valley of the Jammu Division.
- These are the **flat topped mounds** that border the Kashmir Valley on all sides.
- How are Karewas formed? →
  - Karewas were formed **during the Pleistocene Period** (1 million years ago) when the entire Valley of Kashmir was **underwater**.
  - Due to the rise of Pir Panjal, the **drainage was impounded** and a lake of about 5000 sq. km area was developed and thus a basin was formed.
  - Subsequently, the lake was **drained through Bramulla gorge**. The **deposits left in the process** are known as karewas.
- What is the significance of Karewas? →
  - Karewas are 13,000-18,000 metre-thick **deposits of alluvial soil** and sediments like **sandstone** and **mudstone**.
  - This makes them ideal for the **cultivation of saffron, almonds, apples** and **several other cash crops**.
  - **Kashmir saffron**, which received a **Geographical Indication (GI) tag** in 2020 for its longer and thicker stigmas, deep-red colour, high aroma and bitter flavour, is grown on these karewas.
  - However, despite its **agricultural and archaeological importance**, karewas are now being excavated to be used in construction.
  - Between 1995 and 2005, massive portions of karewas were razed to the ground for clay for the **Qazigund-Baramulla rail line**. The **Srinagar airport** is built on the Damodar karewa.

## 4. Aluminium

### Why in News?

The Indian Railways (IR) plans to use Aluminium to produce body coaches in the new generation energy efficient Vande Bharat Train sets.

### About

- Aluminium (Al) is a **highly electropositive metal** with the atomic number of **13**.
- Among metals, aluminium is the **most abundant**. It is the **third most** abundant element in earth's crust (8.3% approx. by weight).
- It is a **major component of many igneous minerals** like mica and clays.
- Properties → Even though Aluminium is a metal, it shows **many chemical similarities to boron, a non-metal**.
  - It has **high tensile strength, high electrical** and **thermal conductivity**.
- Extraction → For the purpose of extraction, **Bauxite** ( $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ ) and **Cryolite** ( $\text{Na}_3\text{AlF}_6$ ) are chosen for aluminium.
  - From bauxite ore, aluminium is **extracted using leaching**.
- In India, bauxite mining sites are located in **Orissa** (the largest bauxite producer), **Jharkhand**, **Maharashtra**, **Chhattisgarh**, **Madhya Pradesh**, etc.
- Aluminium industry is the **2nd most important industry** after the iron and steel industry.

### Anodising

- Anodising is a **process of forming a thick oxide layer of aluminium**. Aluminium develops a **thin oxide layer** when exposed to air.
- This aluminium oxide coat makes it **resistant to further corrosion**.
- Resistance can be **improved further** by making the oxide layer thicker.
- During anodising, a clean aluminium article is made the **anode** and is electrolysed with **dilute sulphuric acid**. The oxygen gas evolved at the anode reacts with aluminium to make a **thicker protective oxide layer**.

## 5. Deep Ocean Mission

## Why in News?

Recently, the Ministry of Earth Sciences has launched the Deep Ocean Mission (DOM).

## About

- Deep Ocean Mission aims to **explore the deep ocean for resources**. Also, for sustainable use of ocean resources, it aims to **develop deep-sea technologies**.
- Nodal Ministry → **Ministry of Earth Sciences (MoES)** will be the nodal Ministry for implementing this mission.

## Components of DOM

- Development of Manned Submersible Vehicle →
  - A **manned submersible** will be developed to **carry three people** to a **depth of 6,000 metres** in the ocean with a suite of scientific sensors and tools.
  - NIOT & ISRO is jointly developing a **Manned Submersible Vehicle**.
  - National Institute of Ocean Technology (**NIOT**), an **autonomous institute** under the Ministry of Earth Sciences.
- Development of Technologies for Deep Sea Mining →
  - An **Integrated Mining System** will be also developed for mining polymetallic nodules at those depths in the central Indian Ocean.
  - Polymetallic nodules are rocks scattered on the seabed containing **iron, manganese, nickel** and **cobalt**.
  - The exploration studies of minerals will **pave the way for commercial exploitation in the near future**, as and when commercial exploitation code is evolved by the International Seabed Authority, a United Nations (UN) organisation.
- Development of Ocean Climate Change Advisory Services →
  - It entails developing a **suite of observations** and **models to understand** and **provide future projections** of important climate variables on seasonal to decadal time scales.
  - Technological Innovations for Exploration and Conservation of Deep-sea Biodiversity →
  - **Bio-prospecting** of deep-sea flora and fauna including microbes and studies on **sustainable utilisation** of deep-sea bio-resources will be the main focus.
- Deep Ocean Survey and Exploration → It will **explore and identify potential sites** of multi-metal Hydrothermal Sulphides mineralization along the Indian Ocean mid-oceanic ridges.
- Energy and Freshwater from the Ocean →
  - Studies and detailed engineering design for **offshore Ocean Thermal Energy Conversion (OTEC)** powered desalination plants are envisaged in this proof of concept proposal.
  - OTEC is a technology that **uses ocean temperature differences** from the surface to depths lower than 1,000 metres, to extract energy.
- Advanced Marine Station for Ocean Biology →
  - It is aimed at the **development of human capacity and enterprise** in ocean biology and engineering.
  - It will **translate research** into industrial application and product development through on-site business incubator facilities.

## 🔗 Do You Know?

- The United Nations (UN) has declared the decade **2021-2030** as the **Decade of Ocean Science for Sustainable Development**.
- The Government of India's **Vision of New India by 2030** announced in 2019 highlighted the Blue Economy as one of the ten core dimensions of growth.

## 6. Par Tapi Narmada link project

## Why in News?

On March 21, 2022, the tribals in Gujarat will hold a public meeting in Kaprada in Valsad district to protest against the Centre's Par Tapi Narmada river-linking project.

### About

- Envisioned under the **1980 National Perspective Plan** under the former Union Ministry of Irrigation and the Central Water Commission (CWC).
- The project proposes to **transfer river water** from the surplus regions of the Western Ghats to the deficit regions of Saurashtra and Kutch.
- The excess water in the **interlinked Par, Tapi and Narmada rivers** which flow into the sea in the monsoon would be diverted to Saurashtra and Kutch for irrigation.
- It proposes to **link three rivers** — **Par**, originating from Nashik in Maharashtra and flowing through Valsad, **Tapi** from Saputara that flows through Maharashtra and Surat in Gujarat, and **Narmada** originating in Madhya Pradesh and flowing through Maharashtra and Bharuch and Narmada districts in Gujarat.
- The link mainly includes the construction of →
  - seven dams** (Jheri, Mohankavchali, Paikhed, Chasmandva, Chikkar, Dabdar and Kelwan),
  - three diversion weirs** (Paikhed, Chasmandva, and Chikkar dams),
  - two tunnels** (5.0 kilometers and 0.5 kilometers length),
  - the 395-kilometre long canal** (205 kilometre in Par-Tapi portion including the length of feeder canals and 190 km in Tapi-Narmada portion), and
  - six powerhouses**.
- Of these, the **Jheri dam falls in Nashik**, while the remaining dams are in Valsad and Dang districts of South Gujarat.



## 7. Asani Cyclone

### Why in News?

Year's 1st cyclone Asani likely to form over Bay of Bengal on Mar 21.

### About

- A **low-pressure area** that formed over the southwest Indian Ocean is **expected to intensify** into a cyclone this week.
- The Cyclone has been named. The name was suggested by **India's southern neighbour Sri Lanka**.
- It is expected to **travel along and off the coast of the Andaman and Nicobar Islands** before it intensifies into a depression.

## 8. Chechnya

### Why in News?

Ramzan Kadyrov, the Head of the Chechen Republic recently shared a video of his forces purportedly in Mariupol – a besieged port city where Russians have been wreaking havoc by bombing civilian targets.

### About

- Chechnya is a **republic of Russia**.
- It is situated in the **North Caucasus of Eastern Europe**, close to the Caspian Sea.
- The republic forms a **part of the North Caucasian Federal District**, and shares land borders with the country of Georgia to its south.
- It is home to the **indigenous Chechens**, **part of the Nakh peoples**, and of primarily Muslim faith. Grozny is the capital and largest city.
- Following the **First Chechen War of 1994–1996 with Russia**, Chechnya gained **de facto independence**, although de jure it remained a part of Russia. Moscow's forces restored Russian federal control in the Second Chechen War of 1999–2009.



## 9. Zoji La

### Why in News?

Zoji la Pass has been opened for Civilian Traffic over Ladakh from Sonamarg.

### About

- Zoji La is a high mountain pass located in the **Kargil district of Ladakh**.
- The pass **links Leh and Srinagar** and provides an important link between Union Territories of Ladakh and Kashmir.
- Zoji la is known as the **“Mountain Pass of Blizzards”**.
- Zojila pass remains **closed during winters** due to heavy snowfall, cutting off Ladakh region from Kashmir.
- In **2018**, the **Zojila tunnel project** was launched. The tunnel is **Asia's longest and strategic bi-directional tunnel**, which will provide all-weather connectivity between Srinagar, Kargil and Leh.



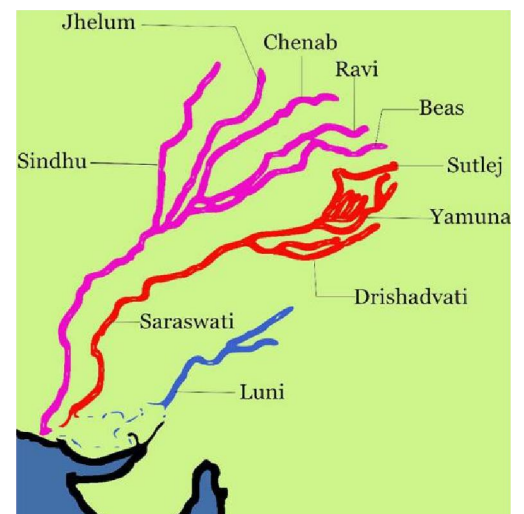
## 10. Saraswati River

### Why in News?

Four decades after the Falklands War between the United Kingdom and Argentina ended bitterly for Buenos Aires, a statement from China on the sidelines of the Winter Olympics, that affirmed Beijing's support for Argentina's claim to the Falkland Islands, had stirred discussions around the long-standing dispute.

### About

- Origin → Saraswati River originated in the **Himalayas** and **met the gulf at the western sea**.
- States → The river passed through **Haryana, Rajasthan** and **North Gujarat**, the land texture of which was studied by the panel.
- Countries → The river passed **through Pakistan** before meeting the Western Sea through the Rann of Kutch. **One-third** of the river stretch **fell in present-day Pakistan**. The longer, two-third stretch fell in India.
- The river had two branches: **western** and **eastern**.
- Western Branch → The Himalayan-born **Satluj “of the PAST”**, which flowed through the channels of present-day **Ghaggar-Patialwali rivulets** represents the western branch of the ancient river.
- Eastern Branch → **Markanda** and **Sarsuti** (the corruption of Saraswati) represented the western branch of Saraswati, known as Tons-Yamuna.





- The confluence of these branches was **near Shatrana**, 25 km south of Patiala. And suddenly, it flows crossing the desert (Rann of Kutch) and meets the Gulf of the western sea.
- Historical evidence of the Saraswati River →
  - The Saraswati River is one of the **main Rigvedic rivers** mentioned in the scripture Rig Veda and later Vedic and post-Vedic texts.
  - **Book 6 of the Rig Veda** includes a hymn called the '**Nadistuti Sukta**', which sings praises of the Saraswati as being a "**perfect mother, unsurpassed river, supreme goddess**".
- Remember → **Adi Badri**, situated **in Haryana** near the Himachal Pradesh border, is believed to be the Saraswati river's origin point.



# Polity

## 1. National Commission for Protection of Child Rights

### Why in News?

National Commission for Protection of Child Rights (NCPCR) celebrated its 17th Foundation Day, recently.

### About

- NCPCR is a **statutory body** under the administrative control of the Ministry of Women & Child Development, Government of India.
- Set up in **March 2007** under the Commissions for Protection of Child Rights (CPCR) Act, 2005, an Act of Parliament (December 2005).
- The Commission began **operational on 5 March 2007**.
- Mandate → The **Commission's Mandate is to ensure** that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child.
- Definition of a Child → Under the CPCR Act, The Child is defined as a person in the **0 to 18 years age group**.
- Composition of NCPCR →
  - This commission has **a chairperson** and **six members**.
  - Of which **at least two should be women**.
  - These are **appointed by Central Government** for three years.
  - The maximum age to serve in commission is **65 years for Chairman** and **60 years for members**.
- Functions of NCPCR → Under the RTE Act, 2009, the NCPCR can:
  - **Inquire into complaints** about violation of the law.
  - **Summon** an individual and demand evidence.
  - Seek a magisterial enquiry.
  - **File a writ petition** in the High Court or Supreme Court.
  - **Approach** the government concerned for prosecution of the offender.
  - **Recommend** interim relief to those affected.

## 2. Supplementary Demands For Grants

### Why in News?

The government has sought approval from Parliament to spend an extra ₹1.07 lakh crore in the current fiscal year.

### About

- It is needed when the **amount authorised by the Parliament** through the appropriation act for a particular service for the current financial year is **found to be insufficient for that year**.
- Constitutional Provisions → **Article 115** pertains to supplementary, additional or excess grants.
- Procedure to be followed →
  - These grants are **presented and passed by the Parliament** before the end of the financial year.
  - When actual expenditure incurred exceeds the approved grants of the Parliament, the **Ministry of Finance presents** a Demand for Excess Grant.
  - The **Comptroller and Auditor General of India** bring such excesses to the notice of the Parliament.
  - The **Public Accounts Committee examines** these excesses and gives recommendations to the Parliament.
  - The Demand for Excess Grants is made after the actual expenditure is **incurred** and is **presented to the Parliament after the end of the financial year** in which the expenses were made.

👉 **Other grants:**

- **Additional Grant** → It is granted when a need has arisen during the current financial year for supplementary or additional expenditure upon **some new service not contemplated** in the Budget for that year.
- **Excess Grant** → It is granted when **money has been spent on any service during a financial year in excess of the amount granted** for that year. The demands for excess grants are made after the expenditure has actually been incurred and after the financial year to which it relates, has expired.
- **Token Grant** → It is granted when funds to meet **proposed expenditure on a new service** can be made **available by re-appropriation**, a demand for the grant of a token sum may be submitted to the vote of the House and, if the House assents to the demand, funds may be so made available.
- **Exceptional Grants** → It is **granted for an exceptional purpose** which forms no part of the current service of any financial year.

### 3. Fundamental Rights of Foreigners

#### Why in News?

The Union government has urged the Supreme Court to help lay down a law with a “long-lasting” implication for the country on the subject of Foreigners’ Right to approach local courts for relief after violating their visa conditions.

#### About

- There are certain rights which are fundamental to the **all-round development of an individual**.
- These rights are **recognized by the state** and **guaranteed by the Constitution** itself. These rights are termed as Fundamental Rights (FRs).

FRs available only to citizens	FRs available to citizens and foreigners	Article 30 – Right of the minority to establish and administer educational institutions.	Article 22 – Right of the state. against arrest and detention in
Article 15 – Prohibition of discrimination on grounds of race, religion, caste, sex or place of birth	Article 14 – Equality before law and protection of		Article 23 – Prohibition of human trafficking and forced labour
Article 16 – Equality of opportunity in matters of public employment	Article 20 – Right of respect of conviction for		Article 24 – Right of employment in factories
Article 19 – Protection of six rights regarding freedom of:	Article 21 – Right of life and personal liberty		Article 25 – Freedom of conscience and profession, and propagation of religion
• speech and expression			Article 26 – Freedom to manage religious affairs
• assembly			Article 27 – Freedom from payment for promotion of religion
• association			Article 28 – Freedom from attending instruction in certain educational institutions
• movement			
• residence			
• profession			
Article 29 – Protection of language, script, and culture of minorities	Article 31 – Right of property		

### 4. Sealed Cover Jurisprudence

#### Why in News?

Recently, the two separate Benches of the Supreme Court have criticized the “Sealed Cover Jurisprudence” practised by the Government in Courts.

#### About

- It is a practice used by the Supreme Court and sometimes lower courts of asking for or accepting information from government agencies in sealed envelopes that can only be accessed by judges.
- While a specific law does not define the doctrine of sealed cover, the Supreme Court derives its power from:
- Rule 7 of Supreme Court Rules: It states that if the Chief Justice or court directs certain information to be kept under sealed cover or considers it of confidential nature, no party would be allowed access to the contents of such information, except if the Chief Justice himself orders that the opposite party be allowed to access it.
- Section 123 of the Evidence Act: It says that the official unpublished documents relating to state affairs are protected, and a public officer cannot be compelled to disclose such documents.

#### Recent Supreme Court views

- The Supreme Court was critical about how the government and its agencies file reports in sealed envelopes directly in court without sharing the contents with the opposite party.
- This is usually done on the ground that the contents are highly sensitive in nature and may injure even national security or public order. Another reason given by State agencies mostly in money laundering cases is disclosure would affect the ongoing investigation.
- However, the court said this sealed cover practice should be used in exceptional cases in which the court, for the benefit of the parties, do not want them to see the government files. For example, like in a case of child sexual abuse.

## 5. National eVidhan Application

### Why in News?

Ministry of Parliamentary Affairs has developed a “National eVidhan Application (NeVA)”, a Mission Mode Project for Digital Legislatures to make the functioning of all Legislative Houses in the country paperless.

### About

- Nodal Ministry → Ministry of Parliamentary Affairs(MoPA).
- National eVidhan Application(NeVA) is a Mission Mode Project (MMP) included in the Digital India Programme.
- Aim → To make the functioning of all Legislative Houses in the country paperless on the theme of ‘One Nation – One Application’.
  - To transform all State Legislatures into ‘DIGITAL HOUSES’ so as to enable them to transact entire Government Business on digital platforms including information exchange with the State Government Departments in digital mode.
- Note: The application has also enabled provisions for onboarding the two Houses of Parliament.
- Funding → The funding for e-Vidhan is provided by the MoPA. It is on the pattern of Central Sponsored Scheme, i.e. 60:40 for States; 90:10 for North East & hilly States and 100% for UTs.
- In 2021, Bihar Legislative Council became the first House in the country to transit to NeVA platform completely and conducted Winter Session, 2021 on the NeVA platform in paperless mode.

## 6. Competition (Amendment) Bill, 2022

### Why in News?

Recently, The Competition (Amendment) Bill, 2022 has been introduced that aims to improve regulatory set-up by increasing the CCI’s accountability, giving it flexibility and enforcement efficiency.

### About Key Provision

- Increasing transparency and strengthening the accountability →
  - A board with part-time members to supervise CCI activities.
    - This would bring its regulatory architecture at par with that of financial regulators.

- CCI to mandatorily **issue penalty guidelines** and give reasons in case of any divergence.
  - It will give **much-needed certainty** in regulatory environment.
- Enforcement efficiency →
  - CCI could engage in **structured negotiations with parties and arrive at mutually-workable solutions** without having to go through lengthy formal proceedings.
  - This will bring powers of **CCI on par with Sebi**, which has been passing settlement orders for over a decade.
  - Previously CCI was only empowered to take action for **abuse of dominance or anti-competitive agreements** in the form of final orders in proceedings before it.
  - CCI can make appeals to the **National Company Law Appellate Tribunal** conditional on a pre-deposit of up to **25% of the penalty** imposed by the CCI.
  - This change is likely to **deter frivolous appeals**.
  - Shortening of the merger review period from **210 to 150 days**
  - **Introduction of a green channel for merger applications**: Certain categories of mergers that had to wait for CCI approval would be allowed to attain full consummation without any standstill obligation under the new green-channel process.
- Flexibility →
  - Previously, only those agreements are allowed if agreements made between businesses **at the same level of production** (such as competitors that form a cartel) or businesses that are in a **directly upstream or downstream market** (such as agreements between a manufacturer and distributor). If the parties do not fall in either of these brackets, **anti-competitive agreements between them can go unchecked**.
  - But the bill also recognizes other forms of cartels such as hub-and-spoke cartels, it also has a **catch-all provision** to enable the CCI to deal with anti-competitive pacts irrespective of the structural relationships between parties.

#### **Competition Commission of India:**

- It is a **statutory body** of the Government of India, responsible for enforcing the Competition Act, 2002 throughout India and to prevent activities that have an adverse effect on competition.
- Functions of the commission →
  - It is the duty of the Commission to **eliminate practices having adverse effect on competition, promote and sustain competition**, protect the interests of consumers and ensure freedom of trade in the markets of India.
  - The Commission is also required to **give opinion on competition issues** on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.

## **7. Section 144 CrPC**

### **Why in News?**

Recently, Section 144 has been imposed in Bodhan town in Telangana after protests turned violent over the installation of a statue of Chhatrapati Shivaji at Ambedkar junction in the town by the Shiv Sena and BJP workers.

### **About**

- Section 144 of the Criminal Procedure Code (CrPC) of 1973 generally **prohibits public gathering**.
- It **authorises the Executive Magistrate of any state or territory** to issue an order to prohibit the assembly of four or more people in an area.
- According to the law, every member of such '**unlawful assembly**' can be **booked for engaging in rioting**. The maximum punishment for such act is **three years**.
- Moreover, **obstructing police** from breaking up an unlawful assembly is a punishable offence as well.

- Section 144 also **restricts carrying any sort of weapon** in that area where it has been imposed and people can be detained for violating it.
- Section 144 is **imposed in urgent cases** of nuisance or apprehended danger of some event that has the potential to cause trouble or damage to human life or property.
- No order under Section 144 shall remain in force for **more than two months** but the **state government can extend** the validity for two months and maximum up to six months.
- It can be **withdrawn at any point of time** if situation becomes normal.
- Background → Section 144 was used for the **first time in 1861 by the British Raj**, and thereafter became an important tool to stop all nationalist protests during the Freedom Struggle. However, the use of the section in Independent India remains **controversial** as very little has changed.

#### 🔑 Section 144 vs Curfew:

- Section 144 is generally **prohibitory in nature**. It restricts from public gathering but **doesn't bar it all together**.
- A curfew, on the other hand, orders people to **stay indoors for a specific period of time**. So, the authorities can impose curfew for certain period of time (However, the authorities can also extend the curfew if the need be).
- One also needs a **prior approval from the local police** for moving out during curfew.

## 8. National Commission for Scheduled Tribes

### Why in News?

According to a parliamentary committee's recent report, the National Commission for Scheduled Tribes has been dysfunctional for the last four years and has not delivered a single report to Parliament.

### About

- Status → It is a **constitutional body**.
- NCST was set up with effect from **19th February 2004 by amending Article 338** and by inserting a new article 338A in the Constitution through the 89th Constitution Amendment Act, 2003.
- Objective → Article 338A inter-alia gives powers to the NCST to **oversee the implementation of various safeguards** provided to STs under the Constitution or under any other law for time being in force or under any other order to the Government and to **evaluate the working of such safeguards**.
- Composition → It consists of a **Chairperson**, a **Vice-Chairperson** and **3 other Members** who are appointed by the President by warrant under his hand and seal.
  - At least one member should be a **woman**.
  - The Chairperson, the Vice-Chairperson and the other Members hold office for a **term of 3 years**.
  - The members are **not eligible for appointment for more than two terms**.
  - The Chairperson has been given the **rank of Union Cabinet Ministers**, the Vice Chairperson has the rank of a Minister of State and other Members have the **rank of a Secretary** to the Government of India.
- Duties and Functions of the NCST →
  - To **investigate and monitor all matters** relating to the safeguards provided for the STs under the Constitution or under any other law for the time being in force or under any order of the Government.
  - To **inquire into specific complaints** with respect to the deprivation of rights and safeguards of the STs.
  - To **participate and advise in the planning process** of socio-economic development of the STs and to evaluate the progress of their development.
  - To **present to the President**, annually and at such other times as the Commission may deem fit, **reports** upon the working of those safeguards.
  - To **discharge such other functions** in relation to the protection, welfare and development and advancement of the Scheduled Tribes as the President may be subject to the provisions of any law made by Parliament by rule specified.

## 9. Principle of Reasonable Accommodation

### Why in News?

In its recent verdict on Hijab case, the Karnataka High Court rejected an argument in support of permitting Muslim girls wearing head-scarves that was based on the principle of 'reasonable accommodation'.

### About

- What is it? → It is a principle that **promotes equality**, enables the grant of positive rights and prevents discrimination **based on disability, health condition or personal belief**.
- It captures the **positive obligation of the State and private parties** to provide additional support to persons with disabilities to facilitate their full and effective participation in society.

### 🔑 How does the principal work?

- The general principle is that reasonable accommodation should be provided, **unless some undue hardship is caused by such accommodation**.
- In **2016**, the ILO came out with a practical guide on **promoting diversity and inclusion** through workplace adjustments.
- Four categories of workers were chosen for the guide →
  - Workers with disabilities.
  - Workers living with HIV and AIDS.
  - Pregnant workers and those with family responsibilities.
  - Workers who hold a particular religion or belief.

### 🔑 Accommodations

- A **modified working environment, shortened or staggered working hours**, additional support from supervisory staff and reduced work commitments are ways in which accommodation can be made.
- Suitable changes in recruitment processes — **allowing scribes during written tests** or **sign language interpreters** during interviews — will also be a form of accommodation.

### 🔑 legal position on this in India

- In India, the **Rights of People with Disabilities Act, 2016**, defines '**reasonable accommodation**' as "necessary and appropriate modification and adjustments, without imposing a disproportionate or undue burden in a particular case, to ensure to persons with disabilities the enjoyment or exercise of rights equally with others".

## 10. Foreigners' Tribunals

### Why in News?

A Foreigners' Tribunal in Assam's Cachar district has served a notice to a deceased person, asking him to appear before it by March 30 as he had failed to produce valid documents to prove his Indian citizenship.

### About

- Foreigners' Tribunals are **quasi-judicial bodies** established as per the Foreigners' Tribunal Order, 1964 and the Foreigners' Act, 1946.
- Composition → **Advocates** not below the age of 35 years of age with at least 7 years of practice (or) **Retired Judicial Officers** from the Assam Judicial Service (or) **Retired IAS or ACS Officers** (not below the rank of Secretary/Addl. Secretary) having experience in quasi-judicial works.
- Who can set up these tribunals? →

- The Ministry of Home Affairs (MHA) has amended the Foreigners (Tribunals) Order, 1964, and has **empowered district magistrates** in all States and Union Territories to set up tribunals (quasi-judicial bodies) to decide whether a person staying illegally in India is a foreigner or not.
- **Earlier**, the powers to constitute tribunals were **vested only with the Centre**.
- Who can approach? →
  - The amended order (Foreigners (Tribunal) Order, 2019) also **empowers individuals to approach the Tribunals**.
  - Earlier, only the State administration could move the Tribunal against a suspect.
- Who is a declared foreigner? → A declared foreigner, or DF, is a person marked by Foreigners' Tribunal (FT) for **allegedly failing to prove their citizenship** after the State police's Border wing marks him or her as an illegal immigrant.

## 11. Article 355

### Why in News?

West Bengal Congress president renewed his calls to invoke Article 355 in the state given the violence that broke out in the Birbhum district.

### About

- It states that → "It shall be the **duty of the Union to protect every State against external aggression and internal disturbance** and to ensure that the Government of every State is carried on in accordance with the provisions of this Constitution."

### 🔑 Cases for its invocation

- This article thus comes handy when there are **communal violence incidents**. Over the period, this article has gained a different texture.
- We know that the "**public order**" and "**police**" **are state subject** and states have exclusive power to legislate on these matters.
- These subjects were entrusted to states because **states would be in better position to handle** any law and order problem.
- Management of Police by states was also seen as **administratively convenient and efficient**.
- However, there might be **some circumstances** where states are unable to maintain public order and protect people.
- In such situation, **centre can invoke article 355** and take measures such as taking law and order of state under its own hand, deployment of military etc.

## 12. Central Bureau of Investigation (CBI) to investigate

### Why in News?

The Calcutta High Court has ordered the Central Bureau of Investigation (CBI) to investigate the killings in West Bengal's Birbhum district, where eight persons were burnt alive.

### About

- Unlike the National Investigation Agency (NIA), CBI **cannot take suo motu cognizance** of a case in a state — whether in a matter of corruption involving government officials of the Centre and PSU staff or an incident of violent crime.
- In order to take up corruption cases involving central government staff, it either **needs general consent of the state government** or **specific consent** on a case-to-case basis.
- For all other cases, whether involving corruption in the state government or an incident of crime, the **state has to request an investigation** by the CBI, and the **Centre has to agree to the same**.
- In case the state does not make such a request, the **CBI can take over a case based on the orders of the High Court** concerned or the Supreme Court.



- Can the CBI decline to take up a case for investigation? →
  - After a state makes a request for an inquiry by the CBI, the **Centre seeks the opinion** of the agency.
  - If the CBI feels that it is **not worthwhile to spend time** and energy on the case, it **may decline** to take it up.
  - In the past, the CBI has refused to take over cases citing a **lack of enough personnel to investigate** and saying it is **overburdened**.
- What is the role of state consent in an investigation by the CBI? →
  - Since 2015, as many as **nine states** — Maharashtra, Punjab, Rajasthan, West Bengal, Jharkhand, Chhattisgarh, Kerala, Mizoram and Meghalaya — have **withdrawn general consent to the CBI**.
  - Withdrawal of general consent means that to **probe any case in these states**, CBI would have to **take prior permission** from the state government. CBI has claimed that this has tied its hands.
  - In **2021**, the Supreme Court expressed concern over CBI's submission that **78% of its 150 requests for sanction to investigate cases were pending** with state governments that had withdrawn consent to the CBI.

### 13. Legal Aid Clinic

#### Why in News?

Recently, the National Commission for Women (NCW) in collaboration with Delhi State Legal Services Authority (DSLISA) has launched a Legal Aid Clinic.

#### About

- Launched by → **National Commission for Women** (NCW) in collaboration with Delhi State Legal Services Authority (DSLISA).
- Purpose → It will act as a **single-window facility** for resolving the grievances of women by offering them free legal assistance.
- Located at → The legal aid clinic will operate out of the NCW office **in New Delhi**.
- Services → Under the clinic, **counselling will be provided** for walk-in complainants, women in distress, advice and information on various schemes of the National Legal Services Authority (NALSA), **free legal aid**, **hearings in matrimonial cases and other complaints** registered with the Commission.

#### National Commission for Women

- It was set up as a **statutory body** in **January 1992** under the National Commission for Women Act, 1990.
- Mission → Its mission is to **strive towards enabling women to achieve equality and equal participation** in all spheres of life by securing her due rights and entitlements through suitable policy formulation, legislative measures, etc.
- Functions →
  - **Review** the constitutional and legal safeguards for women.
  - **Recommend** remedial legislative measures.
  - **Facilitate** redressal of grievances.
  - **Advise** the Government on all policy matters affecting women.

# International Relations

## 1. Council of Europe

### Why in News?

The Council of Europe has suspended Russia from its rights of representation in the Council. However, Russia was not permanently removed from the council, thus obligated to follow its human rights provisions.

### About

- Established in **1949** by the **Treaty of London**.
- It is an international organization founded in the wake of World War II to **uphold human rights, democracy and the rule of law in Europe**.
- The council is **distinct** from the European Union(EU).
- Members → It includes **47 member states** (27 of which are EU members).
- The Council **cannot make binding laws**, but it does have the **power to enforce** select international agreements reached by European states on various topics.
- The Council is also an **official United Nations Observer**.
- Headquarters → **Strasbourg, France**.

## 2. Operation Ganga

### Why in News?

Prime Minister Narendra Modi chaired a high level meeting to review the ongoing efforts under Operation Ganga to bring back Indians stranded in Ukraine.

### About

- As **Russian invasion into Ukraine** has left its major cities, including its capital Kyiv, under siege, India is making efforts to evacuate its citizens stuck in the war-torn country.
- 'Operation Ganga' is the initiative launched by the government of India **to bring back Indians stranded in Ukraine**.
- Under this, India has already successfully **brought back more than a 1,000** of its nationals from the country. It has also set up **24x7 control centres to assist** in the evacuation of Indians through the border crossing points with Hungary, Poland, Romania and Slovak Republic.
- A Twitter handle, '**OpGanga Helpline**', has also been dedicated to the mission, where all information regarding evacuation process and advisories of embassies are shared to **keep everyone up-to-date**.
- Thousands of Indians, especially students studying medicine in Ukraine, have been stuck in the country since it closed its airspace as a security measure after Russia launched "**special military operations**".

### 📁 Evacuation Operations carried out by India

- Vande Bharat (2020) → When the **Covid-19 pandemic hit** the world, the Centre launched the Vande Bharat Mission to bring back Indian citizens stranded in foreign countries.
- Operation Samudra Setu (2020) → It was a **naval operation** as part of the national effort to bring home Indian citizens from overseas **during the Covid-19 pandemic**.
- Operation Raahat (2015) → In 2015, a **conflict raged between the Yemeni government and Houthi rebels**. India evacuated nearly 5,600 people from Yemen.
- Operation Maitri (2015) → It is the joint relief and rescue operation by the Indian government and the Indian Armed forces in the **aftermath of the 2015 Nepal earthquake**.

## 3. Court of Arbitration of Sports

### Why in News?

The Court of Arbitration of Sports decided not to impose any provisional ban on a Russian figure skater from participating in the Beijing Olympics, who was accused of being in violation of the World Anti-Doping Code (WADC).

#### About

- The Court of Arbitration for Sport (CAS) is an **institution independent** of any sports organization which provides for services.
- It **facilitates the settlement of sports-related disputes** through arbitration or mediation by means of procedural rules adapted to the specific needs of the sports world.
- The CAS was created in **1984** and is placed **under the administrative and financial authority** of the International Council of Arbitration for Sport (ICAS).
- Headquartered at the **Palais de Beaulieu, Lausanne (Switzerland)**, the courts of CAS are located in New York City (Australia), Sydney (United States) and Lausanne.
- **Temporary courts** are established in current Olympic host cities.
- The CAS has nearly **300 arbitrators from 87 countries**, chosen for their specialist knowledge of arbitration and sports law.
- Around **300 cases are registered** by the CAS every year.

### 4. International Monsoons Project Office

#### Why in News?

The Union Minister of State (Independent Charge) Science & Technology launched the International Monsoons Project Office (IMPO).

#### About

- It was established at the **Indian Institute of Tropical Meteorology (IITM), Pune**.
- Purpose → It would **support activities and connections related to international monsoon research** that would be identified and fostered under the leadership of the World Climate Research Programme and the World Weather Research Programme.
- Significance → The setting up of IMPO in India would mean **expanding an integrated scientific approach** to solve the seasonal variability of monsoons, enhancing the prediction skill of monsoons and cyclones and strengthening monsoon research for better support operations and services.

#### World Climate Research Programme(WCRP)

- It is an international programme that **helps to coordinate global climate research**.
- It was established in **1980**, under the **joint sponsorship** of the World Meteorological Organization (**WMO**) and the International Council for Science (**ICSU**), and has also been sponsored by the Intergovernmental Oceanographic Commission (**IOC**) of UNESCO since 1993.

#### World Weather Research Programme (WWRP)

- The programme is **coordinated by WMO**. It focuses on **advancing and promoting research** in weather, its prediction and its impact on society.

### 5. Montreux Convention

#### Why in News?

In response to Russia's invasion of Ukraine, Turkey is activating the Montreux Convention on naval passage through the Black Sea Straits.

#### About

- Straits → Also known as the **Turkish Straits**, the Black Sea Straits are the Bosphorus and Dardanelles straits.

- These straits connect the Aegean Sea and the Black Sea via the Sea of Marmara.
- It is the only passage through which the Black Sea ports can access the Mediterranean and beyond.
- **Montreux Convention of 1936** Regarding the Regime of the Straits is an international agreement governing the Bosphorus and Dardanelles Straits in Turkey.
- This pact says that Turkey has control over both the Black Sea Straits.
- In the event of a war, the pact gives Ankara the right to regulate the transit of naval warships and to block the straits to warships belonging to the countries involved in the conflict.
- Exception → **Article 19** of the treaty contains an exception for the countries on the Black Sea that can effectively undermine Turkey's power in blocking the Russian warships entering or exiting the Black Sea.
- This **Article says**, "Vessels of war belonging to belligerent powers, whether they are Black Sea Powers or not, which have become separated from their bases, may return thereto."
- That means warships can return to their original bases through the passage and Turkey cannot prevent it.
- The condition also applies to Russian fleets currently in the Black Sea that belong to a base in the Mediterranean or Baltic Sea. Russia is free to take them out of the Black Sea.



#### 🔑 Official Assignment

- The official assignment of a ship to a port determines whether it has the right to pass through the Straits or not.
- This assignment, according to the International Maritime Organization (IMO) falls under the authority of the state that owns the ships.
- Therefore, another possible way for Russia to exploit the Montreux Convention would be to reassign some of its vessels to the Black Sea.

## 6. Asian Infrastructure Investment Bank

### Why in News?

The Beijing-based Asian Infrastructure Investment Bank (AIIB) said it was putting on hold and reviewing all projects in Russia and Belarus.

### About

- The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia, began operations in **January 2016**.
- It aims to stimulate growth and improve access to basic services by furthering interconnectivity and economic development in the region through advancements in infrastructure.
- Headquartered → **Beijing**.
- Membership → There are more than 100 members now.
- Voting Rights →
  - **China** is the largest shareholder with 26.61 % voting shares in the bank followed by **India (7.6%)**, **Russia (6.01%)** and **Germany (4.2 %)**.
  - The regional members hold 75% of the total voting power in the Bank.
- Various organs of AIIB →
  - Board of Governors → The Board of Governors consists of one Governor and one Alternate Governor appointed by each member country. Governors and Alternate Governors serve at the pleasure of the appointing member.

- Board of Directors → Non-resident Board of Directors is responsible for the direction of the Bank's general operations, exercising all powers delegated to it by the Board of Governors.
- International Advisory Panel → The Bank has established an International Advisory Panel (IAP) to support the President and Senior Management on the Bank's strategies and policies as well as on general operational issues.

## 7. UN Human Rights Council

### Why in News?

India has abstained on a vote at the UNHRC resolution which “strongly condemned” aggression by Russia on Ukraine.

### About

- It was founded in **2006**.
- UNHRC was reconstituted from its predecessor organisation, the UN Commission on Human Rights to help overcome the “credibility deficit” of the previous organisation.
- Headquartered in Geneva, Switzerland.
- Composition →
  - The UNHRC has 47 members serving at any time with elections held to fill up seats every year, based on allocations to regions across the world to ensure geographical representation.
  - Each elected member serves for a term of three years.
  - Countries are disallowed from occupying a seat for more than two consecutive terms.
- Functions →
  - The UNHRC passes non-binding resolutions on human rights issues through a periodic review of all 193 UN member states called the Universal Periodic Review (UPR).
  - It oversees expert investigation of violations in specific countries (Special Procedures).

## 8. International Election Visitors Programme

### Why in News?

The virtual International Election Visitors Programme (IEVP) 2022 was hosted by the Election Commission of India (ECI).

### About IEVP

- Since the 2012 elections, India has hosted the International Election Visitors Programme (IEVP), which invites international delegates to visit polling stations and observe electoral processes.
- Hence, this programme provides a platform for the exchange of ideas, sharing of experiences, best practices and skills in the field of Electoral Management with various countries.
- Participants of IEVP 2022 → IEVP 2022 was attended by delegates from nearly **32 countries and 4 international organizations**: International IDEA, International Foundation of Electoral Systems (IFES), Association of World Election Bodies (A-WEB) and Community of Democracies.

### 📌 International IDEA

- International Institute for Democracy and Electoral Assistance (International IDEA) is an intergovernmental organization that works to support and strengthen democratic institutions and processes around the world, to develop sustainable, effective and legitimate democracies. Headquarters: Stockholm, Sweden. It is also an official United Nations Observer.

### 📌 International Foundation of Electoral Systems (IFES)

- It is an international, non-profit organization founded in **1987**. The organization helps develop and provides assistance and support for elections in new and emerging democracies. It is based in Arlington, USA.

## 🔑 Community of Democracies

- It is an **intergovernmental coalition of states** established in **2000**. It aims to bring together governments, civil society and the private sector in the pursuit of the **common goal of supporting democratic rules, expanding political participation**, advancing and protecting democratic freedoms. Its secretariat is based in **Warsaw, Poland**.

## 9. Motor Vehicles Agreement (MVA)

### Why in News?

Recently, India, Bangladesh and Nepal have finalized a Memorandum of Understanding (MoU) for implementing the Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA).

### About

- Bangladesh, Bhutan, India and Nepal (BBIN)** had signed the Motor Vehicles Agreement (MVA) in 2015 at Thimphu, Bhutan.
- Aim → To provide **seamless people-to-people contact** and **enhance economic interaction** by facilitating cross border movement of people and goods.
- As per the agreement, member countries would **allow vehicles registered in the other countries to enter their territory under certain terms and conditions**. Customs and tariffs will be decided by the respective countries and these would be finalized at bilateral and trilateral forums.
- Assistance → **Asian Development Bank (ADB)** has been providing technical, advisory, and financial support to the BBIN MVA initiative as **part of its assistance to the South Asia Subregional Economic Cooperation (SASEC) program**.
- Why Bhutan has remained out? → Tiven Bhutan's "**current infrastructure**" and top priority to remaining a "**carbon-negative**" country, it said it would not be possible to consider joining the MVA.
- Significance → Operationalising the MVA by concluding the Passenger and the Cargo Protocol will help **realise the full potential of trade and people to people connectivity** between the BBIN countries by fostering greater sub-regional cooperation.



## 10. International Fund for Agricultural Development

### Why in News?

The government of Madhya Pradesh in partnership with the International Fund for Agricultural Development (IFAD) proposed two inexpensive and ingenious ideas to encourage women to cook balanced meals.

### About

- What is it? → It is a **specialized United Nations agency** created in **1977** engaged in providing grants and loans with low interest for allied projects.
- The IFAD **works with rural people** allowing them to enhance their food security, improve nutrition and raise their incomes.
- It also helps people to **expand their businesses**.
- The organization is an **outcome** of the **World Food Conference of 1974**.
- Headquartered in **Rome** and headed by a **President**.
- The objectives of the IFAD are three-fold →
  - To **increase the productive capacity** of poor people.
  - To **increase benefits** for them from market participation.
  - To **strengthen** the environmental sustainability & climate resilience of their economic activities.
- Membership → It has **177 member** countries.
- IFAD brings out the **Rural Development Report** every year.



### About two inexpensive and ingenious ideas

- The '7 days 7 plots' programme →
  - Here, women from the village are taught how to grow different vegetables in their own gardens, seven to be exact, one for each day of the week.
  - By the end of the week, the first plot is ready to be harvested again. This way, families get to eat fresh, affordable vegetables that they can consume for longer and in greater quantity, as against buying from the market, and so reduce sickness.
  - This scheme is an adjunct to the Tejaswini Rural Women Empowerment Programme implemented by the UN-affiliated IFAD in MP.
- Tiranga Thali →
  - To encourage a more balanced meal, the project introduced the concept of the "Tiranga Thali", where each plate contains ingredients of the three colours from the Indian flag. Saffron — all pulses like yellow split peas, pigeon peas, and split red lentils representing proteins; white — rice, milk and roti representing carbohydrates; and green — leafy vegetables representing vitamins and minerals.

## 11. Most Favoured Nation

### Why in News?

The United States, the European Union, Britain, Canada and Japan are planning to jointly revoke Russia's "most favoured nation" (MFN) status over its invasion of Ukraine.

### About

- The World Trade Organization's 164 members commit to treating other members equally so they can all benefit from each other's lowest tariffs, highest import quotas and fewest trade barriers for goods and services.
- This principle of non-discrimination is known as most favoured nation (MFN) treatment.
- There are some exceptions, such as when members strike bilateral trade agreements or when members offer developing countries special access to their markets.
- Removal of MFN status →
  - There is no formal procedure for suspending MFN treatment and it is not clear whether members are obliged to inform the WTO if they do so.
  - India suspended Pakistan's MFN status in 2019 after a suicide attack by a Pakistan-based Islamist group killed 40 police. Pakistan never applied MFN status to India.
- What does losing MFN status mean? →
  - Revoking Russia's MFN status sends a strong signal that the United States and its Western allies do not consider Russia a economic partner in any way, but it does not in itself change conditions for trade.
  - It does formally allow the Western allies to increase import tariffs or impose quotas on Russian goods, or even ban them, and to restrict services out of the country.
  - They could also overlook Russian intellectual property rights.

## 12. 1954 Hague Convention

### Why in News?

Recently, UNESCO is in contact with Ukrainian authorities to mark cultural sites and monuments with the distinctive "Blue Shield" emblem of the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict to avoid deliberate or accidental damages.

### About 1954 Hague Convention

- The convention for the Protection of Cultural Property in the Event of Armed Conflict also known as the Hague Convention was adopted in 1954 under the auspices of UNESCO.



- **India is party** to Hague Convention 1954.
- Aim → To **protect cultural property** such as monuments of architecture, art or history, archaeological sites, works of art, manuscripts, books and other objects of artistic, historical or archaeological interest, as well as scientific collections of any kind regardless of their origin or ownership.
- Significance → It is the first and the most comprehensive multilateral treaty **dedicated exclusively to the protection of cultural heritage** in times of peace as well as during an armed conflict.

#### 🏷️ Blue Shield Emblem

- Founded in **1996**.
- It is an **independent, neutral, non-governmental, non-profit, international organization** which strives to protect heritage during armed conflicts and disasters across the world.
- This includes **all forms of cultural property** including museums, monuments, archaeological sites, archives, libraries and audiovisual material, and significant natural areas, as well as intangible heritage.
- The 1954 Hague Convention **designates an emblem for a cultural property** that **should be protected**, and for identification of those working to protect it. The Blue Shield organization took up the **emblem of the Convention** as a **symbol of their protective work**, set in a **blue circular background**.

#### 🏷️ UNESCO

- It is a **specialized agency of the United Nations** (UN). It seeks to build peace through international cooperation in Education, the Sciences and Culture.
- It was founded in **1945** and is located in **Paris, France**.
- It has **193 Members and 11 Associate Members**. India joined UNESCO in 1946.
- In 2019, the **USA and Israel formally quit** UNESCO.
- Reports → **UNESCO Science Report, Global Education Monitoring Report, State of the Education Report for India**.

### 13. Geneva Conventions

#### Why in News?

As the Russian-Ukraine Conflict gets intense, there is growing concern surrounding the issue of violations of human rights and Geneva Conventions.

#### About

- The Geneva Conventions (1949) and their Additional Protocols are international treaties that contain the most important rules **limiting the barbarity of war**.
- They **protect people who do not take part in the fighting** (civilians, medics, aid workers) and those **who can no longer fight** (wounded, sick and shipwrecked troops, prisoners of war).
- The convention codifies widely accepted **ethical and legal international standards** for humanitarian treatment of those impacted by any ongoing war.
- The focus of the Conventions is also on the **treatment of non-combatants** and **prisoners of war**, and not the use of conventional or biological and chemical weapons.
- Treaties under the Convention: The convention contains **four treaties, formalized in 1949** and three additional protocols, the first two of which were formalized in **1977** and the third in **2005**.
- Four treaties →
  - The **first Geneva Convention** protects wounded and sick soldiers on land during the war.
  - The **second Geneva Convention** protects wounded, sick and shipwrecked military personnel at sea during the war.
  - The **third Geneva Convention** applies to prisoners of war.
  - The **fourth Geneva Convention** affords protection to civilians, including in occupied territory.

- **Article 3** common to the four Geneva Conventions cover situations of non-international armed conflicts. They include traditional civil wars, internal armed conflicts that spill over into other States, or internal conflicts in which a third State or a multinational force intervenes alongside the government.
- Parties to the Convention → The Geneva Conventions have been ratified by 196 states, including all UN member states. The three Protocols have been ratified by 174, 169 and 79 states respectively.
- Potential Prosecution under the Convention → Under **Article 8 of the Rome Statute** of the International Criminal Court (ICC), it is the ICC that has jurisdiction in respect of war crimes. War Crimes' refers to grave breaches of the Geneva Conventions including wilful killing, torture or inhuman treatment, including biological experiments among others.
- International Committee of the Red Cross(ICRC) → It is a humanitarian organization based in Geneva, Switzerland. State parties (signatories) to the Geneva Convention of 1949 and its Additional Protocols have given the ICRC a mandate to protect victims of international and internal armed conflicts.

## 14. Organisation for Economic Co-operation and Development

### Why in News?

Ukraine war could cut 1% off global growth: OECD.

### About

- Background → Organisation for European Economic Co-operation (OEEC) was founded in 1948 to help administer the Marshall Plan
  - In 1961, the OEEC was reformed into the Organisation for Economic Co-operation and Development by the Convention on the Organisation for Economic Co-operation and Development and membership was extended to non-European states.
- Headquarter → Paris, France
- It works through consensus to develop policy recommendations and other “soft law” instruments to encourage policy reform in member countries.
- Membership → Currently, it has 38 members. India is not a member but a key partner.
- Governance →
  - OECD Council — provide direction and guidance to the work of the Organisation. Each member country is represented.
  - OECD Substantive Committees — oversee all the work on each theme (publications, task forces, conferences, and so on)
  - OECD Secretariat — led by the Secretary-General provides support to Standing and Substantive Committees
- It provides a platform to compare policy experiences, seek answers to common problems, identify good practices and coordinate domestic and international policies of its members.
- It is a forum of countries describing themselves as committed to democracy and the market economy.
- Most OECD members are high-income economies with a very high Human Development Index (HDI) and are regarded as developed countries.

## 15. India's Arctic Policy

### Why in News?

The Ministry of Earth Science has unveiled India's Arctic Policy, titled 'India and the Arctic: building a partnership for sustainable development'.

### About

- Pillars → The policy document lays down **six pillars**: 1) Strengthening India's scientific research and cooperation, 2) climate and environmental protection, 3) economic and human development, 4) transportation and connectivity, 5) governance and international cooperation and 6) national capacity building in the Arctic region.
- Objectives of the Policy →
  - **Strengthening national capabilities**, climate and environmental protection, maritime and economic cooperation with the Arctic region.
  - **Inter-ministerial coordination** in pursuit of India's interests in the Arctic.
  - **Enhancing understanding** of the impact of climate change in the Arctic region on India's climate, economic, and energy security.
  - **Contributing better analysis, prediction**, and **coordinated** policymaking on the implications of ice melting in the Arctic.
  - **Studying linkages** between polar regions and the Himalayas.
  - **Deepen cooperation** between India and countries of the Arctic region under various Arctic forums.
  - **Increase India's participation** in the Arctic Council.

### 📌 Activities by India

- India's engagement with the Arctic began when it signed the **Svalbard Treaty in 1920**.
- India initiated its **Arctic research program** in **2007** with a focus on climate change in the region.
- India has the status of **'Observer' member in the Arctic Council** and participates in several meetings that are mostly themed around research.
  - Arctic Council → Eight nations — Canada, Denmark, Finland, Norway, Iceland, Russia, Sweden and the United States — make up the Arctic Council.
- Arctic weather **influences the Indian monsoon** and hence has been of interest to Indian researchers for decades.
- Currently, India has a single station, **Himadri, in Ny-Alesund, Svalbard**, a **Norwegian archipelago**, where research personnel are usually present for 180 days.
- Climate change and the melting of ice caps imply changes to the Arctic weather. India has sent **13 expeditions** to the Arctic since 2007 and **runs 23 active science projects**.



## 16. Finlandization

### Why in News?

Recently, as the Russia invoked the threat of Ukraine joining NATO as a pretext for the invasion, the term "Finlandization" of Ukraine has become popular.

### About

- 'Finlandization' is the process whereby a country is **induced to favour**, or **refrain from opposing**, **the interests of a more powerful country**, despite not being politically allied to it.
- This term was originally used with reference to the influence of the **former Soviet Union** on its neighbour Finland.
- It refers to the **policy of strict neutrality** between Moscow and the West that Finland followed during the decades of the Cold War.
- The principle of neutrality was rooted in the **Agreement of Friendship, Cooperation, and Mutual Assistance** (or YYA Treaty) that Finland signed with the USSR in 1948.
- Among other things, Moscow guaranteed it **wouldn't invade Finland**.

- Later, the term was formally coined by the German political scientist Richard Lowenthal in 1961 in the wake of the Berlin crisis.
- He used it to warn about the Soviet Union's efforts to gain influence in Europe by the same oppressive methods they used on Finland.

## 17. Bucharest Nine (B9)

### Why in News?

The “Bucharest Nine” wrote an article in a popular Indian newspaper to acquaint the Indian public with the basic facts on the ground about the premeditated, unprovoked and unjustified Russian aggression in Ukraine.

### About

- The “Bucharest Nine” or “Bucharest Format” or “B9” was founded in 2015, and takes its name from Bucharest, the capital of Romania.
- The “Bucharest Nine” is a group of nine NATO countries in Eastern Europe that became part of the NATO after the end of the Cold War.
- It is also regarded as the “Voice of the Eastern Flank” in the NATO alliance.
- The group was created at the High-Level Meeting of the States from Central and Eastern Europe in Bucharest on the initiative of,
  - Klaus Iohannis, who became the President of Romania in 2014,
  - Andrzej Duda, who became President of Poland in 2015.
- B9 offers a platform for deepening the dialogue among the participant allied states, in order to articulate their specific contribution to the ongoing processes across the NATO.
- Composition of B9 include, Romania, Poland, Hungary, Bulgaria, the Czech Republic, Slovakia, and the three Baltic republics of Estonia, Latvia, and Lithuania.
  - All nine countries were once closely associated with the now dissolved Soviet Union, but later chose the path of democracy.
- All members of the B9 are part of the European Union (EU) and NATO.
- The B9 countries have been critical of Russia's aggression against Ukraine since 2014, when the war in the Donbas started and Russia annexed the Crimean peninsula.



### ☞ Three Seas Initiative

- B9 should not be confused with Three Seas Initiative (3SI).
- The 3SI is a regional effort in Europe to expand cross-border energy, transportation, and digital infrastructure and boost economic development in the area between the Adriatic Sea, Baltic Sea, and Black Sea.
- Twelve countries (Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia), all of which are members of the EU, participate in the 3SI.

## 18. BRICS Media Forum

### Why in News?

Leading media groups from the five BRICS countries (Brazil, Russia, India, China and South Africa) have put together a three-month long training programme for journalists. The programme was an initiative of the BRICS Media Forum.

### About

- Established in 2015 by media organisations from the five countries, including The Hindu, Brazil's CMA Group, Russia's Sputnik, China's Xinhua and South Africa's Independent Media.

- The Forum was “conceived and developed so that it can function as an independent initiative and set of practical activities undertaken within the broad framework of BRICS cooperation”.

## BRICS

- BRICS is the group composed of the five major emerging countries – Brazil, Russia, India, China and South Africa.
- Background → The acronym BRIC was coined by economist ‘Jim O’Neill’ of Goldman Sachs in 2001 to indicate the emerging powers that would be, alongside the United States, the five largest economies of the world in the 21st century.
- In 2006, BRIC countries started their dialogue, which since 2009 takes place at annual meetings of heads of state and government.
- In 2011, with South Africa joining the group, the BRICS reached its final composition, incorporating a country from the African continent.
- Significance → It together represents about 42% of the population, 23% of GDP, 30% of the territory and 18% of the global trade.
- Key Initiatives → During the Sixth BRICS Summit in Fortaleza (Brazil) in 2014, the leaders signed the Agreement establishing the New Development Bank (NDB headquarters - Shanghai, China).
- They also signed the BRICS Contingent Reserve Arrangement to provide short-term liquidity support to the members.

## 19. BIMSTEC

### Why in News?

Sri Lanka is gearing up to host the Fifth Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) Summit.

### About

- BIMSTEC is a regional multilateral organization comprising 7 Member States lying in the littoral and adjacent areas of the Bay of Bengal.
- This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.
- The seven Member States are Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar and Thailand.
- It has its secretariat at Dhaka, Bangladesh.
- Initially, the economic bloc was formed with 4 Member States with the acronym ‘BIST-EC’ (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation).
- BIMSTEC Centres → BIMSTEC Energy Centre, BIMSTEC Centre on Weather and Climate.
- The BIMSTEC region is home to around 1.5 billion people which constitute around 22% of the global population with a combined GDP of 2.7 trillion economy.
- In the last five years, BIMSTEC member states have been able to sustain an average 6.5% economic growth trajectory despite global financial meltdown.
- BIMSTEC is a sector-driven cooperative organization focussing on agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, climate change, etc.

# Society

## 1. Rashtriya Vayoshree Yojana

### Why in News?

The Ministry of Social Justice and Empowerment will distribute 4,800 daily living aids and assistive devices among 895 senior citizen beneficiaries under Rashtriya Vayoshri Yojana (RVY).

### About

- Launched in **2017**.
- Nodal Ministry → **Ministry of Social Justice and Empowerment**.
- Type → It is a **central sector scheme** funded from the **Senior Citizens' Welfare Fund**. The fund was notified in the year 2016.
  - All unclaimed amounts from small savings accounts, PPF and EPF are transferred to this fund.
- Aim → It aims to provide **aids and assistive living devices to senior citizens belonging to Below Poverty Line (BPL) category** who suffer from age-related disabilities such as low vision, hearing impairment, loss of teeth and locomotor disabilities.
- The **aids and assistive devices**, viz walking sticks, elbow crutches, walkers/crutches, tripods/quad pods, hearing aids, wheelchairs, artificial dentures and spectacles are provided to eligible beneficiaries.
- Implementation → The Scheme is being implemented by the **Artificial Limbs Manufacturing Corporation (ALIMCO)**, a PSU (Public Sector Undertaking) under the Ministry of Social Justice and Empowerment.

## 2. Compensation to Victims of Hit and Run Motor Accidents Scheme, 2022

### Why in News?

Recently, The Government has released "The Compensation to Victims of Hit and Run Motor Accidents Scheme, 2022".

### About

- Launched by → **Ministry of Road Transport and Highways**.
- This scheme will **supersede the Solatium (Compensation) Scheme, 1989**.
- This scheme shall come into force with effect from **April 1, 2022**.
- Key Features of the Scheme →
  - The compensation to the families of hit-and-run victims will be increased by **eight-fold to Rs 2 lakh in cases of death**.
  - The relief to a person sustaining grievous injuries in a hit-and-run case will now be **increased to Rs 50,000** from the current Rs 12,500.
  - Under the scheme, the procedure has been prepared for **detailed investigations of road accidents** and **their reporting** along with timelines for different stakeholders for quick settlements of claims.
  - A **Motor Vehicles Accident Fund** has been set up. The fund will be used for providing compensation in case of hit-and-run cases and treatment for accident victims.

## 3. Stree Manoraksha Project

### Why in News?

During International Women's Day week, Union Minister for Women and Child Development has launched "Stree Manoraksha project".

### About



- Launched by → **National Institute of Mental Health and Neurosciences (NIMHANS)**, Bangalore, with support and funding from the Ministry of Women and Child Development.
- The project is aimed at **extending mental health training to 6000 OSC functionaries** across India.
- The project would emphasise on the **psychosocial well-being** and aim to **improve the mental health of women** in India.
- The project would focus on **building on capacity building of OSC** (One Stop Centres) functionaries on the tools and techniques as to how to handle the cases of women approaching OSC, particularly the women who have suffered violence and distress with due sensitivity and care.
- The project also focusses on **self-care techniques** for OSC staff and counselors.
- Imparted in two formats →
  - One format will **focus on basic training** for all OSC functionaries including the security guards, cook, helpers, case workers, counselors, centre administrators, para medical staff etc.
  - The second format will emphasise on the **advanced course** which focuses on varied components relating to multi-generational implications and life time trauma in case of several violence against women.
  - In this regard, MWCD has launched the **advance certificate course** for OSC Councilors and also released the resource material for capacity building of OSC Staff.

#### 4. Pradhan Mantri Jan-Aushadhi Yojana

##### Why in News?

Janaushadhi Diwas week to be observed from 1st March to 7th March 2022. Theme of 4th Janaushadhi Diwas: “Jan Aushadhi-Jan Upyogi”.

##### About

- Initially launched in **2008**, the scheme was **rechristened in 2015**.
- Implementing agency → **Pharmaceuticals & Medical Devices Bureau of India (PMBI)**, under the administrative control of the Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Government of India.
- It seeks to provide **quality medicines at affordable prices** to the masses through special kendra’s known as Pradhan Mantri Bhartiya Jan Aushadhi Kendra.
- Salient features →
  - **Ensure access** to quality medicines.
  - **Extend coverage** of quality generic medicines so as to reduce the out of pocket expenditure on medicines and thereby redefine the unit cost of treatment per person.
  - **Create awareness** about generic medicines through education and publicity so that quality is not synonymous with only high price.
  - **A public programme** involving Government, PSUs, Private Sector, NGO, Societies, Co-operative Bodies and other Institutions.
  - **Create demand for generic medicines** by improving access to better healthcare through low treatment cost and easy availability wherever needed in all therapeutic categories.

#### 5. Kanya Shiksha Pravesh Utsav

##### Why in News?

On International Women’s Day, the Ministry of Women and Child Development (MoWCD) has launched a landmark campaign Kanya Shiksha Pravesh Utsav.

##### About

- Launched by the **Women and Child Development Ministry** in partnership with the Education Ministry and UNICEF.



- This scheme will fulfil the target of Right To Education act that says to bring out-of-school girls back to the education system.
- Umbrella Initiative → The campaign has been rolled out under the umbrella of the Beti Bachao Beti Padhao(BBBP) Initiative.
- Key Features of the campaign → Under the campaign, over 400 districts across all states will be funded under Beti Bachao Beti Padhao Scheme for outreach and awareness generation at the grassroots level to sensitize communities and families to enroll adolescents girls in schools. This funding will be over and above the funding from Samagra Shiksha Abhiyan.
- Moreover, Anganwadi workers(AWWs) will also be further incentivised for counseling and referring out of school adolescent girls.
- Significance of the campaign → The campaign intends to build on the existing schemes and programmes like Schemes for Adolescent Girls (SAG), Beti Bachao Beti Padhao (BBBP) and National Education Policy (NEP) to work on a comprehensive system for out of school girls.

### 📅 Women's Day 2022

- Celebrated every year around the world on March 8.
- Theme for International Women's Day, 2022 (IWD 2022) is 'Gender equality today for a sustainable tomorrow'.
- IWD 2022 campaign theme is '#BreakTheBias'. → It intends to promote a "gender equal world", which is "free of bias, stereotypes, and discrimination". "A world that is diverse, equitable, and inclusive", and where "difference is valued and celebrated".
- History and significance → IWD has been celebrated for over a century now, but many people think of it purely as a feminist cause. Its roots, however, are found in the labour movement, wherein it was first organised in 1911 by the early 20th century Marxist from Germany Clara Zetkin.
- What colors symbolize International Women's Day? → Purple, green and white are the colors of International Women's Day.
  - Purple signifies justice and dignity.
  - Green symbolizes hope.
  - White represents purity, albeit a controversial concept.
  - The colors originated from the Women's Social and Political Union (WSPU) in the UK in 1908.

## 6. Maternal Mortality in India

### Why in News?

The Registrar General of India has released a "Special Bulletin on Maternal Mortality Ratio (MMR) of India".

### About Registrar General of India

- It is under the Ministry of Home Affairs.
- Apart from conducting the Population Census and monitoring the implementation of the Registration of Births and Deaths in the country, it has been giving estimates on fertility and mortality using the Sample Registration System (SRS).
- SRS is the largest demographic sample survey in the country that among other indicators provide direct estimates of maternal mortality through a nationally representative sample.
- Verbal Autopsy (VA) instruments are administered for the deaths reported under the SRS on a regular basis to yield a cause-specific mortality profile in the country.

### 📅 Key findings

- India's maternal Mortality Ratio(MMR) has declined by 10 points. It has declined from 113 in 2016-18 to 103 in 2017-19 (8.8 % decline).

- India witnessed a **progressive reduction in the MMR** from 130 in 2014-2016, 122 in 2015-17, 113 in 2016-18, and 103 in 2017-19.
- State-wise MMR →
  - Among States, **Kerala has recorded the lowest** Maternal Mortality Ratio (MMR) of 30 in the country.
  - The number of states which have achieved the MMR SDG target has now **risen from 5 to 7** viz. **Kerala** (30), **Maharashtra** (38), **Telangana** (56), **Tamil Nadu** (58), **Andhra Pradesh** (58), **Jharkhand** (61) and **Gujarat** (70).

## 7. PM-Daksh Yojana

### Why in News?

The Ministry of Social Justice and Empowerment released funds under the PM-DAKSH Yojana.

### About

- The Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH) Yojana launched in **2021**, by the **Minister of Social Justice and Empowerment**.
- Purpose → It is a **National Action Plan for skilling marginalized persons** covering SCs, OBCs, EBCs, DNTs, Sanitation workers including waste pickers.
- Aim → To **increase the skill levels** of the target youth by providing them **short term and long term skills**, followed by assistance in wage/self-employment.
- Implementation → It is being implemented through 3 Corporations: National Scheduled Castes Finance and Development Corporation(**NSFDC**), National Backward Classes Finance & Development Corporation(**NBCFDC**) and National Safai Karamcharis Finance & Development Corporation(**NSKFDC**).
- Salient Features →
  - Training Institutions → The training is provided through **Government Sector training institutions** and **reputed institutions** enabling them to take up suitable job/self-employment opportunities.
  - Age of the candidates for undergoing skill training → Beneficiaries between the **age of 18-45 years** are considered for Skill Development Training.
  - Stipend to the trainees → **Stipend is provided** to the eligible candidates based on their attendance through DBT.

## 8. Pradhan Mantri Ujjwala Yojana

### Why in News?

The first independent impact assessment of the Ujjwala programme has highlighted its benefits in terms of saving of lives and reduction in air pollution.

### About

- Launched by the **Ministry of Petroleum and Natural Gas** in **May 2016**.
- Aim → To **provide LPG** (liquefied petroleum gas) **connections to poor households** and reduce health risk associated with burning biomass.
- Key features → A **deposit-free LPG connection** is given to eligible with financial assistance of **Rs 1,600 per connection** by the Centre.
- Achievement → Government data shows that by January 2022, **9 crore new LPG connections** had been rolled out under this scheme, and that 99.8 per cent of the over 28 crore households in India now have access to LPG, up from 61.9 per cent in 2015.
- Eligibility criteria →
  - Applicant must a **woman** above the age of 18 and a citizen of India.
  - Applicant should belong to a **BPL (Below Poverty Line) household**.
  - **No one** in the applicant's household should **own an LPG connection**.

- The household income of the family, per month, must not exceed a certain limit as defined by the government of the Union Territories and State Government.
- Applicant must not be a recipient of other similar schemes provided by the government.

## 9. World Happiness Report 2022

### Why in News?

World Happiness Report 2022 was published recently.

### About

- Published by → United Nations Sustainable Development Solutions Network.
- Published since 2012, the World Happiness Report is based on two key ideas →
  - Happiness or life evaluation measured through opinion surveys and
  - Identifying key elements that determine well-being and life evaluation across countries.
- Parameters → The report usually ranked 150 countries based on several factors such as real GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity and perceptions of corruption.
  - This year, the report ranked 146 countries.
- Scale → Every year, each variable measures a populated-weighted average score on a scale of 0-10 that is tracked over a period of time and further compared with other countries.
  - This year, countries which ranked in the top 10 last year, moved upwards and downwards.

### 🔑 Key Finding

- Finland has been named the world's happiest country for the fifth year running followed by Denmark.
- India's Performance → India saw a marginal improvement in its ranking, jumping three spots to 136, from 139 a year ago.

### 🔑 Sustainable Development Solutions Network

- The SDSN, launched in 2012, mobilises global scientific and technological expertise to promote practical problem solving for the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.
- It was established under the auspices of the United Nations Secretary-General.
- The SDSN and the Bertelsmann Stiftung have been publishing the annual Sustainable Development Goals (SDGs) Index & Dashboards Global Report since 2016.

## 10. POSH Act

### Why in News?

The Kerala High Court has asked organizations associated with the film industry to take steps to constitute a joint committee to deal with cases of sexual harassment of women, in line with the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act of 2013.

### About

- The Vishaka guidelines (legally binding) were laid down by the Supreme Court in a judgment in 1997. This was in a case filed by women's rights groups, one of which was Vishaka.
- The guidelines defined sexual harassment and imposed three key obligations on institutions — prohibition, prevention, redress.
- The Supreme Court directed that they should establish a Complaints Committee, which would look into matters of sexual harassment of women at the workplace.
- The 2013 Act broadened these guidelines.

### 🔑 Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act of 2013:

- The law against sexual harassment is commonly known as the **prevention of sexual harassment** or **POSH Act**, passed by Parliament in 2013.
- Definition of sexual harassment → Sexual Harassment of Women at Workplace (Prevention, Prohibition And Redressal) Act, 2013 defines sexual harassment:
  - It includes “**any one or more**” of the following “**unwelcome acts or behaviour**” committed directly or by implication: Physical contact and advances, Sexually coloured remarks, Showing pornography, A demand or request for sexual favours, Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.
- Key provisions →
  - This Act lays down the **procedures for a complaint** and **inquiry** and **the action to be taken**.
  - It mandates that every employer constitute an **Internal Complaints Committee (ICC)** at each office or branch with 10 or more employees.
  - It lays down the **procedures and defines various aspects** of sexual harassment.
  - A woman **can be of any age**, whether employed or not, who “**alleges to have been subjected to any act of sexual harassment**”, that means the rights of all the women working or visiting any workplace, in any capacity, are protected under the Act.

## 11. National Drug De-Addiction Programme

### Why in News?

Recently, the Union Minister of State for Health and Family Welfare has informed Rajya Sabha about the National Drug De-Addiction Programme (DDAP).

### About DDAP

- Operated by → **Ministry of Health & Family Welfare**.
- Aim → a) To **provide affordable, easily accessible and evidence-based treatment** for all substance use disorders through the government health care facilities, b) To **build the capacities** of health care staff in recognition and management of substance use disorders.
- Implementing agencies → **AIIMS**, New Delhi; **PGIMER**, Chandigarh; **NIMHANS**, Bengaluru among others.
- National / Nodal centre → **National Drug Dependence Treatment Centre (NDDTC)**, AIIMS.

### 🔗 Other programmes

- National Action Plan for Drug Demand Reduction (NAPDDR) → It is being implemented by the **Ministry of Social Justice and Empowerment** (MoSJE).
- Nasha Mukta Bharat Abhiyaan (NMBA) → It is being implemented by the **Ministry of Social Justice and Empowerment** (MoSJE).
- Establishing and Implementing Capacity Building Mechanism for Addiction Treatment Facilities in India → It is a project being implemented by the Ministry of Social Justice and Empowerment (**MoSJE**) through **National Drug Dependence Treatment Centre (NDDTC)**, AIIMS.
  - Under the project, from 2021, **5-day training workshops** are organised for staff of various Government run/supported/funded facilities established for treatment of drug addiction in the Country.

## 12. Common University Entrance Test

### Why in News?

The University Grants Commission (UGC) has announced that admission into undergraduate courses in all centrally-funded universities will henceforth be solely on the basis of a Common University Entrance Test (CUET).

### About

- All **45 central universities** will have to admit students on the basis of their scores on the test.

- Class **12 Board** Exam marks will **no longer be considered**.

### **CUET**

- The CUET will be a **computerised test** to be conducted by the National Testing Agency (NTA).
- Following the exam, the NTA will prepare a **merit list** on the basis of which these universities will admit students.
- This entrance test is **compulsory** for all the central universities and may also be adopted by the state/private/deemed to be universities.
- The entrance exam will be **offered in 13 languages**.
- **International students are exempted** from CUET; their admissions will be carried out on the existing supernumerary basis.

## **13. SHRESTHA**

### **Why in News?**

Ministry of Education has joined hands with Ministry of Social Justice and Empowerment for SHRESTHA.

### **About**

- Objective of SHRESTHA →
  - **Enhance reach of development Intervention** of the Government and fill the gap in service deficient SCs dominant areas.
  - Earlier known as '**Grant in-aid to voluntary and other organisations for Scheduled Castes**',
- SHRESTHA has two Modes with →
  - Mode 1: To **provide high quality residential education** to bright scheduled caste (SC) students.
  - Mode 2: It **provides Grant-in-aid to Schools/ Hostels** run by voluntary and other organisations meeting the required criteria.
- **District administration** is its prime implementing agency for Mode 1.

## **14. Rashtriya Yuva Sashaktikaran Karyakram (RYSK)**

### **Why in News?**

Ministry of Youth Affairs & Sports has decided to continue RYSK Scheme for another five years from 2021 -22 to 2025-26.

### **About**

- RYSK is a Central Sector Scheme that aims to develop **personality and leadership qualities** of youth and to engage them in nation building activities.
- It is an **umbrella scheme** with several sub-schemes under it including Nehru Yuva Kendra Sangathan, National Youth Corps, National Young Leaders Programme etc.
- Scheme beneficiaries are in **age-group of 15-29 years**.
- For adolescents' specific components, beneficiaries are in **age-group of 10-19 years**.

# Security

## 1. Hermetic Wiper

### Why in News?

Several Ukrainian computers and websites faced cyberattacks by a destructive data-wiper malware hours before Russia began its military assault in the country. Moreover, Ukraine's largest commercial bank was also hit by a DDoS or distributed denial-of-service attack.

### About

- Hermetic Wiper or data wiper malware can **erase all the data** from the system that it has infected.
- The thing that makes this malware dangerous is that the **data once deleted, the data cannot be recovered**.
- This malware is **quite different** from most of the malware out there as it doesn't steal information, **it just destroys it**.
- The malware can even **attack the system recovery tools** without leaving any traces of the attack.
- Several cybersecurity experts believe the infections from the malware have **spread widely**.

### 🔑 DDoS or distributed denial-of-service attack

- A DDoS attack essentially **floods a website with countless frivolous requests for information**, eventually leading it to **paralyze or crash**. It uses bots to send these queries that **bombard the site**, leaving it inaccessible to legitimate users.
- Such attacks, in a conflict situation, **can damage critical digital infrastructure, disable government communication** and the information ecosystem in a country.

## 2. INS Visakhapatnam

### Why in News?

The Chief Minister of Andhra Pradesh has dedicated INS Visakhapatnam to the nation in a formal ceremony held at Naval Dockyard.

### About

- Visakhapatnam is the name of the **first stealth guided-missile destroyer ship** under Project 15B.
- Built by → The ship has been designed by the **Directorate of Naval Design** and built by **Mazagon Dock Shipbuilders Ltd** in Mumbai.
- The crew of the ship abides by her motto '**Yasho Labhasva**' – a Sanskrit phrase that translates to '**Attain Glory**'.
- Key Features →
  - It is the **most technologically advanced guided destroyer** in the world with a **displacement of 7,400 tonnes**.
  - It is equipped with **numerous state-of-the-art weapons** and has a significant indigenous content of approximately 75%. It also has **anti-submarine warfare capabilities**.
  - The ship is propelled by a **powerful combined gas and gas propulsion**, which enables her speed of over 30 knots.
  - It is also equipped to be **deployed to fight in Nuclear, Biological and Chemical (NBC) warfare conditions**.
- Other Project 15B Ships → The project 15B ships are a **follow-on of the Kolkata class** (Project 15A) destroyers (INS Kolkata, INS Kochi and INS Chennai).
  - The four ships are: **Visakhapatnam, Mormugao, Imphal, Surat**.

## 3. Cluster Bombs and Vacuum Bombs

### Why in News?

Amnesty International and Human Rights Watch, and Ukraine's ambassador to the United States accused Russia of using cluster bombs and vacuum bombs in the ongoing war.

### About Cluster Bombs

- Cluster Munitions are **non-precision weapons** that are designed to **injure** or **kill human beings indiscriminately** over a large area and to destroy vehicles and infrastructure such as runways, railway or power transmission lines.
- They can be **dropped from an aircraft** or **launched in a projectile** that spins in flight, scattering many bomblets as it travels.
- Many of these cluster bombs **end up not exploding, but continue to lie on the ground**, often partially or fully hidden, posing a threat to people for long after the fighting has ceased.

### ☞ Vacuum Bombs

- Vacuum bombs are also known as **aerosol bombs**, **fuel air explosives**, or **thermo-baric weapons**.
- A vacuum bomb consists of a **fuel container** with two separate explosive charges.
- They **use oxygen** from the air for a large, high-temperature blast.
- They cause **significantly greater devastation** than a conventional bomb of comparable size.
- The weapons, which go off in **two separate stages**, can be fired as rockets from tank-mounted launchers or dropped from aircraft.
- Two stages - As they hit their target, a first explosion splits open the bomb's fuel container, releasing a **cloud of fuel and metal particles** that spreads over a large area.
- A second explosion then occurs, igniting the aerosol cloud into a giant ball of fire and sending out **intense blast waves** that can destroy even reinforced buildings or equipment and vaporise human beings.

### ☞ Is using Cluster and Thermobaric Weapons illegal?

- Cluster Munitions: There is a **Convention on Cluster Munitions (CCM)**. It is an international treaty adopted in **2008**. It **prohibits the use, transfer, production, and stockpiling** of cluster bombs. Currently, 110 states are parties to the convention and 13 other countries have signed up but are yet to ratify it. **Neither Russia nor Ukraine are signatories**.
- Thermobaric weapons are **not prohibited** by any international law or agreement, but their **use against civilian populations** in built-up areas, schools or hospitals, could attract action **under The Hague Conventions of 1899 and 1907**.

## 4. Defence Acquisition Procedure

### Why in News?

Ministry of Defence (MoD) has offered four projects to the Indian Industry for design & development under Make-I category of Defence Acquisition Procedure (DAP) 2020.

### About

- Defence Procurement Procedure(DPP) was **first initiated in 2002** to streamline the procurement of military hardware for the Armed Forces in a systematic and time-bound manner.
- It was **reformed in 2016** putting an emphasis on indigenously designed, developed and manufactured weapon systems and eventually moved towards self-reliance in the field of defence manufacturing.

### ☞ Key features of DAP 2020

- Time Bound Defence Procurement Process → A **Project Management Unit** has been set up to support contract management and to streamline the Acquisition process.
- Ban on Import of Certain Items → With a view to promote domestic and indigenous industry, the Ministry of Defence(MoD) will **notify a list of weapons/platforms banned for import**.



- Revised Offset Guidelines → The Offset guidelines have been revised wherein preference will be given to **manufacture of complete defence products over components** and **various multipliers** have been added to give incentivisation in discharge of Offsets.
- Note: Offsets are a **portion of a contracted price** with a foreign supplier that **must be re-invested** in the Indian defence sector, or against which the government can purchase technology.
- Rationalisation of Procedures for Trials and Testing → Scope of trials will be **restricted to physical evaluation** of core operational parameters.
- New Category of Buy (Global – Manufacture in India) → The new category incorporates '**manufacture of either the entire/part of the equipment or spares/ assemblies/Maintenance, Repair and Overhaul (MRO)**' facility for the equipment, through its subsidiary in India.
- Leasing → A new category introduced to **enable operating of assets** without owning thereby, substitute huge initial capital outlays.
- Make Category → Make category of capital acquisition is the cornerstone of the Make in India initiative:
  - '**Make-I**' refers to government-funded projects
  - '**Make-II**' covers industry-funded programmes.
  - '**Make-III**' covers military hardware that may not be designed and developed indigenously, but can be manufactured in the country for import substitution, and Indian firms may manufacture these in collaboration with foreign partners.
- Reservation in Categories for Indian Vendors → The categories of Buy(Indian-IDDM), Make I, Make II, Production Agency in Design & Development will be **exclusively reserved for Indian Vendors meeting the criteria** of Ownership and Control by resident Indian Citizens with FDI not more than 49%.

## 5. HANSA-NG

### Why in News?

Recently, HANSA-NG, a first of its kind, indigenously developed aircraft trainer has completed sea level trials.

### About

- It is a first of its kind, **indigenously developed aircraft trainer**.
- Developed by → **CSIR-National Aerospace Laboratories, Bangalore** under the aegis of Council of Scientific and Industrial Research.
- The HANSA-NG, or HANSA-New Generation, is **one of the most advanced flying trainers**.
  - HANSA-NG is an **upgraded version of HANSA**, which saw the first flight in **1993**, and was certified in 2000.
  - The Centre **approved HANSA-NG in 2018** and NAL retro-modified HANSA-3 aircraft with a glass cockpit and got it certified by DGCA (Directorate General of Civil Aviation). The aircraft was demonstrated at Aero-India 2019.
- Features → The aircraft is powered by **Rotax Digital Control Engine with unique features** like Just-In-Time Prepreg (JIPREG) Composite lightweight Airframe, Glass Cockpit, Bubble Canopy with wide panoramic view, electrically operated flap among others.
- Significance → The aircraft is designed to **meet the Indian flying club needs**, and it is an ideal aircraft for Commercial Pilot Licensing(CPL) due to its **low cost and low fuel consumption**.

## 6. Central Industrial Security Force

### Why in News?

Union Home Minister Amit Shah pitched for a “hybrid” security model where the CISF could train and certify private security agencies so that they can take over the task of efficiently guarding various kinds of industrial and manufacturing units in the country.

### About

- CISF is **one of the Central Armed Police Forces** in India.
- It was set up **under an Act of the Parliament** of India in **1969**. CISF was subsequently made an armed force of India by another Act of Parliament passed in 1983.
- The CISF is governed by the **Union Ministry of Home Affairs**.
- Its headquarters are at **New Delhi**.
- Mandate →
  - It which works to **provide security cover** to **over 300 industrial units, government infrastructure projects** and facilities and establishments located all over India.
  - Among its duties are **guarding sensitive governmental buildings**, the Delhi Metro, and providing airport security.
  - CISF also provides **consultancy services to private industries** as well as **other organisations** within the Indian government. The scope of CISF's consulting practice includes security consulting and fire protection consulting.
  - It also plays a **major role in Disaster Management**. The CISF has a 'Fire Wing' which helps during fire accidents in Industries where the CISF is on guard.

## 7. Ex Vayu Shakti 2022

### Why in News?

The Indian Air Force (IAF) has decided to postpone its firepower demonstration, Ex Vayu Shakti, scheduled in the Pokhran ranges in Rajasthan.

### About

- It is conducted **once in three years** which is participated by fighters, helicopters, force enablers and support systems.
- The aim of the exercise is to **detect and identify targets and neutralise them** in day, dusk and night capability demonstrations.
- The **Indian Air Force** showcases **repower capability** of indigenously developed aircrafts and its missile arsenal in this exercise.
- **Fighter aircraft** including Jaguar, Rafale, Sukhoi-30, MIG-29, light combat aircraft Tejas, MIG-21 Bison, Hawk 32, M200 participates in the exercise.

## 8. SLINEX

### Why in News?

The Ninth Edition of India - Sri Lanka Bilateral Maritime Exercise SLINEX (Sri Lanka–India Naval Exercise) is scheduled at Visakhapatnam from 07 Mar to 10 Mar 2022.

### About

- The exercise is being conducted **in two phases**; the **Harbour Phase** at Visakhapatnam on 07-08 Mar 22 followed by the **Sea Phase** on 09-10 Mar 22 in the Bay of Bengal.
- **Sri Lanka Navy** will be represented by **SLNS Sayurata**, an advanced offshore patrol vessel and the **Indian Navy** by **INS Kirch**, a guided missile corvette.
- The previous edition of SLINEX was conducted off **Trincomalee in October 2020**.
- SLINEX aims to **enhance inter-operability**, **improve mutual understanding** and **exchange best practices** and procedures for multi-faceted maritime operations between both navies.
- SLINEX is in consonance with India's policy of '**Neighbourhood First**' and PM Modis vision of 'Security and Growth for All in the Region (**SAGAR**)'.

## 9. Colombo Security Conclave

## Why in News?

Recently, the 5th Edition of Colombo Security Conclave(CSC) has started in Maldives.

### About

- India, Maldives, and Sri Lanka began a National Security Advisor (NSA)-level trilateral meeting on maritime security cooperation in 2011.
- Following a halt from 2014-2019, the trilateral meeting was resumed in 2020, when the decision was taken to establish the Colombo Security Conclave(CSC).
- Aim of the Conclave → To forge closer cooperation on maritime and security matters among the three Indian Ocean countries.
- Pillars → There are four pillars of security cooperation including marine security, human trafficking, counter-terrorism and cyber security.
- Secretariat → Colombo, Sri Lanka.

### 📌 Fifth conclave

- The conclave was attended by National Security Advisors and representatives from India, Sri Lanka, Maldives, Mauritius, Bangladesh and Seychelles.
- Note: Bangladesh and Seychelles attended as observers at this conclave meeting.
- Key takeaways →
  - Mauritius was included as a new member of the conclave.
  - The pillar of cooperation of the conclave has been expanded to include Humanitarian Assistance and Disaster Relief as the fifth pillar.

## 10. Biological and Toxin Weapons Convention

### Why in News?

India has emphasized on following the Biological and Toxin Weapons Convention (BTWC) at the UNSC meeting on Ukraine.

### About

- The Biological Weapons Convention (BWC) was negotiated by the Conference of the Committee on Disarmament in Geneva, Switzerland. It opened for signature in 1972 and entered into force in 1975.
- Purpose → The convention effectively prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons.
- If a state possesses any agent, toxin, or delivery system for them, they have nine months from entry into force of the treaty to destroy their stockpiles or divert them for peaceful use.
- Membership →
  - 183 States Parties and 4 Signatory States.
  - India is also a party to the convention.
  - Ten states have neither signed nor ratified the BTWC: Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan, and Tuvalu.
- Significance → It is the first multilateral disarmament treaty banning an entire category of weapons of mass destruction (WMD).
- Drawbacks of the Convention → There is no implementation body of the BTWC, allowing for blatant violations as seen in the past. There is a review conference every five years to review the convention's implementation and establish confidence-building measures.

## 11. White Phosphorus

### Why in News?

Ukrainian police has accused Russian forces of launching phosphorus bomb attacks (chemical weapon) in the Lugansk and Donetsk regions of eastern Ukraine, collectively known as the Donbas.

### About

- It is a colourless, white or yellow, waxy solid.
- It does not occur naturally. It is manufactured using phosphate rocks.
- It is a highly combustible substance that reacts with oxygen in the air.
- It can catch fire at temperatures as low as 10 to 15 degrees above room temperature.
- Due to its combustible nature, every country has strict regulations regarding its manufacturing and handling.
- Applications → It is used mainly in the military, and other applications may include as a component in fertilisers, food additives and cleaning compounds. Initially, it was also used in pesticides and fireworks, but many countries have banned its use in several sectors.

### Is White Phosphorus an incendiary or chemical weapon?

- WP has not been categorised as an incendiary or chemical weapon by international agencies.
- The Organisation for the Prohibition of Chemical Weapons, which is an intergovernmental organisation and the implementing body for the Chemical Weapons Convention, has not listed WP in any of the three Schedules of Chemical Weapons.
- However, the United Nations considers it as an incendiary chemical.
- The general regulations of Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons may apply when it is used in military actions.

### Chemical Weapons Convention

- Chemical Weapons Convention (CWC) is a multilateral treaty banning chemical weapons and requiring their destruction within the stipulated time.
- It became effective from April 1997.
- It makes it mandatory to destroy old and abandoned chemical weapons.
- Members should also declare the riot-control agents (sometimes referred to as 'tear gas') in possession of them.
- India signed the treaty in January 1993. The Chemical Weapons Convention Act, 2000 was passed to implement the CWC.
- Convention Prohibits →
  - The development, production, acquisition, stockpiling, or retention of chemical weapons.
  - Transferring of chemical weapons.
  - Using chemical weapons.
  - Assisting other States to indulge in activities that are prohibited by the CWC.
  - Using riot-control devices as 'warfare methods'.

## 12. Man-Portable Air-Defence Systems (MANPADS)

### Why in News?

The United States and NATO allies are shipping weapons into Ukraine at break-neck speed, including highly sensitive items such as Man-Portable Air-Defense Systems (MANPADS).

### About

- Man-Portable Air-Defence Systems (MANPADS) are short-range, lightweight and portable surface-to-air missiles used to destroy aircraft or helicopters.

- [Man-Portable Anti-Tank Systems (MANPATs) work in a similar manner but are used to destroy or incapacitate military tanks.]
- MANPADS are often described as shoulder-fired anti-aircraft missiles.
- They can be shoulder-fired by individuals or small groups, or can be launched from atop a ground-vehicle, or fired from a tripod or stand, and from a helicopter or boat.
- They help shield troops from aerial attacks and are most effective in targeting low-flying aircrafts.
- Features → Weighing between 10 to 20 kg and not being longer than 1.8 m, MANPADS have a maximum range of 8 kilometres and can engage targets at altitudes of 4.5 km.
  - Most MANPADS have passive or 'fire and forget' guidance systems, meaning the operator is not required to guide the missile to its target, enabling them to run and relocate immediately after firing.
  - The missile stays locked-on to the targeted object, not requiring active guidance from the soldier.
  - The missiles are fitted with Infrared (IR) seekers that identify and target the airborne vehicle through heat radiation being emitted by the latter.

#### 🔗 Common variants of MANPADs

- The most common make of MANPADs is the U.S.-made Stinger missiles.
- Stinger's Russian or Soviet-made counterparts are the Igla MANPADS, which also employ infrared technology.
- Sweden makes the RBS-70 MANPADS series while China's version, FN-6, is akin to the Stinger.

### 13. Kamikaze drones

#### Why in News?

US President announced \$800 million in new military aid for Ukraine, including 800 additional Stinger anti-aircraft missiles, 9,000 antitank weapons, 100 tactical drones including Kamikaze or suicide drones.

#### About

- Also called Switchblade drones, these are small unmanned aircraft that are packed with explosives that can be flown directly at a tank or a group of troops.
- The Switchblade drones have cameras that show a target seconds before impact.
- The drones are difficult to detect on radar, and they can even be programmed to hit targets without human intervention, based on facial recognition.
- Technical specifications: Weighing just five-and-a-half pounds, Switchblade can be taken into battle in a backpack and fly up to 7 miles to hit a target. They are called Switchblade because their bladelike wings spring out on launch.

### 14. Kinzhal hypersonic missile

#### Why in News?

Russia said that it had unleashed hypersonic missiles against an arms depot in Ukraine, the first use of the next-generation weapons in combat.

#### About

- Russia's new Kinzhal (Dagger) hypersonic missile is a nuclear-capable air-launched ballistic missile that flies at 10 times the speed of sound and can overcome air-defence systems. Kinzhal means 'dagger'.
- The missile has a range of approximately 1,500-2,000km and can carry a nuclear payload or conventional payload of 480 kg.

#### 🔗 Hypersonic weapons

- They are normally defined as fast, low-flying, and highly manoeuvrable weapons designed to be too quick and agile for traditional missile defence systems to detect in time.

- Unlike ballistic missiles, hypersonic weapons don't follow a predetermined, arched trajectory and can manoeuvre on the way to their destination.
- The term “hypersonic” describes any speed faster than five times that of sound, which is roughly 760 miles (1,220 kilometers) per hour at sea level, meaning these weapons can travel at least 3,800 miles per hour.
- At hypersonic speeds, the air molecules around the flight vehicle start to change, breaking apart or gaining a charge in a process called ionization. This subjects the hypersonic vehicle to “tremendous” stresses as it pushes through the atmosphere.
- There are two main types of these weapons — glide vehicles and cruise missiles.
- Analysts say Russia is leading the hypersonics race, followed by China and the U.S.



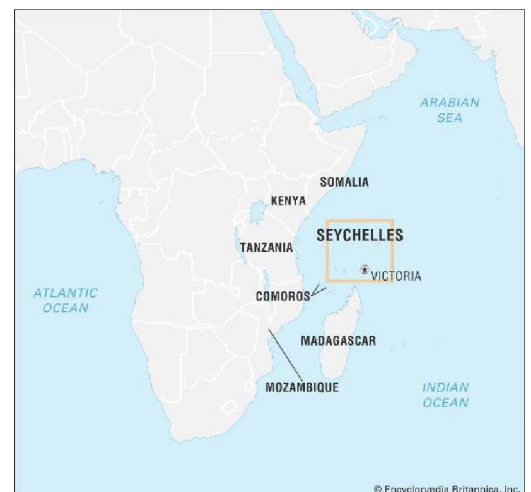
## 15. Exercise LAMITIYE-2022

### Why in News?

The 9th Joint Military Exercise LAMITIYE-2022 between the Indian Army and Seychelles Defence Forces (SDF) is being conducted at Seychelles Defence Academy (SDA), Seychelles from 22 March to 31 March 22.

### About

- It is a biennial training event which is being conducted in Seychelles since 2001.
- The 10 days long joint exercise will include field training exercises, combat discussions, lectures, demonstrations and culminate with a two days validation exercise.
- Exercise LAMITIYE with Seychelles is significant in terms of growing security concerns in the Indian Ocean Region.
- Seychelles → Seychelles is an archipelagic island country consisting of 115 islands in the Indian Ocean at the eastern edge of the Somali Sea.



## 16. INS Shivaji

### Why in News?

Ministry of Skill Development and Entrepreneurship (MSDE) has recognised INS Shivaji as the Centre of Excellence (CoE) in the field of Marine Engineering.

### About

- It is an Indian Naval Station in Lonavala, Maharashtra.
- It houses the Naval College of Engineering, which educates and trains Indian Navy and Coast Guard officials.
- It has three premier training entities, namely Centre of Marine Engineering and Technology (CMET), Centre of Excellence in Marine Engineering and School of Basic Sciences.
- The Nuclear Biological Chemical Defence School, which trains naval personnel on all aspects of NBCD, is also located in the station.
- The naval Station was commissioned as HMIS (His Majesty's Indian Ship) Shivaji in February, 1945.



- INS Shivaji's Centre of Excellence (Marine Engineering) was **established in 2014 with a broad mandate** that included the induction of niche technologies for naval applications, quality research in collaboration with R&D (Research and Development) and academic institutes of high reputation.
- The larger goal here is to **improve the skills** of the personnel across the Indian Navy, Friendly Foreign Navies, and the entire ecosystem.

## 17. DUSTLIK Exercise

### Why in News?

Recently, The 3rd edition of joint training exercise between Indian and Uzbekistan armies, EX-DUSTLIK is being conducted at Yangiariq, Uzbekistan from 22nd to 31st March 2022.

### About

- The exercise would focus on **Counter Terrorism operations** in semi-urban terrain under a United Nations Mandate.
- The **Grenadier's battalion** is nominated for the exercise. The battalion is one of the **highly decorated battalions** of the Indian Army.
- The training schedule will focus primarily on **sharing tactical level drills** and **learning of best practices** from each other.
- It aims at **enhancing understanding, cooperation** and **interoperability** between two armies.
- The last edition of DUSTLIK was conducted in **Ranikhet (Uttarakhand) in March 2021**.

### 🔗 Other Exercises between India and Central Asian Countries:

- Exercise KAZIND → It is an annual military exercise **between India and Kazakhstan army**.
- Exercise KHANJAR → It is a joint military training exercise **between India and Kyrgyzstan**.

## 18. Demand for the Ahir Regiment

### Why in News?

The demand for a full-fledged Infantry Regiment named after Ahir has found support from politicians seeking leverage with them.

### About

- Ahirs community was brought into national limelight after the story of the **bravery of the Ahir troops of Haryana** in the **Battle of Rezang La in 1962** (India-China war) was widely known.
- Most of the soldiers of C Company of the 13th Battalion of the Kumaon Regiment perished fighting the Chinese onslaught, but **broke the enemy's advance to Chushul**.
- Ahirwal region includes the southern Haryana districts of **Rewari, Mahendragarh, and Gurgaon**.
- This region is associated with **Rao Tula Ram, the Ahir hero of the 1857 revolt**, and has traditionally contributed soldiers to the Indian Army in large numbers.
- History of Ahirs in the Indian Army - Ahirs are recruited in the Indian Army in various regiments and corps including
  - **Fixed class regiments** (one or more castes in fixed numbers) like Kumaon, Jat, Rajput,
  - **Mixed class regiments** (of all castes) like the Brigade of the Guards or The Parachute Regiment in the Infantry and other regiments,
  - **In Corps** like Artillery, Engineers, Signals, and Army Service Corps.
- Ahirs were initially recruited in sizable numbers in the **Indian Army's 19 Hyderabad Regiment**, which was the predecessor of Kumaon Regiment.
- In **1930**, the class composition was changed to one company each of **Kumaonis, Jats, Ahirs, and Mixed Class**.
- In 1945, the name of the Regiment was **changed to 19 Kumaon**. Following Independence, it was named the **Kumaon Regiment**.



- The 13th Battalion of the Kumaon Regiment, which **gained fame in Rezang La**, was the first battalion to be raised after Independence.
- It was raised in 1948 with Kumaonis and Ahirs in **equal proportions**.
- In **1960**, after the transfer of Ahirs from 2 Kumaon and 6 Kumaon, 13 Kumaon became the **first pure Ahir battalion** in the Kumaon Regiment.

## 19. INS Valsura

### Why in News?

President Ram Nath Kovind presented the President's Colour to INS Valsura, the Navy's premier technological training establishment.

### About

- The President's Colour is bestowed on a military unit in recognition of the **exceptional service rendered to the nation**, both in peace and in war.
- INS Valsura, is a premier technological training institution, of the Indian Navy based in **Jamnagar, Gujarat**.
- INS Valsura **trains officers and men on operation and maintenance of sophisticated** and technologically advanced equipment on board warships.
- The Navy was the **first Indian armed force** to be awarded the President's Colour by **Dr Rajendra Prasad on May 27, 1951**. INS Valsura, started on 30 acres of land as a torpedo school in 1942 under the British, has today grown into one of the foremost technological training institutions of the country spread over 600 acres.
- In **2018** a **medium voltage laboratory** was set up **by Siemens, Germany**, at INS Valsura to familiarise and train naval engineers in the nuances of medium voltage power generation, protection and distribution.

## 20. Central Equipment Identity Register

### Why in News?

The Central Equipment Identity Register (CEIR) project has been launched in Delhi, Mumbai and Maharashtra licensed service areas (LSAs) in a phased manner.

### About

- The Central Equipment Identity Registry (CEIR) tries to **connect the 15-digit** International Mobile Equipment Identity (IMEI) **database of all the mobile Operators**.
- [From your mobile, you can check the IMEI number by dialling **\*#06#**.]
- CEIR acts as a **central system for all network Operators** to share black listed mobile devices so even if the Subscriber Identity Module (SIM) card in the device is changed these devices won't work in any network.
- The Department of Telecommunications intends to implement the CEIR with the aim to →
  - Curtail the counterfeit mobile phone market,
  - Discourage mobile phone theft,
  - Protect consumer interest and
  - Facilitate law enforcement authorities for lawful interception.
- Functions → The CEIR project facilitates the **blocking and tracing of lost and stolen mobile phones** using the IMEI.
  - The traceability data for the IMEIs will be made **available to police of the respective LSA** to facilitate recovery of handsets.
  - People can request the CEIR system for **blocking the IMEI number**.
- Accessibility → CEIR is a **multi-stakeholder system** where respective stakeholders have a limited access as per their defined roles and responsibilities.
  - [Stakeholders include the Department of Telecommunications, Telecom Service Providers, Police, Mobile phone manufacturers and mobile phone subscribers.]

- Currently, this accessibility includes →
  - Information to the subscriber about the **make & model corresponding to IMEI of his/her mobile handset**,
  - Information to **mobile phone manufacturers** about genuineness of IMEI during import of consignment of mobile phones etc.

## 21. MRSAM Missiles

### Why in News?

Recently, the Defence Research and Development Organisation (DRDO) conducted two successful flight tests of the Army version of Medium Range Surface to Air Missile (MRSAM) at the Integrated Test Range, Chandipur, off the coast of Odisha.

### About

- What is it? → It is a **surface-to-air missile** developed to use for the Indian Army.
- Developed by → **DRDO** and **Israel Aerospace Industries (IAI)**
- Purpose → The missile provides **air defence against aerial threats** like fighter aircraft, UAVs, guided and unguided munitions & cruise missiles.
- Key features →
  - The MRSAM weapon system comprises **multi-function radar**, **mobile launcher system** and **other vehicles**. It has Army, Navy and Air Force variants.
  - The missile's management system **uses the radar** to track and correctly identify the target, calculates the distance from it and gives all the information to the Commander for a decision to be made on the interception.
  - Length and Weight: The missile is **4.5 metres in length** with a **weight of around 275 kg**. It is equipped with fins and canards to stabilize and provide manoeuvrability.
  - Speed and Range: The missile can move at a **maximum speed of Mach 2** (twice the speed of sound). It can engage **multiple targets** up to a range of 70 km.

## 22. Criminal Procedure (Identification) Bill, 2022

### Why in News?

The Criminal Procedure (Identification) Bill, 2022, that would allow the police and prison authorities to collect, store and analyse physical and biological samples, including retina and iris scans, was introduced in the Lok Sabha.

### About

- It seeks to **repeal** the Identification of Prisoners Act 1920. The said Act, in its present form, provides access to a **limited category of persons** whose body measurements can be taken.
- It **authorises law enforcement agencies** to **collect, store** and **analyse physical** and **biological samples** of convicts and other persons for the purposes of identification and investigation in criminal matters.
- The Bill also authorises police to **record signatures, handwriting** or **other behavioural attributes** referred to in section 53 or section 53A of the Code of Criminal Procedure, 1973, for the purposes of analysis.
- As per the Bill, any person convicted, arrested or held under any preventive detention law will be required to provide **"measurements" to a police officer** or **a prison official**.
- Any state government of Union Territory administration may **notify an appropriate agency** to collect, preserve and share the measurements of a person of interest in their respective jurisdictions.
- Resistance to or refusal to allow the taking of measurements under this Act shall be **deemed to be an offence** under section 186 of the Indian Penal Code (IPC).
- The Bill seeks to →
  - Define "measurements" to include **finger impressions, palm-print** and **foot-print impressions, photographs, iris and retina scan**, physical, biological samples and their analysis, etc.

- **Empower the National Crime Records Bureau (NCRB)** to collect, store and preserve the record of measurements and for sharing, dissemination, destruction and disposal of records.
- **Empower a Magistrate** to direct any person to give measurements; a Magistrate can also direct law enforcement officials to collect fingerprints, footprint impressions and photographs in the case of a specified category of convicted and non-convicted persons.
- **Empower police or prison officers** to take measurements of any person who resists or refuses to give measurements.

## 23. Articulated All Terrain Vehicles

### Why in News?

The Indian Army has issued a Request For Information(RFI) for the supply of Articulated All-Terrain Vehicles to be deployed in Ladakh and Kutch.

### About

- What is it? → It is a **twin cabin, tracked, amphibious carrier** for off road mobility.
- The special design of this equipment **exerts low ground pressure on the soil and a pull-push mode of locomotion** between two cabins facilitates mobility over varied terrains like snow, desert and slush.
- A **ballistic protection** in the cabin body ensures protection to troops travelling in it from small arms fire.
- They can reach where **wheeled vehicles cannot** due to deep snow, slush or marshy terrain and can be very effective for patrolling and rapid deployment in operational situations.
- Where can these vehicles be used?
  - These vehicles are very **useful to move troops** or **supplies in snow-bound terrains** and in **marshy/sandy environments**.
  - The Indian Army wishes to use these vehicles in the **snow-bound areas of Ladakh** and in the **marshy terrain of the Rann of Kutch**.

## 24. DRDO's Corner-Shot Weapon System

### Why in News?

A corner-shot weapon system (CSWS), designed and developed by the Defence Research and Development Organisation (DRDO), is at an advanced stage of being inducted by the Central Reserve Police Force (CRPF) and the Jammu and Kashmir police.

### About

- The CSWS is a **special purpose weapon** designed by the Armament Research and Development Establishment (ARDE), Pune.
- It can **engage targets located around the corners** as the system bends and captures video feed thus saving soldiers from any surprise counter-attack and is best suited for urban, close quarter situations.
- It is equipped with **weapon, camera, laser, infrared illuminator** and **torch in front portion**, while display, electronics, battery and swivelling mechanism are located at rear portion.
- The body is made from **high-grade aluminium alloy** to make it lighter and durable.
- Key features →
  - **Day-night firing capability, colour display, digital zoom, zeroing facility, hot keys, high power battery** along with status display and compliance with JSS 5855 makes it a very potent system for security forces.
  - It is very **helpful in Counter Insurgency and Counter Terror** (CI/CT) operations.

## 25. Condors

### Why in News?

Indian Navy formally commissioned its second squadron of P-8I long-range maritime patrol aircraft, 'Condors', at INS Hansa in Goa.

#### About

- The squadron has been named '**Condors**', one of the **largest flying land birds** with a massive wingspan.
- 'Condors' are known for **excellent sensory capabilities**, **powerful** and **sharp talons** and large massive wings symbolising the capabilities of the aircraft and envisaged roles of the squadron.
- The '**Game Changer**' aircraft is a potent platform for **maritime surveillance and strike**, **electronic warfare missions**, **search and rescue**, providing targeting data to weapon platforms, time-critical surveillance information to the Army and the Air Force.
- The Indian Naval Air Squadron (**INAS**) **316**, will **operate four P-8I aircraft** procured as part of the optional clause in 2016 in a deal worth over \$1 bn, deliveries of which were completed recently by Boeing.
- The Defence Ministry has already **approved a proposal** for procurement of **six more P-8Is** but that is now under review as part of an overall review of all imports.

## 26. National Maritime Security Coordinator

#### Why in News?

Government has given approval for the appointment of the Country's first National Maritime Security Coordinator (NMSC).

#### About

- Proposed **after the 26/11 terror attacks (2008)**, the National Maritime Security Coordinator (NMSC) will be **part of the National Security Council Secretariat** and will report to National Security Advisor (NSA).
  - NMSC has been a **long pending requirement** since the Kargil Group of Ministers (GoM) recommended it.
- Role
  - **Principal advisor** to the government on maritime security domain.
  - To **coordinate** among the Indian Navy, the Coast Guard, security agencies involved in coastal and maritime security and 13 coastal states and UTs.
    - At present, all these agencies tend to work in **silos with overlapping jurisdictions** and are constantly at odds with each other.

#### Other measures for maritime security

- **SAGAR**- Security and Growth for All in the Region is the theme of Indian Ocean Policy as outlined by PM.
- **Signing of White Shipping Agreements**, and agreements on Humanitarian Assistance and Disaster Relief (HADR).
- Setting up of **Coastal Surveillance Radar Systems** and **medical supplies** through Operation-Sagar-I and Sagar II during covid times.
- **Net Security provider** - deployment of ships by Indian Navy and Coast guard for maritime security and anti-piracy operations.

## 27. Weaponization of Space

#### Why in News?

IAF chief cautioned about the newer threats in the race to weaponize the space domain, a domain which was hitherto considered relatively safe.

#### About

- It includes **placing weapons in outer space or on heavenly bodies** as well as creating weapons that will transit outer space or simply travel from Earth to attack or destroy targets in space.

- Examples include the placing of orbital or suborbital satellites with the intention of attacking enemy satellites, using ground-based direct ascent missiles to attack space assets, jamming signals sent from enemy satellites, satellite attacks on Earth targets etc.
- The **weaponization of space is different from the militarization of space**, which includes using space-based assets for C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance).
  - The militarization of space assists armies on the conventional battlefield, whereas via the weaponization of space, outer space itself emerges as the battleground, sometimes referred to as the **“fourth frontier of war.”**
- Development projects for militarisation and weaponisation of outer space have been on the increase with the **aim of one country achieving military dominance over the other in outer space.**

### India in the race of space power

- Institutional progress →
  - As a first step, the Department of Atomic Energy formed **the Indian National Committee for Space Research (INCOSPAR)** under the leadership of Dr Sarabhai and Dr Ramanathan in 1962. Later, the Indian Space Research Organisation (ISRO) was formed on August 15, 1969.
  - India established a **Defence Space Agency (DSA)** in 2019, which is expected to be the forerunner for a full-fledged aerospace command.
  - It is also establishing a **Defence Space Research Organisation (DSRO)**, which is meant to undertake research and development on the capability mix that is required as per the strategy and policy developed by the DSA.
- **Anti-satellite (ASAT) missile test (Mission Shakti)**: India is now the fourth country in the world to conduct an ASAT missile test, after the United States, Russia, and China.
  - The test entailed launching a ballistic missile into outer space to destroy an Indian satellite located about 300 kilometres above the earth’s surface in low earth orbit (LEO).

### United States’ programme for developing space weapons

- Some of its declared projects for space Weaponisation include:
  - **Space-Based Lasers (SBLs)**: These would operate in LEO and destroy hostile ballistic missiles during their boost phase.
  - **Space-Based Missile Interceptors.**
  - **Anti-Satellite (ASAT) Weapons**: It includes high powered lasers, micro-satellites, Kinetic-Energy Anti-Satellites (KE-ASAT) weapon, Near Field IR Experiment (NFIRE), etc.

### Global Framework to prevent Weaponization of Space

- **Outer Space Treaty**: It was conceptualized by the United Nations in 1967.
  - It emphasizes the fact that the exploration of outer space should be beneficial to all mankind and nations and it should be for peaceful purposes.
  - It claims that one nation cannot claim national sovereignty in outer space.
- **Prevention of an Outer Space Arms Race**: It re-emphasized the importance of using space for peaceful purposes, the importance of avoiding an arms race and the readiness of all states to contribute to that common objective, in conformity with the provisions of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

# History and Culture

## 1. Vinayak Damodar Savarkar

### Why in News?

Gujarat Forest Department is reintroducing the Indian grey hornbill(IGH) in Gir Forest after almost ninety years when they vanished from this largest contiguous forest tract in western India.

### About

- He was born in a Hindu Marathi family in Nashik, Maharashtra on **May 28, 1883**.
- He was nicknamed '**Veer**' for his courage from an early age.
- He, popularly known as **Swatantryaveer Savarkar**,
- Formed a youth organization- **Mitra Mela**. This organization was put into place to bring in national and revolutionary ideas.
- He was **against foreign goods** and propagated the idea of Swadeshi.
- He championed **atheism and rationality** and also **disapproved orthodox Hindu belief**. In fact, he even dismissed cow worship as superstitious.
- He also Worked on **abolishment of untouchability** in Ratnagiri. Dr Babasaheb Ambedkar also compared his work to Lord Buddha.
- Organizations/institutions he was associated with →
  - He was a **president of Hindu Mahasabha** from 1937 to 1943.
  - When congress ministries offered resignation on 22nd oct 1939, Hindu mahaasabha under his leadership cooperated with Muslim league to form government in provinces like Sindh, Bengal and NWFP.
  - In Pune, Savarkar founded the "**Abhinav Bharat Society**".
  - He joined **Tilak's Swaraj Party**.
  - He founded the **Free India Society**. The Society celebrated important dates on the Indian calendar including festivals, freedom movement landmarks, and was dedicated to furthering discussion about Indian freedom.
- Important works →
  - Book- **The History of the War of Indian Independence**.
  - An armed revolt against the Morley-Minto reform.
  - Two-nation theory in his book '**Hindutva**'.

## 2. Konark Sun Temple

### Why in News?

The Ministry of New and Renewable Energy (MNRE) has taken up the complete solarisation of Konark Sun Temple and Konark town in Odisha.

### About

- The scheme plans to set up the **10-MW grid-connected solar project** and **various solar off-grid applications** such as solar trees, solar drinking water kiosks, and off-grid solar power plants with battery storage,
- It is not just the temple; even the **Konark town will be covered** as part of the scheme.
- The implementation of this project will be done by the **Odisha Renewable Energy Development Agency (OREDA)**
- Also, **100% central financial assistance** of around 25 crores from the Government of India through the MNRE.

### 📌 Konark Sun Temple:

- The temple is a **World Heritage Site** is situated in the eastern **state of Odisha** and is a massive temple dedicated to the **Sun God temple**.
- The alignment of the Sun Temple is in the **east-west direction**.





- The people of these districts consider Theyyam itself as a **channel to a god** and they thus **seek blessings from Theyyam**.
- There are about **456 types of Theyyam**.
- Theyyam is **performed by males**, except the Devakoothu theyyam; the Devakoothu is the only Theyyam ritual performed by women.
- It is performed only in the **Thekkumbad Kulom temple**.
- Major types of performances →
  - Vishnumoorthi → It is the **most popular Vaishnava Theyyam**. This theyyam narrates and performs the story of Hiranyakashipu's death by the Lord Vishnu in his avatar of Narasimham.
  - Sree Muthappan Theyyam → It consists of **two divine figures** is considered as the personification of two divine figures— **the Thiruvappana or Valiya Muttapan** (Vishnu) and **the Vellatom or Cheriya Muttapan** (Shiva).
  - Padikutti Amma → It is believed to be the **mother of Muthapan**. The Padikutti Amma Theyyam is performed in the **Palaprath Temple in Kodallur** near Parassini Kadavu in the Meenam (a Malayalam month)

## 5. Swadesh Darshan Awards

### Why in News?

The Ministry of Tourism constituted the Swadesh Darshan awards in various categories.

### About

- Constituted by → **Ministry of Tourism**.
- Aim → To **highlight best practices** undertaken by the State Governments, Union Territories and various implementation agencies in planning, design and operations, efficient project monitoring, attracting private investments, operations and maintenance.
- Categories → The award will be given under the following categories as: **Best Tourist Interpretation Center**, **Best Log Hut Facility**, **Best MICE Facility**, **Best Cafeteria**, **Best Craft Haat**, **Best Sound and Light Show** and **Best Waterfront Development** (Beach/ River/ Lake).

### 🔑 Swadesh Darshan Scheme

- It is a **Central Sector Scheme** launched by Ministry of Tourism in **2014-15**.
- Aim → To develop **theme-based tourist circuits** on the principles of high tourist value, competitiveness and sustainability in an integrated manner.
- Under the scheme, **15 themes have been identified**. These themes include Buddhist Circuit, Coastal Circuit, Desert Circuit, Eco Circuit, Heritage Circuit, Himalayan Circuit, Krishna Circuit, North-East Circuit, Ramayana Circuit, Rural Circuit, Spiritual Circuit, Sufi Circuit, Tirthankar Circuit, Tribal Circuit and Wildlife Circuit.
- The Ministry of Tourism provides **Central Financial Assistance** – CFA to State Governments, Union Territory Administrations for the infrastructure development of these theme based circuits.

## 6. Savitribai and Jyotirao Phule

### Why in News?

Governor Bhagat Singh Koshyari has recently received flak for his remarks on the child marriage of the social reformist couple Jyotirao and Savitribai Phule.

### About Jyotirao Phule

- Born in **1827** in Satara district of Maharashtra.
- Phule was **given the title of Mahatma** on May 11, 1888, by Vithalrao Krishnaji Vandekar, a Maharashtrian social activist.

- His work is related mainly to eradication of untouchability and caste system, emancipation and empowerment of women, reform of Hindu family life.
- In 1873, Phule founded the Satyashodhak Samaj, or the Society of Seekers of Truth, for the rights of depressed classes, to denounce the caste system and to spread rational thinking.
- His famous works → Tritiya Ratna (1855), Gulamgiri (1873), Shetkarayacha Aasud, or Cultivator's Whipcord (1881), Satyashodhak Samajokt Mangalashtakasah Sarva Puja-vidhi (1887).

### Savitribhai Phule

- Born in Naigaon in Maharashtra on January 3, 1831.
- Phule is widely regarded as one of India's first generation modern feminists for her significant contributions in ensuring equal education opportunities under the British raj.
- She became the first female teacher in India in 1848 and opened a school for girls along with her husband, social reformer Jyotirao Phule.
- The two also worked against discrimination based on caste-based identity, something vehemently opposed by the orthodox sections of society in Pune.
- The couple set up 'Balyata Pratibandak Gruha', a childcare centre for the protection of pregnant widows and rape victims.
- Phule also played a pivotal role in directing the work of the Satyashodhak Samaj, formed by her husband with the objective to achieve equal rights for the marginalised lower castes.
- As an extension, they started, 'Satya Shodhaka Marriage' where the marrying couple has to take a pledge to promote education and equality.
- Savitribai opened a clinic in 1897 for victims of the bubonic plague that spread across Maharashtra just before the turn of the century.
- She also set up "Balhatya Pratibandhak Griha".
- She organised a boycott by barbers against the tradition of head tonsuring of widows.
- In her honour, University of Pune was renamed Savitribai Phule University in 2015.

## 7. The fort of Halebidu

### Why in News?

The historic fortification which stood for centuries at Halebidu was demolished recently to lay a road.

### About

- It was once the capital of Hoysalas in the state of Karnataka.
- The place has been recommended for the World Heritage Site Tag.
- The Hoysala rulers had built the fort using granite boulders in the 11th century.
- It served as a protective wall for the capital township, which included temples, including Hoysaleshwara, Shantinath Basadi among other historic structures and monuments.
- At present, the Hoysaleshwara temple is not part of the Swachh Iconic Places (SIP).

## 8. Pal-Dadhvav massacre

### Why in News?

On Monday, March 7, the Gujarat government marked 100 years of the Pal-Dadhvav killings, calling it a massacre "bigger than the Jallianwala Bagh".

### About

- The Pal-Dadhvav massacre took place on March 7, 1922, in the Pal-Chitariya and Dadhvaav villages of Sabarkantha district, then part of Idar state.

- Villagers from Pal, Dadhvav, and Chitariya had gathered on the banks of river Heir as part of the 'Eki movement', led by one Motilal Tejawat.
- The movement was to protest against the land revenue tax (lagaan) imposed on the peasants by the British and feudal lords.
- British Paramilitary force was on hunt for Tehawat. It heard of this gathering and reached the spot.
- Nearly 200 bhils under the leadership of Tehawat lifted their bows and arrows. But, the Britishers opened fire on them. Nearly 1,000 tribals (Bhils) fell to bullets.
- Tejawat, however, escaped and later "returned to the spot to christen it 'Veerbhumi'."
- Legacy → A Gujarat government release on the centenary of the massacre described the incident as "more brutal than the Jalliwala Bagh massacre of 1919".

## 9. Jharokha

### Why in News?

Recently, the Ministry of Culture and Ministry of Textiles are organizing "Jharokha-Compendium of Indian handicraft/ handloom, art and culture".

### About

- Jharokha is a celebration of traditional Indian handicrafts, handlooms, and art & culture.
- It will be a pan India celebration that will be held at 16 locations in 13 states and UTs.
- The first event under this celebration is being organized in Bhopal, Madhya Pradesh.
- It will be organized at Rani Kamlapati Railway Station which is named after the brave and fearless Queen Kamlapati of the Gond kingdom of Madhya Pradesh.

## 10. Sahityotsav

### Why in News?

Sahityotsav, the Festival of Letters of Sahitya Akademi, India's most inclusive literature festival will be held from 10th to 15th March 2022 in New Delhi.

### About

- Sahityotsav is a Festival of Letters of Sahitya Akademi. It is India's most inclusive literature festival.
- The festival will be a part of the celebrations to commemorate the 75th anniversary of India's Independence.
- The prestigious Sahitya Akademi Awards will also be presented during the festival.

### 📖 Sahitya Akademi Award

- Sahitya Akademi award was established in 1954. It is a literary honour that is conferred annually by Sahitya Akademi, India's National Academy of letters.
- The Akademi gives 24 awards annually to literary works in the languages it has recognized, and an equal number of awards to literary translations from and into the languages of India.
- Note → Besides the 22 languages enumerated in the Constitution of India, the Sahitya Akademi has recognised English and Rajasthani as languages in which its programme may be implemented.
- Significance → The Sahitya Akademi award is the second-highest literary honour by the Government of India, after the Jnanpith award.

### 📖 Sahitya Akademi

- Sahitya Akademi, India's National Academy of Letters, was founded in 1954 by the Ministry of Culture.
- It is an organisation dedicated to the promotion of literature in the languages of India

- Though set up by the Government, the Akademi functions as an **autonomous organisation**. It was **registered as a society in 1956** under the Societies Registration Act, 1860.
- Location → **Rabindra Bhawan** near Mandi House in Delhi.

## 11. Nari Shakti Puraskar

### Why in News?

On International Women's Day on Tuesday, President Ram Nath Kovind conferred the Nari Shakti Puraskars on 29 outstanding individuals for 2020 and 2021.

### About

- Initiated in the **year 1999**, it is the **highest Civilian Honour for Women** in India.
- The awards are given away **by the President of India every year on 8 March**, International Women's Day.
- The Ministry of Women and Child Development announces these national level awards for **eminent women**, **organisations** and **institutions**.
- Eligibility Criteria →
  - Open to **individuals**, **groups** and **institutions** for outstanding work towards empowerment of women.
  - Individual applicant must be **at least 25 years of age**.
  - Institutions must have **at least 5 years of relevant experience**.
- The Nari Shakti Puraskar carries a **cash award of Rs.2 Lakh** and a **certificate** for individuals and institutions.

## 12. Santhali Sohrai murals

### Why in News?

Santhali communities of Odisha and Jharkhand are changing their ways of painting traditional Sohrai murals to modernity.

### About

- Sohrai painting is an **indigenous art form** practised by tribal women in the **Hazaribagh district of Jharkhand**.
- The paintings are **done on mud walls** to welcome the harvest and to celebrate the cattle. The **women clean their houses and decorate their walls** with murals of Sohrai arts.
- This art form has continued **since 10,000-4,000 BC**. It was prevalent mostly in caves, but **shifted to houses** with mud walls.
- Key Features of Sohrai Art Form →
  - The Sohrai art form can be **monochromatic** or **colourful**. The people coat the wall with a layer of **white mud**, and while the layer is **still wet**, they **draw with their fingertips** on it.
  - Their designs range from **flowers and fruits to various other nature-inspired designs**. The cow dung that was earlier used to cake the walls of the house is used to add colour.
  - The artists are **spontaneous** in their drawings. The designs are usually drawn from **the artist's memory**. The personal experience of the artist and their interaction with nature are the **biggest influence**.
- Note: Sohrai Khovar painting received the **Geographical Indication(GI) tag in 2020**.

### 👉 Sohrai

- Sohrai is a **five-day festival** of the **Santhal, Munda, Prajapati, Khurmi** and **Oraon tribes** in the Indian states of Jharkhand, Chhattisgarh, Odisha, and West Bengal.
- It is a **Harvest Festival** held at the start of the winter harvest season.
- It is also called **cattle festival**.
- It is celebrated **during Amavasya in Kartik** (October-November) month of the Hindu calendar.
- For **Santhals** - Sohrai is the **most important** festival of the Santhals.

- It is the Harvest Festival celebrated after the rice harvest in early January.

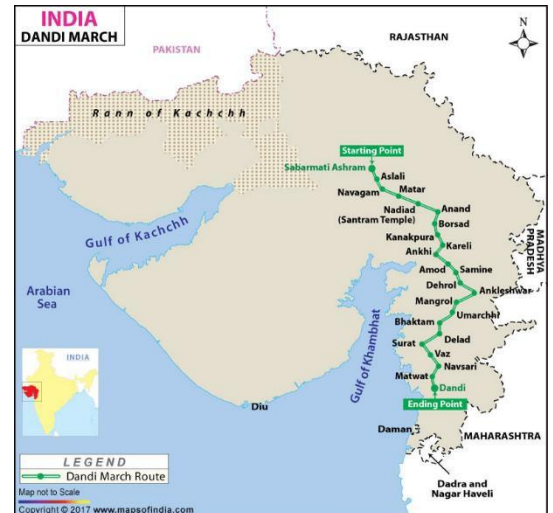
### 13. Dandi March

#### Why in News?

Prime Minister paid tributes to Mahatma Gandhi and all the eminent persons who Marched to Dandi (1930) in order to protest injustice and protect our nation's self-esteem.

#### About

- Mahatma Gandhi and 78 others** from his Sabarmati Ashram had embarked on the Dandi Yatra on March 12, 1930 to break the law which had imposed tax on salt.
- After walking for 21 days, they reached Dandi on April 5 and broke the law.
- After making salt at Dandi, Gandhi headed to Dharasana Salt Works, 40 km south, but was arrested on May 5.
- The Congress Party in the Lahore session of December 1929 passed the Purna Swaraj resolution. It was proclaimed on 26 January, 1930 and decided that civil disobedience was the way to achieve it.
- Mahatma Gandhi chose the path of non-violence to break the salt tax against the British government.



#### Why salt?

- Salt was a commodity used by all people of every community and the poor people were affected more by the salt tax.
- Until the passing of the 1882 Salt Act, Indians were making salt from seawater free of cost.
- But the Salt Act gave British monopoly over the production of salt and authority to impose a salt tax. Violation of the Salt Act was a criminal offence.
- With the Salt Satyagraha, Mahatma Gandhi tried to unite Hindu and Muslims because the cause was common.

#### Outcomes of Salt March or Salt Satyagraha:

- A lot of people came together including women, depressed class.
- The movement showed the power of non-violence in fighting against colonialism for the freedom struggle.
- In 1931, Mahatma Gandhi was released and met Lord Irwin who wanted to put an end to the civil disobedience movement.
- As a result, Gandhi-Irwin pact was signed, the civil disobedience movement ended and Indians were allowed to make salt for domestic use.

### 14. Ol Chiki script

#### Why in News?

For first time, the Indian Constitution has been translated in Santali, written in the Ol Chiki script.

#### About

- Also known as Ol Cemet', Ol script and Ol ciki Script, the Ol Chiki script is used for writing Santali.
- Pandit Raghunath Murmu** (Guru Gomke) is the inventor of Ol Chiki script.
- In the novel Bidu Chandan, he described how god Bidu, and goddess Chandan who appear on Earth as humans had naturally invented the Ol Chiki script to communicate with each other using written Santali.

- One of the interesting feature of the Ol Chiki script is that it makes use of signs and symbols long familiar to the Santals.

### Santali

- Santali is a language with its own special characteristics, and has a literature which dates back to the beginning of the 15th century.
- Santali belongs to the Munda group languages of the Austro-Asiatic family.
- According to the 2011 Census of India, Santali is spoken by over 70 lakh people across the country.
- In **2003**, the 92nd Constitutional Amendment Act added Santhali (along with the Bodo, Dogri and Maithili languages) to Schedule VIII (Official Languages of India) to the Constitution of India.
- This addition meant that the Indian government was obligated
  - To undertake the development of the Santali language and
  - To allow students appearing for school-level examinations and entrance examinations for public service jobs to use the language.
- In 2005, India's Sahitya Akademi started handing out awards every year for outstanding literary works in Santali, a move that helped preserve and give more visibility to the community's literature.

## 15. Navroz

### Why in News?

The Prime Minister of India has greeted the people on the occasion of Navroz or Nowruz (21 March 2022).

### About

- Navroz is the new year celebrations for Parsis (Zoroastrians) and Muslims (both Shia and Sunni).
- It is celebrated on 21st March every year.
- In **1079 AD**, a Persian (Iranian) king named Jalaluddin Malekshah introduced this festival to generate revenue and collect taxes from people.
- It was observed on **March 21** to mark the beginning of spring and the day of equinox.
- It is inscribed in the list of UNESCO Intangible Cultural Heritage of Humanity of India.
- In India it is known as Jamshed Navroz.

## 16. Biplobi Bharat Gallery

### Why in News?

Prime Minister Narendra Modi will inaugurate Biplobi Bharat Gallery at Victoria Memorial Hall, Kolkata today on the occasion of Shaheed Diwas (March 23).

### About

- The Gallery displays the contribution of the Revolutionaries in the freedom struggle and their armed resistance to British colonial rule.
- The purpose of this new gallery is to provide a holistic view of the events that led up to 1947 and highlight the important role played by the Revolutionaries.
- Biplobi Bharat Gallery depicts the political and intellectual backdrop that triggered the Revolutionary movement.
- It showcases the birth of the revolutionary movement, formation of significant associations by revolutionary leaders, spread of the movement, formation of Indian National Army, contribution of Naval Mutiny, among others.

## 17. Bappanadu Sri Durgaparameshwari Temple

### Why in News?

Denying reports that Muslim traders were sent away from having their stalls at the ongoing temple fair, Bappanadu Sri Durgaparameshwari Temple authorities said that traders have themselves left the place.

### About

- Sri Durga Parameshwari temple was built in the Bappanadu village of Mulki town at a distance of 22.5km away from **Mangalore, Karnataka**.
- This temple is situated on the **banks of Shambhavi River**.
- The Goddess here is in the **form of Linga** and is believed to have emerged in **conjunction of the rivers Nandini and Shambhavi** at the border of Mulki.
- History → The temple has been believed to be built by a **Muslim merchant from Kerala** called **Bappa Beary** with the help of Mulki Swantha (Jain ruler).
- Hence, the name of the village is called **Bappanadu** and the temple is famous as **Bappanadu Durga Parameshwari**.
- The date of inception of the temple is **unknown**. However, the temple architecture style resembles the **14th century**.
- Specialty → Uniquely, along with the **Hindu devotees**, the temple also has **Muslim devotees** who come here to seek blessings from the Goddess, who is also called '**Ulladi**'.
- Another specialty of the temple is the, **beating of drums** which is followed during the annual festival celebrations.

## 18. City of Literature

### Why in News?

Kozhikode was proposed by the Kerala Institute of Local Administration (KILA) to be branded as a 'City of Literature' with the help of UNESCO.

### About

- UNESCO's City of Literature programme is **part of the wider Creative Cities Network**.
- The Network was **launched in 2004**, and now has member cities in seven creative fields.
- The other creative fields are: **Crafts and Folk Art**, **Design**, **Film**, **Gastronomy**, **Media Arts**, and **Music**. A city designated as 'Creative City of Literature' must have a sufficient number of institutions taking care of its literary life.

### 👉 Indian Cities on UNESCO Creative Cities Network:

- **Srinagar** - Crafts and Folk Arts (2021)
- **Mumbai** – Film (2019).
- **Hyderabad** – Gastronomy (2019).
- **Chennai**- Creative city of Music (2017).
- **Jaipur**- Crafts and Folk Arts (2015).
- **Varanasi**- Creative city of Music (2015).

### 👉 UNESCO

- It is a **specialized agency** of the United Nations (UN). It seeks to build peace through international cooperation in Education, the Sciences and Culture.
- It was founded in **1945** and is located in **Paris, France**.
- Reports → **UNESCO Science Report**, **Global Education Monitoring Report**, **State of the Education Report for India**.

## 19. Mapilla rebellion of 1921

### Why in News?



The Indian Council for Historical Research (ICHR) has deferred its decision on a recommendation to remove the 1921 Malabar Rebellion martyrs, including Variamkunnaathu Kunhahamad Haji and Ali Musliyar, from the list of India's freedom fighters.

### About

- The Mapilla rebellion or Moplah Rebellion (Moplah Riots) of 1921 was the culmination of a **series of riots by Moplahs** (Muslims of Malabar) in the **19th and early 20th centuries** against the British and the Hindu landlords in Malabar (Northern Kerala).
- The year 2021 will mark the **100th year anniversary** of the uprising.
- Reasons and outcomes of the revolt →
- The resistance which started **against the British colonial rule** and the **feudal system** later ended in **communal violence between Hindus and Muslims**.
- **Gandhiji along with Shaukat Ali**, the leader of the Khilafat movement in India, **visited Calicut** in August 1920 to spread the combined message of non-cooperation and Khilafat among the residents of Malabar.
- In response to Gandhiji's call, a **Khilafat committee** was formed in Malabar and the Mappilas, under their religious head **Mahadum Tungal of Ponnani** who pledged support to the non-cooperation movement.
- Most of tenants' grievances were related to the **security of tenure, high rents, renewal fees** and **other unfair exactions** of the landlords.
- The British government responded with much aggression, **bringing in Gurkha regiments** to suppress it and imposing martial law.
- Wagon Tragedy → A noteworthy event of the British suppression was the **wagon tragedy** when approximately **60 Mappila prisoners** on their way to prison, **were suffocated to death** in a closed railway goods wagon.

## 20. Karakattam Dance

### Why in News?

Kerala Nattukala Kshema Sabha has demanded that Karakattam (known as Kumbakkali in certain parts) be recognised as agricultural art form of Kerala.

### About

- Karakattam is an **ancient folk dance of Tamil Nadu** performed in praise of the **rain goddess Mariamman**.
- It's performed in **different parts of Kerala** as well.
- It is performed at **festivals, roadshows** and **primarily at Mariamman festivals**.
- It involves **balancing a large number of pots** of decreasing size on the head of the dancers while dancing and expressing theme of the dance.
- **Mariamman pooja** is held in the month of Medam after Makarakkoythu (harvest season) in Kerala.

## 21. Panruti Cashews

### Why in News?

Cashew Processors and Exporters based in Tamil Nadu have sought GI tag for Panruti Cashews.

### About

- Known as the '**goldmine**' of **Cuddalore**, demand for Panruti Cashew is huge because of its **unique taste and quality**.
- A GI is a sign used on products that have a **specific geographical origin and possess qualities** or a reputation that are due to that origin.
- **Geographical Indications of Goods (Registration and Protection) Act, 1999** seeks to provide for the registration and better protection of GI relating to goods in India.

# Miscellaneous

## 1. Pickleball

### Why in News?

According to the U.S. Pickleball Association, the pickleball sport has grown 39.3% in the past two years in the country.

### About

- Pickleball is a paddle sport created in **1965 by Joel Pritchard, Bill Bell, and Barney McCallum**.
- Pickleball incorporates components of **tennis, table tennis, and badminton all into one**.
- It can be played **both indoors and outdoors**, with standard court size the same as a badminton court or a modified tennis court.
- The game is usually played as **singles or doubles using paddles and a plastic ball with holes**.
- Pickleball was introduced to **India by Sunil Valavalkar**.

## 2. ECGC Ltd

### Why in News?

ECGC Ltd. has now put Russia in the Restricted Cover Category (RCC-I) from the earlier 'open cover' category. 'Open cover' category enables policyholders to obtain cover on a more liberalised basis.

### About

- It was established in **1957** and based in **Mumbai**.
- The ECGC Ltd. (Export Credit Guarantee Corporation of India Ltd) is a **government owned export credit provider**.
- It provides **export credit insurance support** to Indian exporters.
- It is under the ownership of the **Ministry of Commerce and Industry**, Government of India.

## 3. Mriya

### Why in News?

Recently, The world's largest cargo aircraft, the Antonov An-225, has been "destroyed" in an attack on its base at Hostomel/Gostomel airport in Ukraine.

### About

- Known formally as the "**Cossack**", its North Atlantic Treaty Organization (NATO) operating code, the world knew the "**super-heavy transport plane**" better by its Ukrainian name, "**Mriya**", or "**the Dream**".
- The **six-engine 84-metre-long behemoth**, with its 32-wheel landing gear, had its first flight on December 21, 1988, built mainly for the **transportation of the Buran shuttle orbiter** and **components of the Energiya carrier rocket**.
- It **made its maiden landing in India, in May 2016**, at Hyderabad's Shamshabad airport while en route to Perth to deliver a 117-tonne power generator (from Prague, the Czech Republic) to a mine in Australia.
- It played an **important role too in the COVID-19 fight, ferrying nearly 100 tonnes of medicines, laboratory kits, medical masks and personal protective equipment** in various missions across Europe, Canada and to Africa.

## 4. Armed Forces Preparatory School

### Why in News?

The Armed Forces Preparatory School, which is part of the projects announced by the Delhi government in its 2021 'Deshbhakti Budget', is taking admissions for the first batch.

### About

- Aim → In **helping students prepare for entry** into the National Defence Academy and other services.
- It will be the **first fully residential school** set up by the Delhi government.
- Eligibility → The school will be **from Class IX to XII** and admissions will be conducted for **100 students in each class**. Of these, 60 will be boys and 40 will be girls in each grade.
- The school will have an academic wing and a **'service preparatory' wing**.
- The services preparatory wing is aimed at **"nurturing the identified potential and improving on the identified gaps/working areas"** and inculcating **"officer-like qualities"** in the students.

## 5. FIFA

### Why in News?

On February 28, 2022, FIFA and UEFA decided to indefinitely suspend all Russian teams, whether national representative teams or club teams, from participation in all competitions run by the two football bodies.

### About

- FIFA, Fédération Internationale de Football Association in French, is the **highest global governing body of football** (also known as soccer to distinguish it from American football), the world's most popular game.
- FIFA is also the **international governing body for futsal** (a kind of mini football played indoors on a hard court between two teams of five players each) and **beach soccer** (five-a-side, played on a beach).
- FIFA is responsible for **organising and promoting football's major international tournaments**, most importantly the football World Cup, which began in 1930, and the Women's World Cup which began in 1991.
- The membership of FIFA now **comprises 211** national football associations around the world.
- FIFA, which is headquartered in **Zurich, Switzerland**, supports these national associations financially and logistically through various programmes.
- The **FIFA Congress** is the **supreme legislative body of FIFA**, in which each of the 211 members of the organisation has a vote. The Congress ordinarily **meets annually**.

## 6. International Intellectual Property Index

### Why in News?

Recently, the International Intellectual Property Index, 2022 has been released.

### About

- International Intellectual Property Index is an **annual report** compiled by the **US Chambers of Commerce**.
- Purpose → The index benchmarks the IP framework in **55 global economies**, with Ghana and Honduras added as two new economies in the tenth edition.
- Parameters → The index ranks countries based on **50 unique indicators**. These indicators are divided across nine categories of protection: 1) **Patents**, 2) **copyrights**, 3) **trademarks**, 4) **design rights**, 5) **trade secrets**, 6) **commercialization of IP assets**, 7) **enforcement**, 8) **systemic efficiency** and 9) **membership and ratification of international treaties**.

### 🔑 Key findings

- India has been **ranked 43 out of 55 countries** in the Index. It has improved its overall IP **score from 38.4% to 38.6%**.
- The **United States topped** the index, followed by the UK, Germany, Sweden and France.

## 7. Co-location

### Why in News?

Multiple agencies are investigating the NSE co-location scam related to the manipulation of the market at the stock exchange.

## About

- Also known as “**carrier hotel**”, Co-location is a type of data centre.
- Co-location **allows brokers to operate closer to their servers** upon payment of additional fees.
- Co-location facility **provides infrastructure** such as power supply, bandwidth, and cooling for setting up servers and storage of data.
- It **helps brokers secure an advantage over others** due to proximity to exchange servers as data transmission takes less time.
- Orders reach exchange servers **faster than** those who have not availed of the facility.

## 8. Kavach

### Why in News?

Recently, the Indian Railways tested 'Kavach'-Automatic Train Protection System by making two trains move towards each other at full speed.

### About

- Developed by → **Research Design and Standards Organisation(RDSO)** of the Ministry of Railways in collaboration with Indian industry.
- KAVACH is an indigenously developed **Automatic Train Protection(ATP) System** for Indian Railways.
- It is **designed to bring a train to a halt automatically** when it notices another train on the same line within a prescribed distance.
- Features of Kavach →
  - **Prevents trains** from passing the signal at Danger (Red) and avoiding collisions.
  - **Activates the train braking system automatically** if the driver fails to control the train as per the speed restrictions.
  - **Continuous update of Movement Authority** with the display of signal aspects in Driver Machine Interface(DMI)/Loco Pilot operation cum Indication Panel
  - **Auto Whistling** while approaching Level Crossing Gates
  - **Prevention of collision** between two Locomotives equipped with functional KAVACH
  - **SoS Messages** during emergency situations
  - **Centralised live monitoring** of Train movements through Network Monitor System.
- Significance → 1) Kavach is one of the **cheapest, Safety Integrity Level 4(SIL-4) certified technologies** with the probability of an error being 1 in 10,000 years. 2) It **opens avenues of export** of this indigenous technology for Railways. 3) It helps the Railways to achieve the goal of “**zero accidents**”.

### Research Designs & Standards Organization(RDSO)

- RDSO is the **sole R&D Wing** of the Ministry of Railways. It was founded by integrating the Central Standards Office (CSO) and the Railway Testing and Research Centre(RTRC) into a single unit in **1957**.
- Purpose → It is **one of India's leading Standard formulating bodies** undertaking standardization work for the railway sector.
- Location → It is situated in **Lucknow, Uttar Pradesh**.

## 9. Zaporizhzhia Nuclear Power Station

### Why in News?

Zaporizhzhia Nuclear Power Station, Europe's largest nuclear power plant was hit by Russian shelling, sparking a fire and raising fears of a disaster that could affect all of central Europe for decades, like the 1986 Chernobyl meltdown.

### About

- Zaporizhzhia nuclear plant is located in Enerhodar, Ukraine, on the southern shore of the Kakhovka Reservoir on the Dnieper river.
- it is the largest nuclear power plant in Europe and among the 10 largest in the world. The plant has 6 VVER-1000 pressurized light water nuclear reactors (PWR).

## 10. Humanitarian Corridors

### Why in News?

The United Nations considers humanitarian corridors to be one of several possible forms of a temporary pause of armed conflict.

### About

- They are demilitarized zones, in a specific area and for a specific time — and both sides of an armed conflict agree to them.
- Via these corridors, either food and medical aid can be brought to areas of conflict, or civilians can be evacuated.
- The corridors are necessary when cities are under siege and the population is cut off from basic food supplies, electricity and water.
- In cases where a humanitarian catastrophe unfolds because the international law of war is being violated — for example through large-scale bombing of civilian targets — humanitarian corridors can provide crucial relief.
- Who sets them up? →
  - In most cases, humanitarian corridors are negotiated by the United Nations. Sometimes they're also set up by local groups.
  - Since all sides need to agree to set up the corridors, there is a risk of military or political abuse. For example, the corridors can be used to smuggle weapons and fuel into besieged cities.
  - On the other hand, they can also be used by UN observers, NGOs and journalists to gain access to contested areas where war crimes are being committed.

## 11. Democracy Report 2022

### Why in News?

A Sweden-based institute has said that India is no longer an 'electoral democracy', classifying the country as an 'electoral autocracy' instead.

### About

- Released by → Varieties of Democracy(V-Dem) Institute at Sweden's University of Gothenburg
- Purpose → The report measures hundreds of different attributes of democracy. It enables new ways to study the nature, causes and consequences of democracy embracing its multiple meanings.
- Parameters → The report is based on the score in the Liberal Democracy Index(LDI). LDI captures both liberal and electoral aspects of democracy, based on the 71 indicators included in the Liberal Component Index (LCI) and the Electoral Democracy Index (EDI).
- Categorization → Based on the score in the LDI, the report classifies countries into four regime types: Liberal Democracy, Electoral Democracy, Electoral Autocracy and Closed Autocracy.

### 🔑 Highlights of the report

- More than twice as many countries are undergoing Autocratisation as are witnessing democratization.
- Autocratisation is spreading rapidly, with a record of 33 countries autocratising.
- India's performance → It classifies India as an electoral autocracy ranking it 93rd on the LDI, out of 179 countries.

## 12. Boltzmann medal

### Why in News?

Deepak Dhar, physicist from the Indian Institute of Science Education and Research, Pune, has been selected for the Boltzmann medal.

#### About

- The Boltzmann medal is awarded by the **Commission on Statistical Physics (C3)** of the International Union of Pure and Applied Physics.
- The award was **initiated in 1975**, with Nobel laureate (1982) K.G. Wilson was the first recipient.
- He became the **first Indian to win** this award.
- He shares the platform with **American scientist John J. Hopfield** who is known for his invention of an associative neural network, now named after him.
- The award consists of the **gilded Boltzmann medal** with the **inscription of Ludwig Boltzmann**.
- The chosen two scientists will be presented the medals at the **StatPhys28 conference** to be held in Tokyo, 7-11 August, 2023.

### 13. WHO Global Centre for Traditional Medicine

#### Why in News?

On 9th March 2022, the Union Cabinet, chaired by PM Modi approved the establishment of the World Health Organization Global Centre for Traditional Medicine (WHO GCTM) in Gujarat.

#### About

- Established under the **Ministry of AYUSH**.
- WHO GCTM will be the **first and only global outposted Centre** (office) for traditional medicine across the globe.
- Location → **Jamnagar, Gujarat**.
- Purpose → The Centre will help
  - To position AYUSH systems across the globe,
  - To ensure quality, safety and efficacy, accessibility and rational use of traditional medicine,
  - To help develop norms, standards and guidelines, tools and methodologies for collecting data, undertaking analytics and assessing impact,
  - To develop specific capacity building and training programmes in the areas of relevance.

### 14. Age of sexual consent

#### Why in News?

The Philippines raised its age of sexual consent from 12 years to 16 years.

#### About

- In **India**, The Protection of Children from Sexual Offences Act, 2012, defines a “**child**” as **anyone below 18 years of age**, and hence, engaging in sexual activity with a ‘child’ is considered sexual assault.
- With the Philippines’ new law, the age of consent remains lowest in **Angola at 12 years**.
- According to data provided by the World Population Review, **Japan has the age of consent at 13**, and countries like **China, Germany, Italy and Brazil have it as 14**.
- In the **United States**, the age of consent is decided by states individually and varies **between 16 to 18**. The **United Kingdom**, too, has **16** as its age of consent.

### 15. Mankading

#### Why in News?

Recently, the Marylebone Cricket Club has announced its new code of laws, under which Mankading has been made a normal mode of running out the non-striker.

## About Mankading

- Mankading is a **method of run out** where a bowler dismisses a non-striker by hitting the bails before bowling when the latter is outside the crease.
- Though this is a **legally permissible dismissal**, it is considered **against the spirit of the game**. The method is named after legendary Indian bowler **Vinoo Mankad**.

## 🔪 Applying saliva to the ball

- One of the key changes has been a **complete ban on applying saliva** to the ball irrespective of the Covid situation.
- MCC's research found that applying saliva to the ball had **little** or **no impact on the amount of swing** the bowlers were getting. Players were **using sweat to polish the ball**, and this was equally effective.

## 16. Temporary Protection Directive

### Why in News?

Responding to the crisis, EU Member States made the unprecedented decision to activate a major European Union's Council Directive, known as the Temporary Protection Directive (TPD).

### About

- The European Commission describes TPD as **an exceptional measure** to **provide immediate and temporary protection** to displaced persons from non-EU countries and those unable to return to their country of origin.
- The directive **applies when** there is a risk that the **standard asylum system is struggling to cope** with demand stemming from a mass influx risking a negative impact on the processing of claims.
- Need →
  - Firstly, having proper standards will **reduce the disparities** between the policies of European Union (EU) countries on the treatment of potential refugees during mass influx.
  - Secondly, the standards also **promote burden-sharing among EU countries** regarding receiving a large number of displaced persons in a short duration and bearing the consequences of receiving such persons.
- What obligations does the TPD place upon EU states? → According to the European Commission, the TPD foresees harmonized rights for the beneficiaries of temporary protection which include:
  - A **residence permit** for the duration of the protection (1-3 years).
  - **Appropriate information** on temporary protection,
  - **Access to jobs, housing, social welfare, medical treatment, education** for minors.
  - **Opportunities for families** to reunite in some circumstances.
  - **Guarantees for access** to the normal asylum procedure.

## 17. Away From Reactor (AFR) Facility

### Why in News?

Recently, the Kudankulam Village Panchayat has passed a resolution against the construction of the 'Away From Reactor (AFR) facility at the Kudankulam Nuclear Power Project (KKNPP) site for storing nuclear waste.

### About

- The storage of spent fuel in a nuclear power plant is two-fold →
  - One facility is located within the reactor building/service building, generally known as the **Spent Fuel Storage Pool**.
  - Another is located away from the reactor, called the **Away From Reactor (AFR) Spent Fuel Storage Facility**, but within the plant's premises.
- The spent fuel storage pool inside the reactor building has a **limited capacity** and is **used for immediate storage** of the spent fuel removed from the reactor during refuelling.



- The fuel remains in the pool initially for a **few years** for it to be **cooled sufficiently** before it is shifted to the AFR facility. The AFR Facility is **functionally similar to the 'Spent Fuel Pool'** inside the reactor building, except in terms of capacity.

## 18. National Youth Parliament Festival

### Why in News?

3rd edition of National Youth Parliament Festival (NYPF) -2022 was conducted in the Central Hall of Parliament in New Delhi.

### About

- Organized by → **Ministry of Youth Affairs and Sports.**
- NYPF is based on the idea given by the Prime Minister in his **Mann Ki Baat Address in 2017.**
- Objective → To **hear the voice of youth in this age bracket of 18-25** who are allowed to vote but cannot contest in elections.
- To **encourage the youth to engage with public issues**, understand the common man's point of view, form their opinion and express these in an articulate manner.
- Features →
  - All **recognised educational institutions** of the country are eligible to participate in this programme.
  - **Kishore Sabha** for the students of Class IX to XII .
  - **Tarun Sabha** for the students of Undergraduate/ Post Graduate level.
  - The registration for participation will be done by the education institutions through the web-portal.
  - To ensure effective implementation of the scheme, the participating institutions may **invite an MP/ex-MP/ MINA/ Ex-MLA/ MLC/ Ex-MLC** or **a Person of eminence** as the Chief Guest who would oversee the performance of the Youth Parliament sitting of the institution.
- Previous NYPF → The 1st edition of NYPF was **organised in 2019**, with the theme **"Be the Voice of New India and Find solutions and Contribute to Policy "**.
  - The 2nd edition of NYPF was organized in **2020**, with the theme **"YUVAAH- Utsah Naye Bharat Ka"**.

## 19. India Water Pitch-Pilot-Scale Start-up Challenge

### Why in News?

The Ministry of Housing and Urban Affairs has launched the Water Pitch Pilot Scale Start-up Challenge under the aegis of its Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0.

### About

- This conclave is being organized with an aim of starting communication with **Start-ups in the water sector.**
- Aim → To **empower startups in the water/ used-water sector** to grow through innovation and design that will drive sustainable economic growth and generate employment opportunities.
- Thematic areas → The start-ups providing innovative technological/ business solutions in the **following areas are eligible to participate**: 1) Freshwater systems, 2) Hydro informatics – use of water + data, 3) Used water management, 4) Urban Water Management, 5) Agricultural Water Management, 6) Urban Sewerage Management, 7) Water governance, and 8) Innovation in conventional taps and plumbing systems.
- Eligibility Criteria → All entities **recognised as start-ups by the Department of Promotion of Industry and Internal Trade** (DPIIT) are eligible to participate
- Prize → The **100 final** selected start-ups in the Challenge will be given a **grant amounting to a maximum of Rs. 20 lakh**. Mentorship will also be provided.

### AMRUT 2.0

- AMRUT 2.0 was **launched by the Prime Minister in 2021**. The mission aims to **provide central assistance for universal coverage in water supply** in all statutory towns, upscaling coverage of sewerage and septage management in 500 AMRUT cities, rejuvenation of water bodies and creation of green spaces.
- Besides this, the mission also envisages the **identification of innovative, proven and potential environment-friendly technologies** in the fields of water & used water treatment, distribution and water body rejuvenation.
- To achieve this above goal, this **challenge was launched**.

## 20. Rashtriya Raksha University

### Why in News?

Prime Minister Narendra Modi recently dedicated to the nation the building of Rashtriya Raksha University near Gandhinagar in Gujarat.

### About

- Rashtriya Raksha University- an **institution of National Importance** is established by the Indian Parliament Act.
- The University aims to become an **academic-research-training ecosystem** for national security and police.
- Located in **Gandhinagar, Gujarat**.
- The **university offers** undergraduate, post-graduate, research degree programmes, and professional diploma and certificate programmes.

### 📌 National Forensic Sciences University (NFSU)

- National Forensic Sciences University (NFSU) formerly Gujarat Forensic Science University (GFSU), is a **central university** located in Gandhinagar, Gujarat. It is solely **dedicated to forensic and investigative science**.
- The university was formed by the Government of Gujarat in **2008**. It was upgraded to the National Forensic Sciences University in 2020. It is recognised as an **Institution of National Importance** by the Act of Parliament.

## 21. Rashtriya Indian Military College

### Why in News?

Rashtriya Indian Military College (RIMC), Dehradun, previously known as the Prince of Wales Royal Indian Military College, has completed 100 years.

### About

- Historical Background → RIMC was inaugurated in **March 1922** by the then **Prince of Wales, later King Edward VIII**.
- The aim at that time was to **educate and train Indian youth** as part of the Indianisation programme of the officer cadre of the British Indian Army.
- Location → It is a military school situated in **Doon Valley, Dehradun in India**.
- Administered by → The college is administered through the **Army Training Command** (ARTRAC) under the aegis of the **Ministry of Defence**.
- Purpose of the College now →
  - The RIMC is a **feeder institution for the National Defence Academy, Indian Naval Academy** and subsequently the Indian Armed Forces.
  - Approximately **25 cadets are admitted** to the RIMC every six months through the Entrance Examination.
  - At the time of joining, candidates should **not be less than 11-and-a-half years of age** or **must not have attained the age of 13**. Admissions are made from **Class VIII only**.
- Do you know? → RIMC (Limca Book of Records confirm) is perhaps the only institution in the country where **exams for Class X and XII** are **conducted twice a year in May and November**. These exams/ certifications are recognized by CBSE.

## 22. Touch-less touch screen technology

### Why in News?

Indian Scientists have provided an affordable solution to develop a low-cost touch-cum-proximity sensor popularly called touchless touch sensor through a printing technique.

### About

- Scientists have developed touchless touch screen technology through **a printing technique**.
- This touch sensor senses a proximal or hovers **touch even from a distance of 9 cm** from the device.
- Benefits →
  - The **coronavirus pandemic** has triggered efforts to **make lifestyle more adaptable** to pandemic scenarios.
  - Hence, technologies like these will **help reduce the risk of viruses spreading** particularly in public places where touchscreens are there like on self-service kiosks, ATMs and vending machines.
  - Moreover, it has **tremendous potential** to be used in advanced smart electronic devices like touchless screens and sensors.

## 23. International Day to Combat Islamophobia

### Why in News?

The UN General Assembly has adopted a resolution to proclaim March 15 as the International Day to Combat Islamophobia.

### About

- The resolution was introduced on **behalf of the Organization of Islamic Cooperation (OIC) countries**, under the agenda item Culture of peace.
- The resolution was **sponsored by 57 member states** of the Organization of Islamic Cooperation (OIC) and eight other countries including China and Russia.
- India's stand → India expressed concern over **phobia against one religion** being elevated to the level of an international day.

## 24. Bahini Scheme

### Why in News?

The Sikkim government is set to announce a scheme (Bahini) to install vending machines to provide free sanitary pads.

### About

- It seeks to **install vending machines** to **provide free sanitary pads** in all its 210 secondary and senior secondary government schools across the state.
- The scheme aims at providing **"100 percent access to free and safe sanitary pads to secondary and senior secondary school going girls"**.
- It aims to **curb dropout of girls** from schools and **raise awareness** about menstrual hygiene.
- This is the first time that a state government has taken a decision to **cover all girls studying in Classes 9-12**.

## 25. Mina Swaminathan

### Why in News?

Mina Swaminathan, Distinguished Chair, Gender and Development, M.S. Swaminathan Research Foundation (MSSRF), died in her home at Teynampet at the age of 88 due to natural causes.

### About

- Born in **1933**, Mina was the daughter of civil servant and economist S Bhoothalingam and Tamil writer **"Krithika"** Mathuram Bhoothalingam.

- A **teacher-educator** and writer on early childhood education (ECE), she was appointed in 1970, by the Central Advisory Board of Education, as **Chairman of the Study Group on the Development of the Preschool Child**.
- The report of this committee, **submitted in 1972**, became the **basis for the scheme** known as the **Integrated Child Development Services (ICDS) in 1975**, a landmark intervention in the field of early childhood care and development.
- She was a founder-member of the **Centre for Women's Development Studies, New Delhi, in 1980**, and had been its Vice Chairman from 1987 to 1993.
- She is survived by her husband, agricultural **scientist M. S. Swaminathan**, and her daughter — **Soumya Swaminathan**, Chief Scientist, World Health Organization.

## 26. Man Booker International Prize

### Why in News?

Delhi-based writer Geetanjali Shree's 2019 novel *Ret Samadhi* became the first Hindi work of fiction, among 13 books, to be longlisted for the Man Booker International Prize. The novel has been translated into English by painter, writer and translator, Daisy Rockwell under the title *Tomb of Sand*.

### About

- Man Booker International Prize is an **international literary award** hosted in the United Kingdom.
- The introduction of the International Prize to **complement the Man Booker Prize** was announced in June 2004.
- Organizations involved and Eligibility → Sponsored by the **Man Group**, from 2005 until 2015 the award was given every two years to a living author of any nationality for a body of work published in **English** or **generally available in English translation**.
- Since 2016, the award has been given annually to a single book translated into **English** and **published in the United Kingdom or Ireland**, with a **£50,000 prize for the winning title**, shared equally between author and translator.

## 27. World Sparrow Day

### Why in News?

Drugs Controller General of India (DGCI) has given emergency use authorisation to Corbevax vaccine for use in children between 12 and 18 years of age.

### About

- World Sparrow Day is an initiative of the **Nature Forever Society**, which is a non-government organisation (NGO) **run by Mohammed Dilawar**, who's an internationally acclaimed conservationist.
- The first World Sparrow Day was celebrated in **2010** in different parts of the world.
- The theme for this year is **"Monitor the Sparrows & other common birds"**.
- Sparrow is a **very social bird** and is gregarious at all seasons when feeding, often forming flocks with other types of bird.
- House sparrows are **becoming extinct everywhere**, including in India. Experts say there's a need to spread awareness on their conservation.

## 28. Mahatma Gandhi Green Triangle

### Why in News?

'Mahatma Gandhi Green Triangle' has been unveiled in Madagascar to mark Azadi ka Amrit Mahotsav.

### About

- This "Gandhi Green Triangle" would **create the maximum green space** in the capital city of Madagascar, Antananarivo.

- The word green in the **plaque** (a flat piece of stone or metal) **signifies their commitment to sustainable development** and saving the environment.
- The naming of this park as Mahatma Gandhi Green Triangle is a **tribute to Mahatma Gandhi**.
- Gandhi was a '**Pravasi**' who **returned to India from South Africa**, led India's freedom struggle.



## 29. Women Transforming India (WTI) Awards

### Why in News?

Recently, NITI Aayog organized the fifth edition of the Women Transforming India (WTI) Awards.

### About

- Initiated by → **NITI Aayog**.
- Aim → To **highlight the commendable and ground-breaking endeavours** of India's women leaders and change-makers.
- Since 2018, the Awards have been **hosted under the aegis of Women Entrepreneurship Platform** (WEP) with a special focus on entrepreneurship.

### Women Entrepreneurship Platform

- Launched by → **NITI Aayog**
- Purpose → It is an **aggregator portal** that aims to catalyze the entrepreneurial ecosystem for women and address information asymmetry.
- Pillars → The platform is built on **three pillars**, namely:
  - **Iccha Shakti** represents motivating aspiring entrepreneurs to start their business
  - **Gyaan Shakti** represents providing knowledge and ecosystem support to women entrepreneurs and
  - **Karma Shakti** represents providing hands-on support to entrepreneurs in setting-up and scaling up businesses.

## 30. Delhi Municipal Corporation (Amendment) Bill, 2022

### Why in News?

The Union Cabinet has approved the Delhi Municipal Corporation (Amendment) Bill, 2022.

### About

- The amendment proposes a **unified Municipal Corporation of Delhi by subsuming** the South Delhi Municipal Corporation, the North Delhi Municipal Corporation and the East Delhi Municipal Corporation. The corporation was trifurcated in 2012.
- According to Government of India, The division of the corporation was uneven in terms of **territorial divisions and revenue generation**. As a result, there is a **huge gap in the resources** available to the three corporations, vis-à-vis their obligation.
- The gap has **widened over time**, increasing the financial difficulties of the civic bodies.
- At the moment the precise contours of the **unified civic body** are yet to emerge — especially in terms of the composition of its legislature and the executive.

## 31. All India Digital Nation-Wide Pension Adalat

### Why in News?

Secretary (Telecommunications) & Chairman, Digital Communications Commission (DCC) inaugurated the All India Digital Nation-Wide Pension Adalat.

### About

- It is Organized by **Controller General of Communication Accounts(CGCA)**, Department of Telecommunications.
- Purpose → The Adalat **serves as a forum for mitigating the grievances** of the pensioners by bringing in all the relevant stakeholders under one single platform.

### 🔗 Other Initiatives

- SAMPANN →
  - The SAMPANN Initiative was launched in **2018** by the Controller General of Communication Accounts (**CGCA**), Department of Telecommunications.
  - Purpose: It is a **seamless online pension processing and payment system** for Department of Telecommunications pensioners. It provides direct credit of pension into the bank accounts of pensioners.
- Jeevan Pramaan → It is a **biometric-enabled Aadhaar-based Digital Life Certificate for pensioners**. Pensioners of Central Government, State Government or any other Government organization can take benefit of this facility.

## 32. Abel Prize 2022

### Why in News?

It has been awarded to Professor Dennis Parnell Sullivan. He was awarded the prize “For his groundbreaking contributions to topology in its broadest sense, and in particular its algebraic, geometric and dynamical aspects.

### About

- Background → Established by the **Norwegian Government in 2002** and is managed by The Norwegian Academy of Science and Letters.
- Awarded **annually to outstanding mathematicians**.
- The first Abel Prize, awarded in **2003**, went to French mathematician **Jean-Pierre Serre**.
- The only person of Indian origin to have won this prize is **Srinivasa S.R. Varadhan**. He is at the Courant Institute, New York University, and won it in 2007.
- So far, the prize has gone to only one woman mathematician, **Karen Keskulla Uhlenbeck** of University of Texas, U.S.A.

## 33. World Water Day

### Why in News?

Every year on March 22nd, World Water Day is celebrated to highlight the importance of water.

### About

- Observed on **22 March every year**.
- Coordinated by **UN-Water** – the UN’s inter-agency collaboration mechanism for all freshwater related issues – **in collaboration with governments and partners**.
- The **World Water Development Report** is also released by the UN every year around World Water Day.
- Theme of World Water Day 2022 → **“Groundwater, making the invisible visible”** is the theme for this year’s World Water Day.
- Water, a human right → In **2010**, the UN recognized **“the right to safe and clean drinking water and sanitation** as a human right that is essential for the full enjoyment of life and all human rights.”

### 🔗 Other Important Days

- 22 April: **Earth Day**
- 22 May: **World Biodiversity Day**

## 34. Wings India 2022

### Why in News?

The Ministry of Civil Aviation, Airports Authority of India (AAI) and Federation of Indian Chambers of Commerce and Industry (FICCI) is jointly organising Wings India 2022 from 24th – 27th March 2022, Begumpet Airport, Hyderabad, India.

### About

- It is **Asia's largest event** on Civil Aviation (Commercial, General and Business Aviation).
- Purpose → It is **Asia's largest event** on Civil Aviation. It is held biennially (once every two years).
- The theme for 2022 → '**India@75: New Horizon for Aviation Industry**'
- Components → The components of the event include **Exhibition, Conference, Chalets, CEOs Forum, Static Display, Media** Conferences and Awards.

## 35. H2Ooooh

### Why in News?

National Mission for Clean Ganga, UNESCO (United Nations Educational, Scientific and Cultural Organization) and other partners released three animation films under its initiative "H2Ooooh! – Water Wise program for the Children of India".

### About

- It was launched by **UNESCO in July 2021**, jointly with the National Mission for Clean Ganga (NMCG) and others.
- H2Ooooh! is a **unique program** crafted for Indian school students from **Standard 1-8**.
- Objectives →
  - It aims to **increase awareness** about the limited availability of water, its sustainable use, its conservation, its exploitation and much more.
  - It seeks to enable the students to **share their own experiences and proposals** for the protection of the environment.
  - Divided in **three phases**, the project aims to **spur creativity and raise awareness** on water conservation and its sustainable use for students between the **age of 6-14 years**, by providing training and encouraging them to submit paintings and story ideas for the animated short films.
- Significance → Since the launch of the initiative, nearly, **31000 students from 53 schools in 18 Indian states** have been engaged actively with support from over 400 teachers.

## 36. TEJAS Skilling Project

### Why in News?

Recently, Union Minister Shri Anurag Thakur launched TEJAS (Training for Emirates Jobs And Skills), a Skill India International Project to train overseas Indians.

### About

- What is it? → It is a **Skill India International Project** to train overseas Indians.
- Full-Form → TEJAS stands for **Training for Emirates Jobs And Skills**.
- Aim → The project is aimed at **skill enhancement, certification** and **overseas employment of Indians**.
- It also aims at **creating pathways** to enable the Indian workforce to get equipped for skill and market requirements in the UAE.
- Target → The project has a target of creating a **10,000 strong Indian workforce in the UAE** during the initial phase.

## 37. Herbal Formulation for Tick Infestation

### Why in News?



Scientists have found that a formulation consisting of herbal ingredients like Neem (*Azadirachta indica*) and Nagod (*Vitex negundo*) is effective in combating tick infestation among dairy animals.

#### About Tick Infestation in Dairy Animals

- The Ticks are **harmful as blood sucking parasites** severely affect productivity of dairy animals and a major economic impediment, welfare concern in dairy farming.
- Tick-Borne Pathogens (TBP) are a **major source of production loss** and a welfare concern in livestock across the globe.
- This causes **tick worry, loss of appetite** among animals causing reduction in milk production, thereby lessening farmers' income.
  - These parasites are **vectors of systemic protozoan infection**, threat to dairy animal health & productivity.
- Presently, farmers rely on **chemical acaricides** that are costly, have to be used recurrently due to the nature of parasites.

#### New Formulation

- **National Innovation Foundation (NIF)** has developed a polyherbal formulation consisting of ingredients like **Neem (Azadirachta indica) and Nagod (Vitex negundo)**. This formulation has been **found to be effective** in combating tick infestation among dairy animals.

#### National Innovation Foundation

- It was set up in **2000** as an **autonomous body** under the Department of Science and Technology.
- Aim → To help India **become a creative and knowledge-based society** by expanding policy and institutional space for grassroots technological innovators.

## Quick revision (True/False)



1	<b>Council of Europe</b> -> Headquarters: Brussels, the capital of Belgium.	
2	<b>Operation Ganga</b> -> objectives of effective abatement of pollution, conservation and rejuvenation of National River Ganga.	
3	<b>Market Infrastructure Institutions</b> -> Stock exchanges, depositories and clearing houses are all Market Infrastructure Institutions (MIIs).	
4	<b>Pickleball</b> -> introduced to India by Sunil Valavalkar.	
5	<b>Rashtriya Vayoshree Yojana</b> -> Centrally Sponsored Scheme. Launched in 2017.	
6	<b>International Intellectual Property Index</b> -> Released by World Intellectual Property Organization.	
7	<b>Tropical Cyclones</b> -> winds blow counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.	
8	<b>Intergovernmental Panel on Climate Change</b> -> set up in 1988 by the World Wild Fund (WWF) and United Nations Environment Programme (UNEP).	
9	<b>Indian Grey Hornbill</b> -> IUCN Status: Vulnerable.	
10	<b>Vinayak Damodar Savarkar</b> -> founded the "Abhinav Bharat Society".	
11	<b>Hermetic Wiper</b> -> Anti-aircraft missile system.	
12	<b>Konark Sun Temple</b> -> built by King Narasimhadeva I of the Eastern Ganga dynasty from 1238-1250 CE.	
13	<b>Montreux Convention</b> -> an international convention designed to protect the ozone layer.	
14	<b>INS Visakhapatnam</b> -> first stealth guided-missile destroyer ship under Project 75.	
15	<b>Facility for Low Carbon Technology Deployment (FLCTD) Project</b> -> Funded by Global Environment Facility (GEF).	
16	<b>Stree Manoraksha Project</b> -> Launched by Ministry of Social Justice and Empowerment.	

17	<b>Vacuum Bombs</b> -> They use oxygen from the air for a large, high-temperature blast.	
18	<b>India's First Dugong Reserve</b> -> in Gulf of Kutch, Gujrat.	
19	<b>SIMBA Software</b> -> For captive breeding of Wild Fauna.	
20	<b>Perini Dance</b> -> Kerala.	
21	<b>SARAS 3 Radio Telescope</b> -> built by ISRO.	
22	<b>Asian Infrastructure Investment Bank</b> -> India is the largest shareholder in AIIB.	
23	<b>Agni Kandakarnan Theyyam</b> -> Kerala and Karnataka.	
24	<b>Kavach</b> -> a multi-layered ballistic missile defence system.	
25	<b>Belarus</b> -> is a landlocked country in Eastern Europe.	
26	<b>Glycosmis albicarpa</b> -> discovered a new gin berry species from Meghalaya.	
27	<b>National Commission for Protection of Child Rights</b> -> The term of office a chairperson is 6 years.	
28	<b>UN Human Rights Council</b> -> Headquartered in Geneva, Switzerland.	
29	<b>HANSA-NG</b> -> It is a first of its kind, indigenously developed aircraft trainer.	
30	<b>Fusobacterium</b> -> One of the reasons for oral cancer is Fusobacterium which is sexually transmitted.	
31	<b>Humanitarian Corridors</b> -> Only the United Nations has the authority to mediate between the two sides for a humanitarian corridor.	
32	<b>Northern River Terrapin</b> -> IUCN Red List: Critically Endangered.	
33	<b>Central Industrial Security Force</b> -> functions under the Ministry of Defence.	
34	<b>Theme for International Women's Day, 2022</b> -> Gender equality today for a sustainable tomorrow.	
35	<b>Pradhan Mantri Shram Yogi Maan-Dhan Scheme (PM-SYM)</b> -> Ministry of Finance will oversee PM-SYM.	
36	<b>SLINEX</b> -> India - Singapore Bilateral Maritime Exercise.	

37	<b>Jyotirao Phule</b> -> In 1873, Phule founded the Satyashodhak Samaj, or the Society of Seekers of Truth.	
38	<b>SAMARTH</b> -> Launched by Ministry of Social Justice and Empowerment.	
39	<b>PARAM Ganga</b> -> is a supercomputer.	
40	<b>Pal-Dadhvav massacre</b> -> took place on March 7, 1922 in West Bengal.	
41	<b>National Land Monetization Corporation</b> -> The administrative jurisdiction is with the Ministry of Corporate Affairs.	
42	<b>UPI123Pay</b> -> is a Four-step method to initiate and execute services for users.	
43	<b>Karewas</b> -> In Maharashtra.	
44	<b>Temporary Protection Directive</b> -> as an exceptional measure to provide immediate and temporary protection to displaced persons ONLY from EU countries.	
45	<b>MSME Innovative Scheme</b> -> three sub-schemes under Incubation, Design, IPR (Intellectual Property Rights).	
46	<b>Colombo Security Conclave</b> -> India, China, and Sri Lanka began a National Security Advisor (NSA)-level trilateral meeting.	
47	<b>International Fund for Agricultural Development</b> -> specialized United Nations agency created in 1977.	
48	<b>Santhali Sohrai murals</b> -> Practised by tribal women in the Madhya Pradesh.	
49	<b>1954 Hague Convention</b> -> Convention for the Protection of Cultural Property in the Event of Armed Conflict also.	
50	<b>Dandi March</b> -> slogan "Do or Die" associated with it.	
51	<b>Syllipsimopodi Bideni</b> -> discovered fossils of a species in Central Montana, USA.	
52	<b>Geneva Conventions</b> -> The Convention on Cybercrime.	
53	<b>Rashtriya Raksha University</b> -> Located in Hyderabad, Telangana.	
54	<b>Gallium Nitride</b> -> is a semiconductor commonly used in blue light-emitting diodes (LEDs).	

55	<b>White Phosphorus</b> -> It does occur naturally.	
56	<b>Supplementary Demands For Grants</b> -> Article 115 pertains to supplementary grants.	
57	<b>Registrar General of India</b> -> Under Ministry of Health and Family Welfare, Government of India.	
58	<b>Man-Portable Air Defence Systems (MANPADS)</b> -> They have a maximum range of 30kms.	
59	<b>Rashtriya Indian Military College</b> -> Doon Valley, Dehradun in India.	
60	<b>Fundamental Rights</b> -> Promoting the ideal of political democracy.	
61	<b>INSPIRE Faculty fellowship</b> -> Nodal Ministry: Ministry of education.	
62	<b>Phool Dei</b> -> harvest festival of West Bengal.	
66	<b>Gangetic Dolphin</b> -> IUCN: Vulnerable.	
67	<b>Detailed Project Reports</b> -> funded by Compensatory Afforestation Fund.	
68	<b>PM-Daksh Yojana</b> -> Nodal Ministry: Ministry of Skill Development and Entrepreneurship.	
69	<b>Aluminium</b> -> It is the third most abundant element in earth's crust (8.3% approx. by weight).	
70	<b>Bahini Scheme</b> -> intended to support women affected by violence, in private and public spaces.	
71	<b>Mina Swaminathan</b> -> founder-member of the Centre for Women's Development Studies, New Delhi, in 1980.	
72	<b>National Institute of Ocean Technology</b> -> an autonomous institute under the Ministry of Science and Technology.	
73	<b>Pradhan Mantri Ujjwala Yojana</b> -> Applicant should belong to a BPL (Below Poverty Line) household.	
74	<b>Competition Commission of India</b> -> Non-statutory body.	
75	<b>OECD</b> -> India is a member of OECD.	
76	<b>Kinzhal hypersonic missile</b> -> USA.	

77	<b>Sustainable Development Solutions Network</b> -> Established under the auspices of the United Nations Secretary-General.	
78	<b>Par River</b> -> originating in Madhya Pradesh.	
79	<b>POSH Act</b> -> Every employer constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.	
80	<b>Vedanthangal Bird Sanctuary</b> -> Rajasthan.	
81	<b>Boma Capturing Technique</b> -> Used for capturing and translocating of animals.	
82	<b>Arctic Council</b> -> India is a member of Arctic Council.	
83	<b>Chechnya</b> -> shares land borders with the Black Sea to its West.	
84	<b>Exercise LAMITIYE-2022</b> -> between the Indian Army and Seychelles Defence Forces (SDF).	
85	<b>Section 144 CrPC</b> -> maximum punishment for such act is 10 years.	
86	<b>Navroz</b> -> new year celebrations for Parsis (Zoroastrians) and Muslims.	
87	<b>Arsenic</b> -> is a natural semi-metallic chemical component of the earth's crust.	
88	<b>PACER Initiative</b> -> Initiative of Ministry of Earth Sciences.	
89	<b>Minamata Convention</b> -> It is not a UN treaty.	
90	<b>DUSTLIK Exercise</b> -> between Indian and Uzbekistan armies.	
91	<b>Foreigners' Tribunals</b> -> Powers to constitute tribunals were vested only with the Centre.	
92	<b>Minamata Disease</b> -> Disorder caused by methylmercury poisoning.	
93	<b>Articulated All Terrain Vehicles</b> -> It is a twin cabin, tracked, amphibious carrier for off road mobility.	
94	<b>Corner-Shot Weapon System</b> -> designed by the Centre for Air Borne System (CABS) Bengaluru.	
95	<b>Olive Ridley Turtles</b> -> IUCN Red list – Endangered.	
96	<b>Coral Reefs</b> -> Corals share a symbiotic relationship with single-celled algae called zooxanthellae.	

97	<b>Legal Aid Clinic</b> -> act as a single-window facility for resolving the grievances of women by offering them free legal assistance.	
98	<b>Kaziranga National Park and Tiger Reserve</b> -> Uttarakhand.	
99	<b>Shrinkflation</b> -> is the practice of reducing the size of a product while maintaining its sticker price.	
100	<b>BIMSTEC</b> -> Member States are China, Bangladesh, Bhutan, India, Nepal, Myanmar and Thailand.	