

# 2021 APRIL MAGZINE

**SPECIAL  
FEATURES**



**SPECIAL QUICK  
REVISION  
(TRUE / FALSE)**

Online Courses Available at - [video.onlyias.in](https://video.onlyias.in)

# Table of Contents

## Economy

1. Emergency Credit Line Guarantee Scheme.....	5
2. Inflation targeting.....	5
3. PLI scheme for Food Processing Industry.....	6
4. AIM-PRIME.....	7
5. Sankalp Se Siddhi.....	7
6. ProrIISe Software.....	8
7. China's Digital Currency.....	8
8. Blockchain-based traceability interface.....	9
9. World Economic Outlook.....	10
10. National Bank for Agriculture and Rural Development (NABARD) .....	11
11. Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021.....	11
12. Opium Production in India .....	12
13. Shaphari Scheme.....	13
14. Global minimum corporate income tax.....	14
15. India Energy Dashboards.....	14
16. Currency Chest.....	15
17. Gold hallmarking.....	16
18. e-SANTA Web Portal.....	16
19. The Hydrogen Economy – New Delhi Dialogue 2021.....	17
20. Trade Facilitation Mobile Application.....	18
21. ITCN Programme.....	18
22. National Startup Advisory Council.....	19
23. Eatsmart Cities Challenge and Transport 4 All Challenge.....	20
24. National Internet Exchange of India.....	20
25. Regulations Review Authority 2.0.....	21
26. Currency watch list.....	22
27. Startup India Seed Fund Scheme.....	22
28. Sudarshan Sen committee.....	23
29. Codex Committee on Spices and Culinary Herbs (CCSCH) .....	23
30. Dogecoin.....	24
31. Ways and Means Advances.....	25
32. Energy Transition Index 2021.....	25
33. Large Area Certification.....	26
34. Power Grid Infrastructure Investment Trust.....	26
35. Agriculture Infrastructure Fund.....	27
36. New Umbrella Entity.....	28

## Environment

1. Nacaduba sinhala ramaswamii Sadasivan....	30
2. Global Wind Report 2021.....	30
3. Amboli- biodiversity heritage site.....	31
4. Jammu and Kashmir Lakes.....	31
5. Pong Dam Wildlife Sanctuary.....	32
6. Mahendragiri Biosphere Reserve.....	32
7. Rosefinch.....	33
8. Dolphin Census.....	34
9. Navegaon-Nagzira Tiger Reserve.....	35
10. Danube Sturgeon.....	35
11. Monkeydactyl.....	36
12. Rewaconodon indicus.....	37
13. Great Indian Bustards.....	38
14. Disk-footed Bat.....	38
15. National Climate Vulnerability Assessment Report.....	39
16. Blue Nature Alliance.....	39
17. World Earth Day.....	40
18. Blue Flag Beaches.....	41
19. State of the Global Climate Report 2020.....	42
20. GloLitter Partnerships Project.....	42
21. Climate Resilient Grains.....	43
22. SEEA Ecosystem Accounting.....	44

## Science and Technology

1. DSIR-PRISM Scheme.....	47
2. Asteroid Apophis.....	47
3. Giga Mesh.....	48
4. NASA's InSight lander.....	48
5. Wolf-Rayet stars or WR stars.....	49
6. Oxygen Enrichment Unit.....	50
7. African Swine Fever.....	51
8. Muon g-2 vs Standard Model.....	51
9. Hydrogen Sulphide (H <sub>2</sub> S) .....	52
10. Narrow-Line Seyfert 1 (NLS1) galaxy.....	52
11. HGCO19 Vaccine.....	53
12. Aditya-L1 Support Centre.....	54
13. NASA's Ingenuity Mars Helicopter.....	54
14. RESPOND programme.....	55

15. Brucellosis.....	56
16. Harlequin ichthyosis.....	56
17. Virafin Drug.....	57
18. Oxygen concentrators.....	57
19. Zhurong Rover.....	58
20. Trachoma.....	59
21. Classical swine fever and Sheep Pox Disease Vaccine.....	59
22. Large Hadron Collider beauty (LHCb) experiment.....	60
23. Black Hole's magnetic field.....	61

## Geography

1. Godavari River.....	63
2. Asian Desert Dust & Indian Summer Monsoon.....	64
3. Chilika was a part of the Bay of Bengal: Study.....	65
4. Sadabahar.....	66
5. Red Sea.....	67
6. Whitsun Reef.....	67
7. Umngot.....	67
8. Doomsday Glacier.....	68
9. Valley of the Fallen.....	68
10. Tanzania.....	69
11. Chad.....	69
12. Kowloon peninsula.....	69
13. Marib.....	70
14. Sahel.....	70

## Polity

1. Article 244(A) of the Constitution.....	72
2. Model Code of Conduct.....	72
3. Central Vigilance Commission.....	73
4. AI Portal SUPACE.....	74
5. Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021.....	74
6. Copyright (Amendment) Rules, 2021.....	75
7. Durbar Move.....	76
8. People are free to choose religion: SC.....	76
9. Chief Election Commissioner.....	77
10. Judgments and Orders Portal.....	77
11. National Commission for Scheduled Castes.....	78
12. Abhijit Sinha committee.....	79

13. Memorandum of Procedure.....	79
14. Appointment of ad-hoc Judges.....	80

## International Relations

1. New Development Bank.....	82
2. BIMSTEC.....	82
3. UN Women.....	83
4. World Cities Culture Forum.....	83
5. E9 Initiative.....	84
6. North Atlantic Treaty Organization.....	85
7. International Virtual Election Visitors Programme.....	85
8. OPEC.....	86
9. Raisina Dialogue.....	87
10. UN Food Systems Summit 2021.....	87
11. Boao Forum.....	88
12. Country of Particular Concern.....	89
13. United Nations Economic and Social Council (ECOSOC) .....	89
14. Organisation for the Prohibition of Chemical Weapons (OPCW) .....	90
15. Project DANTAK.....	91
16. Supply Chain Resilience Initiative.....	91
17. Human Rights Watch.....	92

## Society

1. Anandam: The Centre of Happiness.....	93
2. Global Gender Gap Report.....	93
3. National Policy for Rare Diseases, 2021.....	94
4. Integrated Health Information Platform.....	95
5. Anamaya Initiative.....	96
6. SARTHAQ.....	96
7. Aahaar Kranti.....	97
8. Report on Racial Discrimination against Northeast People.....	98
9. Poshan Gyan.....	99
10. State of World Population report 2021.....	99
11. Gender Samvaad.....	100
12. Global Youth Mobilization Initiative.....	100
13. Pradhan Mantri Garib Kalyan Anna Yojana.....	101
14. Ladakh Ignited Minds project.....	101
15. State of the world's indigenous people.....	102

## Security

1. Exercise Vajra Prahar.....	104
2. Exercise SHANTIR OGROSHENA 2021.....	104
3. Joint Logistics Node.....	105
4. Front Hard Armour Panel jacket.....	105
5. Left Wing Extremism.....	106
6. Advanced Chaff Technology.....	106
7. INS Viraat.....	107
8. Exercise La Pérouse.....	107
9. PS Zoroaster.....	108
10. NanoSniffer.....	108
11. Freedom of Navigation Operation.....	109
12. Dhruv MK III: Advanced Light Helicopter....	110
13. Exercise Khanjar.....	110
14. KRI Nanggala.....	111
15. Exercise VARUNA 2021.....	112
16. Single Crystal Components.....	112
17. Python-5.....	113
18. Critical Infrastructure.....	113

## History and Culture

1. Hoysala inscription found near Arsikere.....	115
2. Lingayat.....	115
3. Megalithic era caves found.....	116
4. Babu Jagjivan Ram.....	116
5. Lost Golden City in Egypt.....	117
6. Lilavati Award.....	117
7. Jyotirao Phule.....	118
8. Jallianwala Bagh Massacre.....	118
9. Attingal revolt.....	119
10. Konyak Community.....	120
11. Lingaraja Temple.....	120
12. World Heritage Day.....	121
13. Sri Ramanujacharya.....	122
14. Khajuraho Temples.....	122

15. Mahavir Jayanti.....	123
16. Kumbh Mela.....	123

## Miscellaneous

1. Echo and Bifrost.....	125
2. Dadasaheb Phalke Award.....	125
3. Harmonized System of Nomenclature Code.....	125
4. Culex Mosquito.....	126
5. Madhu Kranti portal.....	126
6. Lab on Wheels Programme.....	127
7. Advanced Antiquities Management System.....	127
8. MANAS app.....	127
9. Global Food Policy Report 2021.....	128
10. Heparin Induced Thrombocytopenia.....	128
11. Whitest paint.....	129
12. Inclusive Internet Index 2021.....	129
13. Global Diabetes Compact Initiative.....	130
14. Vande Bharat Mission.....	131
15. Bitcoin Digital Currency.....	131
16. World Press Freedom Index.....	132
17. DRDO's Supplemental Oxygen Delivery System.....	132
18. #FOSS4GOV Innovation Challenge.....	133
19. NASSCOM.....	133
20. World Malaria Day.....	134
21. Chandler Good Government Index.....	134
22. Armenian Genocide.....	135
23. Project Pyrasol.....	135
24. Deep Time Project.....	136
25. Morarji Desai National Institute of Yoga....	136
26. Aluminium-air batteries.....	137

# Economy

## 1. Emergency Credit Line Guarantee Scheme

### Why in News?

- The government has extended the ₹3-lakh-crore emergency credit line guarantee scheme by another three months and also widened its scope to new sectors, including hospitality, travel and tourism.

### About

- Aim** → The scheme was launched as part of the Aatmanirbhar Bharat Abhiyan package announced **in May 2020 to mitigate the distress** caused by coronavirus-induced lockdown, **by providing credit** to different sectors, especially Micro, Small and Medium Enterprises (MSMEs).
- Guarantee** → **100% guarantee coverage** is being provided **by the National Credit Guarantee Trustee Company**, whereas Banks and Non Banking Financial Companies (NBFCs) provide loans.
- The credit will be provided in the form of a **Guaranteed Emergency Credit Line (GECL) facility**.
- No Guarantee Fee** shall be **charged by NCGTC** from the Member Lending Institutions (MLIs) under the Scheme.
- Interest Rates** → Interest rates under the Scheme shall be **capped at 9.25% for banks and FIs**, and at **14% for NBFCs**.
- Eligibility** → Borrowers with credit outstanding **up to Rs. 50 crore** as **on 29th February, 2020**, and with an annual **turnover of up to Rs. 250 crore** are **eligible** under the Scheme.
- On **1st August 2020**, the government **widened the scope** of the **Rs. 3 lakh crore-ECLGS scheme** by doubling the upper ceiling of loans outstanding and including certain loans given to professionals like doctors, lawyers and chartered accountants for business purposes under its ambit.
- Benefits of the scheme** → The scheme is expected to **provide credit to the sector at a low cost**, thereby enabling MSMEs to **meet their operational liabilities** and **restart their businesses**.

### 📌 National Credit Guarantee Trustee Company

- It was set up in **2014** as a private limited company by the Department of Financial Services, **Ministry of Finance** under the **Indian Companies Act, 1956**.
- Purpose** → To act as a **common trustee company** to manage and operate various credit guarantee trust funds.

## 2. Inflation targeting

### Why in News?

- The Centre has decided to retain the inflation target of 4%, with a tolerance band of +/- 2 percentage points for the Monetary Policy Committee of the RBI for the coming five years.

### About

- It is a **central banking policy** that revolves around **adjusting monetary policy** to **achieve a specified annual rate of inflation**.
- The principle of inflation targeting is based on the belief that **long-term economic growth** is **best achieved by maintaining price stability**, and price stability is achieved by controlling inflation.

- Inflation Targeting Framework →
  - Now there is a **flexible inflation targeting framework** in India (after the 2016 amendment to the Reserve Bank of India (RBI) Act, 1934).
  - Flexible inflation targeting (FIT) – Under this, apart from inflation, the central bank is also **concerned about other variables** like the **stability of interest rates**, **exchange rates**, **output** and **employment ratios**.
- Who sets the inflation target in India? → The amended RBI Act provides for the inflation target to be **set by the Government of India**, in **consultation with the Reserve Bank**, once every five years.
- Current Inflation Target → The Central Government has notified **4 per cent Consumer Price Index (CPI)** inflation as the **target** for the period **from August 5, 2016, to March 31, 2021**, with the **upper tolerance limit of 6 per cent** and the lower tolerance **limit of 2 per cent**.

#### 📌 About MPC (Monetary Policy Committee)

- The Monetary Policy Committee (MPC) is a **committee of the Central Bank of India** (Reserve Bank of India).
- The **Reserve Bank of India Act, 1934** (RBI Act) was amended by the Finance Act, 2016.
- It provided for a **statutory and institutionalized framework** for a Monetary Policy Committee.
- Composition →
  - Monetary Policy Committee (MPC) is a **6-member committee**. **Three** members are **from RBI** while three **other members are nominated by the Government of India**.
  - Members from the RBI are the **Governor who is the chairman** of the MPC, a **Deputy Governor** and **one officer of the RBI**.
  - The **government members** are **appointed by the Centre** on the recommendations of a search-cum-selection committee.
- MPC **maintains price stability** while keeping in mind the objective of growth.
- The function of MPC is to **fix the benchmark policy interest rate** (repo rate) **to contain inflation** within the specified target level i.e. inflation targeting.

### 3. PLI scheme for Food Processing Industry

#### Why in News?

- The Union Cabinet has approved a production-linked incentive scheme for the food processing industry with an outlay of ₹10,900 crore.

#### About

- The scheme will be implemented over a six-year period **from 2021-22 to 2026-27**.
- Aim → The scheme aims to **support the creation of global food manufacturing champions** according to the natural resources of India.
- Objectives of the scheme →
  - PLI scheme will **support food manufacturing org** with **stipulated minimum Sales**.
  - Furthermore, It will **support Indian brands** of food products in the international markets with an **outlay of Rs. 10900 crore**.

- Moreover, it will **increase employment opportunities** for nearly 2.5 lakh persons by the year 2026-27.
- The scheme will **ensure good prices** for farm produce and higher income to farmers.
- Applicability → The **scheme would cover** ready-to-cook and ready-to-eat foods, processed fruits and vegetables, marine products and mozzarella cheese, organic products, free-range eggs, poultry meat and egg products.
  - The applicants selected for the scheme would be **required to invest in plant and machinery** in the **first two years**.
- Implemented by → **Project Management Agency (PMA)**
  - PMA will be **responsible for verification of eligibility** for support, scrutiny of claims eligible for disbursement of incentive.
- Background → In all, **13 PLI schemes** are **being rolled out**, including those for automobiles, pharmaceuticals, IT hardware including laptops, mobile phones & telecom equipment, white goods, chemical cells and textiles.

## 4. AIM-PRIME

### Why in News?

- Atal Innovation Mission(AIM), NITI Aayog in association with Bill & Melinda Gates Foundation(BMGF) launch AIM-PRIME (Program for Researchers on Innovations, Market-Readiness & Entrepreneurship).

### About AIM-PRIME

- Aim → AIM-PRIME Program aims at **promoting science-based, deep technology**. For that, it will **provide training and guidance** over a period of 12 months.
- Implementation by → **Venture Center** – a non-profit technology business incubator.
- Eligibility → The program is open to:
  - **Technology developers** (early-stage deep tech start-ups, and scientists/ engineers/ clinicians) with **strong science-based deep tech business ideas**.
  - **CEOs** and **Senior incubation managers** of AIM Funded Atal Incubation Centers that are **supporting** deep tech entrepreneurs.
- Benefits of the programme →
  - The candidates selected for the program will get **access to in-depth learning resources** via a comprehensive lecture series, live team projects, exercises, and project-specific mentoring.
  - They will also have access to a **deep tech startup playbook, curated video library, and plenty of peer-to-peer learning opportunities**.

### 📁 Deep Technology

- Deep techs are **very high cutting-edge** and **disruptive technologies**. These technologies **base on scientific discoveries, engineering, mathematics, physics, and medicine**.
- Examples → A **new medical device** or **technique fighting cancer**, data analytics to help farmers grow more food, or a clean energy solution trying to lessen the human impact on climate change.

## 5. Sankalp Se Siddhi

### Why in News?

- Tribal Co-operative Marketing Federation of India (TRIFED) under the Ministry of Tribal Affairs has launched “Sankalp se Siddhi” - Village & Digital Connect Drive.

### About

- Aim → To **activate the Van Dhan Vikas Kendras** (VDVKs) in the 100 villages in each region.
- Starting **from April 1, 2021**, this **100 day drive** will **entail 150 teams** in which 10 teams in each region from TRIFED and State Implementation Agencies/ Mentoring Agencies/ Partners will be visiting 10 villages each.
- **1500 villages** in the country will be **covered in the next 100 days**.
- The visiting teams will **identify locations** and **shortlist potential VDVks** for **clustering** as TRIFOOD, and SFURTI units as larger enterprises.
- [TRIFOOD aims to **enhance the income of tribes** through **better utilization of and value addition** to the Minor Forest Produce collected by the tribal forest gatherers.]
- They will **identify suppliers from the tribal artisans** and **other groups to provide access them** to **larger markets** through the Tribes India network - both physical outlets and **TribesIndia.com**.

## 6. ProrIISe Software

### Why in News?

- Indian Institute of Science, Bengaluru, (IISc) and Prorigo Software Pvt. Ltd. jointly develop ProrIISe Software.

### About

- Purpose → ProrIISe Software aims to **automate the legal and bureaucratic part of the patent process**.
- It will be helpful for **registering intellectual property** developed by Indian academicians.
- Benefits → This software is **available at a lesser cost** when compared to the software available outside India. Earlier the only choice available was outside software products.
- **Version 2.0** of the software is aimed for **release in 2021**. This version will **automate the financial part also**.
- Similarly, **Version 3.0** may release in **2022**. It will bring out **artificial intelligence approaches** to processes required to evaluate a patent.

### 📌 Intellectual Property Rights

- What is it? → Intellectual property rights (IPR) are the **rights given to persons over the creations of their minds**: inventions, literary and artistic works, and symbols, names, and images used in commerce.
- Conventions → The importance of intellectual property was **first recognized** in the **Paris Convention for the Protection of Industrial Property**(1883). Later it was also recognized in the **Berne Convention for the Protection of Literary and Artistic Works**(1886). The World Intellectual Property Organization (**WIPO**) **administers both treaties**.

### What is a Patent?

- Patents are **exclusive rights granted** by the Government to a company /individual for an invention.
- Duration → Patents are **time-bound**. For example: In India patents are granted for a **period of 20 years** from the date of filing of the patent application.

## 7. China's Digital Currency

## Why in News?

- The Ministry of Agriculture and Farmers Welfare signed a MoU with the Central Silk Board on a convergence model for the implementation of Agroforestry in the silk sector under the ongoing Sub-Mission on Agroforestry (SMAF) Scheme.

## About

- Officially titled the **Digital Currency Electronic Payment** (DCEP), the **digital RMB** (or Renminbi, China's currency) is, as its name suggests, a digital version of China's currency.
- It can be **downloaded** and **exchanged via an application authorised** by the People's Bank of China (**PBOC**), China's central bank.
- China** is among a small group of countries that have begun pilot trials; others include **Sweden**, **South Korea** and **Thailand**.
- Key features of the digital currency →
  - This is a **legal tender guaranteed by the central bank**, not a payment guaranteed by a third-party operator.
  - There is **no third-party transaction**, and hence, **no transaction fee**.
  - Unlike e-wallets, the digital currency does **not require Internet connectivity**. The payment is made **through Near-field Communication (NFC) technology**.
  - Unlike non-bank payment platforms that require users to link bank accounts, this can be **opened with a personal identification number**.

## 8. Blockchain-based traceability interface

## Why in News?

- Spices Board India and UNDPs India's Accelerator Lab signed a Memorandum of Understanding (MoU). The MoU aims to build a blockchain-based traceability interface for Indian spices.

## About

- What is it? → Blockchain-based traceability interface will be **integrated with the e-Spice Bazaar portal**. The portal was developed by Spices Board India for **connecting spices farmers with markets**.
- Benefits → It will **bring ease and transparency** in data management across a complex network.
- This network includes **farmers**, **distributors**, **processors**, **retailers**, **regulators**, and **consumers** thus simplifying the supply chain.
- It will also **allow farmers** and **other stakeholders to access the information**. This makes the entire supply chain more efficient and equitable.

### Blockchain Technology

- A blockchain is a **distributed ledger of information**. It replicates across various nodes on a "**peer-to-peer**" **network** (P2P Network).
- The data exists on **multiple computers at the same time**. It **constantly grows** as new sets of recordings or blocks add to it in a decentralization manner.

- All transactions on a standard Blockchain are **verified and signed with cryptography** to ensure security and anonymity.
  - Cryptography → It is the process of **converting ordinary plain text into unintelligible text** and **vice-versa**.
- The ledger can **record many transactions** such as monetary transactions, property transfer, and even ballot storage.

#### 📌 Spices Board India

- Spices Board is one of the five Commodity Boards functioning **under the Ministry of Commerce & Industry**.
- Purpose → It is an **autonomous body responsible for the export promotion** of the 52 scheduled spices and development of Cardamom (Small & Large).

#### 📌 UNDP Accelerator Lab:

- Agency involved → Accelerator Lab is an innovative **initiative by the UNDP, Qatar Government** and the **Federal Republic of Germany**.
- Aim → It aims to **find 21st-century solutions** to today's complex new challenges.
- Purpose → These labs seek to **identify grassroots solutions** together with local actors. Further, they will validate their potential to accelerate further developments.
- UNDP Accelerator Lab in India has been **launched by UNDP** in **collaboration with Atal Innovation Mission**.

## 9. World Economic Outlook

### Why in News?

- The latest edition of the International Monetary Fund's (IMF) World Economic Outlook has raised its Financial Year (FY) 2021 growth forecast for India to 12.5% from 11.5% estimated earlier in January 2021.

### About

- What is it? → It is a **survey by the IMF** that is usually **published twice a year** in the months of April and October.
- Purpose → It **analyzes and predicts global economic developments** during the near and medium term.
- In response to the **growing demand** for **more frequent forecast updates**, the WEO Update is published in January and July between the two main WEO publications released usually in April and October.

#### 📌 Key Points

- Indian economy is expected to **grow by 12.5% in 2021** and **6.9% in 2022**.
  - In 2020, India's economy witnessed an estimated contraction of 8%.
- Growth rate for India in 2021 is **stronger than that of China**.
  - **China** was the only major economy to **have a positive growth rate** of **2.3% in 2020**, and is expected to grow by 8.6% in 2021 and 5.6% in 2022.

#### 📌 International Monetary Fund (IMF)

- It is an organization of **189 countries** which seeks to **ensure the stability of the International monetary system**.
- Created in → **1945**. India joined on 27th December, 1945.
- Headquarters → **Washington, US**.
- Other Reports → a) **Global Financial Stability Report** and b) **Fiscal Monitor**(FM).

## 10. National Bank for Agriculture and Rural Development (NABARD)

### Why in News?

- National Bank for Agriculture and Rural Development (NABARD) closed its business at Rs. 6.57 lakh crore in FY 2020-21, recording a growth rate of 23.5%.

### About

- Background → NABARD came into existence on **12th July 1982** by **transferring the agricultural credit functions** of the Reserve Bank of India (**RBI**) and refinance functions of the then Agricultural Refinance and Development Corporation (**ARDC**).
- Status → It is a **statutory body** established under 'National Bank for Agriculture and Rural Development Act, 1981'.
- Purpose →
  - It is a development bank **focussing primarily on the rural sector** of the country.
  - It is the apex banking institution to **provide finance for Agriculture and rural development**.
- Cooperation with the RBI →
  - RBI provides **3 directors** to NABARD's Board of Directors.
  - NABARD provides **recommendations to RBI** on issue of licenses to Cooperative Banks, opening of new branches by State Cooperative Banks and RRBs.
- Headquarters → **Mumbai**.
- Major Functions of NABARD →
  - It provides **refinance support for building rural infrastructure**.
  - It **supervises Cooperative Banks** and **Regional Rural Banks** (RRBs) and helps them develop sound banking practices and integrate them to the CBS (Core Banking Solution) platform.
  - It is involved in **designing Union government's development schemes and their implementation**.
  - NABARD has **various international partnerships** including leading global organizations and World Bank-affiliated institutions that are breaking new ground in the fields of rural development as well as agriculture.

## 11. Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021

### Why in News?

- The Insolvency and Bankruptcy Code (Amendment) Ordinance, 2021 promulgated on 4th April, 2021 provides for pre-packaged insolvency resolution process (PPIRP) for corporate debtors classified as micro, small and medium enterprises.

### About

- IBC Amendment Ordinance 2021 **amends the Insolvency and Bankruptcy Code, 2016.**
- The Amendment allows the **use of Pre-Packaged insolvency resolution** as an alternative resolution mechanism for MSMEs. The **threshold limit** to trigger the Pre-Packaged insolvency resolution is **between Rs 10 lakh to 1 Crore.**

### Pre-Pack insolvency resolution

- A pre-pack resolution is a **form of restructuring** that allows creditors and debtors to **work on an informal plan** and then **submit it for approval.**
- Under this system, **financial creditors** will **agree to the terms of a potential investor.** Further, they will seek approval of the resolution plan from the National Company Law Tribunal (NCLT).
- However, the resolution plan **cannot be submitted directly to NCLT.** It requires **approval of a minimum of 66% of financial creditors** that are unrelated to the corporate debtor before submission of a resolution plan.
- Further, **NCLTs** also **require to consider any application** for a pre-pack insolvency proceeding before considering a Corporate Insolvency Resolution Process(CIRP).
- CIRP is the **process of resolving corporate insolvency** according to the provisions of the Insolvency and Bankruptcy Code, 2016.

### Benefits of Pre-Packs over CIRP

- Quicker Resolution → One of the **key criticisms of the CIRP** is the **time taken for resolution.** At the end of December 2020, over 86% of the ongoing insolvency resolution proceedings crossed the 270-day threshold.
- In contrast, the **pre-pack resolution process** is **limited to a maximum of 120 days.** Further, only 90 days are available to the stakeholders to bring the resolution plan to the NCLT.
- Management Control → Another key difference between pre-packs and CIRP is that the **existing management retains control** in the **case of pre-packs.** Whereas a resolution professional takes control of the debtor as a representative of financial creditors in the case of CIRP.

## 12. Opium Production in India

### Why in News?

- The Union government has decided to bring in the private sector in the production of poppy straw from opium production. This move is expected to boost the yield of alkaloids which are used for medical purposes and exported to several countries.

### About Opium

- Opium is **dried latex** obtained from the **seed capsules of the opium poppy Papaver somniferum.**
- **India** is one among 12 countries in the world where **legal cultivation of opium** is **permissible.** It is permissible within the **ambit of the United Nations, Single Convention on Narcotic Drugs 1961.**
- **Uttar Pradesh, Rajasthan, and Madhya Pradesh** are the three traditional opium-growing States. In those states, poppy cultivation is **allowed based on licences** issued annually by the **Central Bureau of Narcotics.**
- It currently **only extracts alkaloids** from opium gum at few facilities. These facilities are **controlled by the Revenue Department in the Finance Ministry.**
- This is done by using the **poppy straw method.** Under this, the farmers extract gum by manually cutting the opium pods and selling the gum to government factories.

- Government decided to adopt the **public-private partnership**(PPP). Under this, the government will **switch to new technologies** after trial cultivation by two private firms showed higher extraction of alkaloids using the **Concentrated Poppy Straw**(CPS).
- CPS is a **mechanised system** under which the **entire harvest will be cut by machine** and **transferred to government factories**.

### Poppy Straw

- Poppy Straw is the **husk left after the opium is extracted from pods**. They are used in the **commercial manufacture of morphine** or **other poppy alkaloid derived drugs**.
- Poppy straw is **one of the narcotic drugs** under the **NDPS Act, 1985**. Hence, anyone who possesses, selling, purchasing, or using poppy straw without a license or authorization is liable to prosecution under the NDPS Act.
- Further, the Possession, sale, use of poppy straw is **regulated by the State Governments** under the **State NDPS Rules**.
- Farmers **sell the poppy straw to those licensed by the State Governments to purchase poppy straw**. Any excess poppy straw is ploughed back into the field.

## 13. Shaphari Scheme

### Why in News?

- Recently, the Marine Products Exports Development Authority (MPEDA) has developed a certification scheme for aquaculture products called 'Shaphari'.

### About

- Shaphari is a **Sanskrit word** that means the **superior quality of fishery products suitable for human consumption**.
- Purpose → It is an **Antibiotics free Certification Scheme**. It certifies hatcheries and farms for the production of antibiotic-free shrimp products.
- By doing that, it aims to →
  - enhance the consumer confidence,
  - meet international standards
  - promote hassle-free export.
- The entire certification process will be online to **minimize human errors** and **ensure higher credibility** and **transparency**.
- Based on → The scheme is based on the **United Nations' Food and Agriculture Organization's technical guidelines** on aquaculture certification.
- Components → The scheme will have two components:
  - **Certifying hatcheries** for the quality of their seeds and
  - **Separately approving shrimp farms** that adopt the requisite good practices.
- Significance →
  - India is the **second-largest fish producer** in the world.
  - Fish Sector provides **employment to 14 million people** in harvesting, processing packaging, and distribution.

- Major Producing States: Andhra Pradesh, West Bengal, Odisha, Gujarat, and Tamil Nadu are the major shrimp producing States.

#### 📌 Marine Products Exports Development Authority

- MPEDA is a **nodal coordinating, state-owned agency** engaged in fishery production and allied activities.
- Formation → It was established in 1972 under the Marine Products Export Development Authority Act (MPEDA), 1972.
- Ministry → It functions under the Union Ministry of Commerce and Industry.
- Headquartered → Kochi, Kerala.
- Mandate → Its mandate is to increase exports of seafood including fisheries of all kinds, specifying standards, marketing, processing, extension and training in various aspects.

## 14. Global minimum corporate income tax

### Why in News?

- The US Treasury Secretary has urged the world's 20 advanced nations to move in the direction of adopting a Global minimum corporate income tax.

### About

- It is a **type of corporate tax**.
- Under this, If a **company moves some of its operations to another country** having **low-tax jurisdiction**, then the company **have to pay the difference** between that minimum rate and whatever the firm paid on its overseas earnings.
- **For example**, assume Country A has a corporate tax rate of 20 percent and Country B has a corporate tax rate of 11 percent. If the global minimum tax rate is 15 percent. Consider a situation, where Company X is headquartered in Country A, but it reports income in Country B. Then Country A will increase the taxes paid by Company X. This is equal to the percentage-point difference between Country B's rate and the global minimum rate(15 percent).
- In short, **Company X** will have to pay an **additional 4 percent** of the tax to Country A.
- What is the US proposal? → The US has proposed a **21% Global minimum corporate tax rate**. Further, the US also suggests **cancelling exemptions** on income from countries that do **not legislate a minimum tax**. This aims to **discourage** the **shifting of multinational operations and profits overseas**.
- India's Stand on Global Minimum Corporate Tax Rate →
  - Indian Government has said that it is **open to participate** and **engage in discussions** about the Global Minimum corporate tax structure.
  - It said that the government will look into the **pros and cons of the new proposal** and **take a view thereafter**.

## 15. India Energy Dashboards

### Why in News?

- Recently, the government think tank NITI Aayog has launched India Energy Dashboards (IED) Version 2.0. NITI Aayog launched the Version 1.0 in May 2017.

### About

- India Energy Dashboards(IED) aims to provide **single-window access** to the **energy data for the country**.
- Purpose → The dashboard **compiles Energy data published/provided by various sources**. Like the Central Electricity Authority, Coal Controller's Organisation and Ministry of Petroleum and Natural Gas.
- The key features of the enhanced version, India Energy Dashboards Version 2.0, are →
  - India Energy Dashboards(IED) provides **time-series data from FY 2005-06 until FY 2019-20**;
  - The dashboard enables **easy downloading of data** into **convenient spreadsheet formats** in a cleaner way;
  - The dashboard provides data at **sub-yearly frequencies** as well. This includes **monthly data** and data from portals **maintained by the government agencies**. Such as Saubhagya, UJALA, PRAPTI and Vidyut PRAVAH.
  - It also has a '**Feedback and Suggestions**' forum for the engagement of energy data user community.
  - A **semi-automated workflow** will **manage periodic updates** to the IED. The workflow system performs **basic checks and data validation**, helping to avoid incorrect data entry.

#### 👉 PRAAPTI Portal

- PRAAPTI is a **web portal**, launched in **2018 by the Ministry of Power**.
- Full-Form → PRAAPTI **stands for** Payment ratification and analysis in power procurement for bringing transparency in invoicing of generators.
- Aim → The portal aims at **enhancing transparency** and **encouraging best practices** in Power Purchase transactions.

#### 👉 Vidyut PRAVAH

- Vidyut PRAVAH is a **mobile application** launched **by the Ministry of Power**.
- Purpose → It aims to **provide data** pertaining to:
  - Market price of power from power exchange
  - Value of current all India demand in GW and
  - All India and State shortage including peak hour and total energy shortage.

## 16. Currency Chest

### Why in News?

- Recently, the theft to the tune of Rs 4.04 crore by a private security guard from the currency chest of Axis Bank in Chandigarh's Sector 34 has put the affairs of currency chests in the spotlight.

### About

- What is it? → A currency chest is a place where the Reserve Bank of India (**RBI**) **stocks the money meant for banks and ATMs**.
- Governance of Currency Chest → These chests are usually situated on the **premises of different banks** but **administered by the RBI**.
- Belongs to → The money present in the currency chest **belongs to the RBI**. But the money kept in the **strong room outside the currency chest belongs to the bank**.

- Security arrangement for the chests? → The security of currency chests **varies from one bank to the other** where the chests are situated. The Reserve Bank of India (**RBI**) **reimburses the security expenses to the bank as per the set norms.**
- Recovery Procedure if stolen → As per the set guidelines, the **bank in which the currency chest is situated** is **liable to fulfil the loss of the currency chest.**

## 17. Gold hallmarking

### Why in News?

- The government said that it is fully prepared to implement the mandatory hallmarking of gold jewellery and artefacts from June 1, 2021.

### About

- What is it? → Gold hallmarking is a **purity certification of precious metal.** At present, It is **voluntary in nature.**
- Background → In 2019, the Government announced that hallmarking of gold jewellery and artefacts will be **made mandatory** across the country.
- The government had **given jewellers more than a year to shift to hallmarking** and **register themselves** with the Bureau of Indian Standards (**BIS**).
- Key Features →
  - Hallmarked gold jewellery will only available in **three grades** – **14-carat**, **18-carat** and **22-carat.** Currently, it is available in ten grades.
  - The Hallmarked Gold jewellery will contain **four marks.** Such as **BIS mark**, **purity in carat**, **assay centre's name** and **jewellers' identification mark.**
  - Applicability: The rule is applicable **only to sales by retailers** and **not to consumers.** However, it is available for consumers if they want to get their old jewellery hallmarked.
  - Penalty: Anybody found violating the provision, will have to pay a **minimum fine of Rs 1 lakh** or **5 times the price of the article.**
- Advantages →
  - Gold Hallmarking will **protect the public against lower caratage.** It also ensures consumers do **not get cheated** while buying gold ornaments.
  - Further, it will also help to **get the purity**, bring in **transparency and assure the consumers of quality.**
- Also Remember → India is the **largest importer of gold.** In volume terms, the country **imports 700-800 tonne** of gold annually.

## 18. e-SANTA Web Portal

### Why in News?

- Recently, the Ministry of Commerce & Industry has virtually inaugurated e-SANTA Web Portal.

### About

- What is it? → It is an **electronic marketplace** providing a platform to **connect aqua farmers and the buyers**.
- The term e-SANTA was coined for the web portal, meaning **Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture**.
- e-SANTA is a **digital bridge** to **end the market divide** and will **act as an alternative marketing tool** between farmers & buyers by eliminating middlemen.
- The farmers can **freely list their produce** and **quote their price** while the exporters have the freedom to list their requirements and also to choose the products based on their requirements such as desired size, location, harvest dates etc.
- The Platform is available in **many languages**, which will **help the local population**.
- Significance → e-SANTA will **RAISE income, lifestyle, self-reliance, quality levels, traceability**, and **provide new options** for aqua farmers by:
  - Reducing Risk
  - Awareness of Products & Markets
  - Increase in Income
  - Shielding Against Wrong Practice
  - Ease of Processes.

#### **National Centre for Sustainable Aquaculture**

- National Centre for Sustainable Aquaculture (NaCSA) is an **extension arm** of Marine Products Export Development Authority (**MPEDA**), **Ministry of Commerce & Industry** Govt. of India.
- The objectives of NaCSA are to **encourage and uplift the small and marginal farmers** through **organization of clusters** and **maintaining Best Management Practices** in shrimp culture.
- The primary advantage of cluster approach to **shrimp farming** is that it contributes to **substantial reduction in cost of production**.

## 19. The Hydrogen Economy – New Delhi Dialogue 2021

### Why in News?

- Inaugural Edition of The Hydrogen Economy – New Delhi Dialogue 2021.

### About

- Organized by → **The Energy Forum** (TEF) and **the Federation of Indian Petroleum Industry** (FIPI), under the aegis of **Ministry of Petroleum and Natural Gas**, Government of India, organised a Hydrogen Roundtable titled “**Hydrogen Economy- the Indian Dialogue-2021**” in a virtual mode.
- The roundtable will **discuss emerging hydrogen ecosystems** and **exploring opportunities** for collaboration, cooperation and coalition.
- The **Hydrogen Roundtable**, the **first of its kind**, will **comprise a High-level Ministerial Session**, followed by five Panel Discussions by eminent policy makers, experts and industry leaders from different geographical regions of the world, with **focus on policy roadmaps** and **mapping demand** and **supply of Hydrogen**.
- A **separate session** is devoted to **India's Hydrogen Mission**.

- The objective of the roundtable is to **understand the progress of the Hydrogen ecosystem** across continents and contribute to creating synchrony among the thinktanks, Governments and the industry to join forces for developing innovative and sustainable technologies at attractive costs.

## 20. Trade Facilitation Mobile Application

### Why in News?

- Union Minister of Commerce and Industry has launched the Directorate General of Foreign Trade's (DGFT) Trade Facilitation Mobile Application.

### About

- Developed by → **Tata Consultancy Services (TCS)**.
- It is **as per the directions** of the Directorate General of Foreign Trade (**DGFT**).
- Aim → To **promote ease of doing business** by providing quick access to information to importers/exporters.
- Features → The application will provide the following facilities:
  - **Real-time trade policy updates** and event notifications.
  - It provides options to **explore Export-Import policies** and **statistics**.
  - **Virtual Assistance** to trade-related queries.
  - It provides **access to all the services** provided by DGFT.
  - **Raise and track help requests** in real-time.
- **Tech-enabled governance** will play a **major role** in determining India's competitiveness, in the post-Covid world.
- Thus, Initiatives like this, will significantly contribute to the achievement of **India's export target of \$1 trillion by 2025** and **GDP target of \$5 trillion**.

### 📁 Directorate General of Foreign Trade (DGFT)

- Established in → **1991**.
- Ministry → It is an attached office of the **Ministry of Commerce and Industry**.
- Functions → It is responsible for **formulating and implementing the Foreign Trade Policy** with the main objective of promoting India's exports.
- Headquarters → **New Delhi**.

## 21. ITCN Programme

### Why in News?

- The 'Infant Toddler and Caregiver-friendly Neighbourhoods (ITCN) Training and Capacity Building Programme' was launched recently.

### About

- Launched by → National Institute of Urban Affairs (**NIUA**) in partnership with Bernard van Leer Foundation (**BvLF**).

- The ITCN Programme is designed to **build capacities of city officials** and **young professionals** for **developing neighbourhoods within Indian cities** that are friendly to young children and families.
- Key Features of the ITCN Programme →
  - Under the programme, **city officials and young professionals** will get **skills** through **certified training** and **capacity building modules**.
  - The training is proposed to deliver through **well-structured training modules**. These modules are provided online through the **National Urban Learning Platform** (NULP).

#### 📁 **National Institute of Urban Affairs(NIUA)**

- Established in → **1976**.
- It is a premier institute of the **Ministry of Housing and Urban Affairs**,
- Purpose → It aims to **bridge the gap** between **research and practice on issues related to urbanization**. Further, it suggests ways and mechanisms to address urban challenges in the country.
- Significance → The institute has **utilized its competencies in research, knowledge management, policy advocacy and capacity building** to address urban challenges. Further, NIUA continuously strives to develop sustainable, inclusive and productive urban ecosystems in the country.

#### 📁 **National Urban Learning Platform(NULP)**

- National Urban Learning Platform (NULP) is an initiative of the **Ministry of Housing and Urban Affairs** and **National Institute of Urban Affairs(NIUA)**.
- Aim → The platform aims to **empower India's urban functionaries, administrators, elected representatives, civil society, industry actors** and **other ecosystem players**. The NULP also aims to empower them to build smart, inclusive, sustainable and resilient cities.

## 22. National Startup Advisory Council

### Why in News?

- The first meeting of the National Startup Advisory Council (NSAC) was held recently.

### About

- Constituted by → the '**Department for Promotion of Industry and Internal Trade** (DPIIT).
- Purpose → Its role is to **advise the Government** on measures **needed to build a strong ecosystem for nurturing innovation and startups** in the country to drive sustainable economic growth and generate large scale employment opportunities.
- Functions of NSAC →
  - Suggest measures to **foster a culture of innovation** amongst citizens and students.
  - **Promote innovation in all sectors of economy** across the country, including semi-urban and rural areas.
  - **Support creative** and **innovative ideas through incubation and research** and development to transform them into valuable products.
- Structure of NSAC →
  - The National Startup Advisory Council will be **chaired by the Minister for Commerce & Industry**.
  - The Council will **consist of the non-official members**, to be nominated by the Central Government.

- The **nominees** of the concerned **Ministries/ Departments/ Organisations**, not below the rank of Joint Secretary to the Government of India, will be ex-officio members of the Council.

### 23. Eatsmart Cities Challenge and Transport 4 All Challenge

#### Why in News?

- Ministry of Housing and Urban Affairs launched the EatSmart Cities Challenge and Transport 4 All Challenge.

#### About Eatsmart Cities Challenge

- The EatSmart Cities Challenge is envisioned as a **competition among cities** to **recognize their efforts** in adopting and scaling up various initiatives under Eat Right India.
- The challenge is **open to all Smart Cities, capital cities of States /UTs**, and **cities** with a population of more than 5 lakh.
- Objective → It aims to **motivate Smart Cities to develop a plan** that **supports a healthy, safe and sustainable food environment** supported by institutional, physical, social, and economic infrastructure along with the application of 'smart' solutions to combat food related issues.
- Significance → The challenge has a **potential to create social and behavioural change** towards food safety, hygiene and nutrition.

#### 📁 Transport 4 All Challenge

- The initiative has been launched in **collaboration with The Institute for Transportation and Development Policy (ITDP)** and aims to **bring together cities, citizen groups**, and **start-ups to develop solutions** that improve public transport.
- ITDP is a **non-governmental non-profit organization** that **focuses on developing bus rapid transit systems, promoting biking, walking**, and non-motorized transport, and improving private bus operators margins.
- Objective → The **Transport 4 All Digital Innovation Challenge** Aims to **develop digital solutions** that will make public transport safe, affordable, comfortable, and reliable for all.
- Significance →
  - COVID-19 has **brought the entire world to a halt with transport** being one of the **worst-hit sectors**. **Transport 4 All Digital Innovation Challenge** has the potential to support cities to recover from this mobility crisis.
  - It will **support the cities** and **start-ups all over the country** to move towards digital transformation in urban mobility.

### 24. National Internet Exchange of India (NIXI)

#### Why in News?

- Recently, the Secretary Ministry of Electronics & Information Technology (MeitY) & Chairman NIXI has inaugurated three path breaking initiatives for National Internet Exchange of India (NIXI).

#### About IPv6 Expert Panel (IP Guru)

- It is a **group to extend support to all the Indian entities** who are finding it technically challenging to **migrate and adopt IPv6**. It will be **offering its services free of cost**.
- It's a joint effort of the Department of Telecom (**DOT**), **MeitY** and **industry**.

### NIXI Academy

- NIXI Academy is created to **educate technical/non-technical people in India to learn and relearn technologies** like IPv6 which are normally not taught in Educational Institutes.
- Successful candidates (after passing examination) can take a **certificate from NIXI**, which will be **useful to find/upgrade jobs** in the Industry.

### NIXI-IP-INDEX

- NIXI has developed an **IPv6 index portal** for the **Internet community**.
- NIXI-IP-INDEX portal will **showcase the IPv6 adoption rate** in India and across the world. It can be used to **compare IPv6 Indian adoption rate** with **other economies** in the world.
- It will also include details about **web adoption in IPv6**, **IPv6 traffic** etc.

### 📁 National Internet Exchange of India (NIXI)

- It is a **not for profit Organization** under **section 8** of the **Companies Act 2013**.
- It was **set up for peering of ISPs among themselves** for the **purpose of routing the domestic traffic** within the country.
- It is **working since 2003** for spreading the internet infrastructure to the citizens of India through the following activities:
  - **Internet Exchanges** through which the internet data is exchanged amongst ISP's, Data Centers and CDNs.
  - **.IN Registry**, managing and operation of .IN country code domain and **.भारत IDN domain** for India.
  - **IRINN**, managing and operating Internet protocol (IPv4/IPv6)

## 25. Regulations Review Authority 2.0

### Why in News?

- The Reserve Bank of India (RBI) has recently set up the Regulations Review Authority 2.0.

### About

- It will **review regulatory prescriptions internally** as well as **by seeking suggestions** from RBI-regulated entities for simplification and ease of implementation.
- Deputy Governor **M. Rajeshwar Rao** has been **appointed** as the **Regulations Review Authority**.
- The authority would have **validity** for a **period of one year from May 1**.
- The RBI had set up a **similar authority in 1999** for **reviewing regulations, circulars, and reporting systems**.
- The recommendations **enabled streamlining** and **increasing the effectiveness of several procedures**, paving the way for issuance of master circular and reducing reporting burden on regulated entities.

## 26. Currency watch list

### Why in News?

- The US treasury places India along with 10 other countries on its currency watch list.

### About currency manipulation

- What is it? → Currency Manipulators are countries engaging in “**unfair currency practices**” by **deliberately devaluing their currency against the dollar**.
- The practice would mean that the country in question is **artificially lowering the value of its currency**. By that, it aims to gain an unfair advantage over others.
- This is because the **devaluation** would **reduce the cost of exports** from that country. Thus, **more exports** will result in a **reduction in trade deficits**.
- Criteria → US places a country on Currency Watch List if it is **meeting any two** of the below three criteria. **This includes**:
  - A significant (at least \$20 billion) bilateral trade surplus.
  - A material current account surplus.
  - Persistent one-sided intervention in forex markets.
- Impact → The designation of a country as a currency manipulator does **not immediately attract any penalties**. However, it **lowers the confidence** about a country in the global financial markets.

## 27. Startup India Seed Fund Scheme

### Why in News?

- Union Minister of Commerce & Industry launches the Startup India Seed Fund Scheme (SISFS).

### About

- It was announced in the ‘**Prarambh: Startup India International Summit**’ that marks the five-year anniversary of the Startup India initiative.
- Aim → Startup India Seed Fund Scheme(SISFS) aims to **provide financial assistance to startups**. Assistance is provided for **proof of concept, prototype development, product trials, market entry, and commercialization**.
- Implementation → The Department for Promotion of Industry and Internal Trade (DPIIT) constituted An **Experts Advisory Committee(EAC)**. Which will be **responsible for the overall execution and monitoring** of the Startup India Seed Fund Scheme.
- Funding →
  - Eligible incubators** throughout India will **hand out funding to eligible startups across India**.
  - Grants of up to Rs 5 Crores** shall be provided to the eligible incubators selected by the EAC.
  - The **selected incubators** shall provide **grants of up to Rs 20 lakhs** for validation of Proof of Concept, or prototype development, or product trials to startups.
  - After that, Startups will **further receive investments of up to Rs 50 lakhs** for market entry, commercialization, or scaling up through convertible debentures or debt-linked instruments.
- Duration → The scheme will have a corpus of **Rs. 945 Crore**. This will be divided over the **next 4 years**.

- **Online portal** created for the scheme by Department for Promotion of Industry and Internal Trade (DPIIT) will **allow incubators to apply it**.
- Significance →
  - The SISFS will **Secure** seed funding, **Inspire** innovation, **Support** transformative ideas, **Facilitate** implementation, and **Start** startup revolution.
  - It will create a **robust startup ecosystem**, particularly in Tier 2 and Tier 3 towns of India, which are often deprived of adequate funding.

## 28. Sudarshan Sen committee

### Why in News?

- Reserve Bank of India(RBI) has set up the Sudarshan Sen committee to review the working of Asset Reconstruction Companies (ARCs) Comprehensively.

### About

- Committee headed by → **Sudarshan Sen**.
- Terms of reference →
  - To **review the existing legal and regulatory framework** applicable to ARCs and recommend measures to improve efficacy of ARCs.
  - To **review the role of ARCs in the resolution of stressed assets**, including under the Insolvency and Bankruptcy Code (IBC), and give suggestions for improving liquidity in and trading of security receipts.

### 📌 Asset Reconstruction Company (ARC)

- Asset Reconstruction Company (ARC) is a **specialized financial institution** that **buys the Non-Performing Assets** (NPAs) from banks and financial institutions. It **helps banks** in **cleaning up their balance sheets**.
- Thus, it **helps** banks to **concentrate on normal banking activities**. Banks, Instead of going after the defaulters, can focus on selling their bad assets to the ARCs at a **mutually agreed value**.
- Regulated by →
  - Legal Basis: **SARFAESI** (Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest) **Act, 2002** provides the **legal basis** for the **setting up of ARCs** in India.
  - Functions under: ARCs function under the **supervision and control of the Reserve Bank of India** (RBI).
  - Capital Requirements for an ARC →
  - As per the **SARFAESI Act**, ARCs should have a **minimum net owned funds** of **Rs. 100Cr**.
  - The ARCs also have to maintain a **capital adequacy ratio** of **15% of its risk-weighted assets**.
  - The amount of **Risk-weighted assets helps** to determine the minimum capital that a bank must hold to **reduce the risk of insolvency**.

## 29. Codex Committee on Spices and Culinary Herbs (CCSCH)

### Why in News?

- Recently, the 5th session of the Codex Committee on Spices and Culinary Herbs (CCSCH) has been inaugurated in order to harmonize Codex standards for spices products in global trade.

## About

- Establishment → It was **formed in 2013**.
- Terms of Reference →
  - To **elaborate worldwide standards for spices and culinary herbs** in their dried and dehydrated state in whole, ground, and cracked or crushed form.
  - To consult, as **necessary, with other international organizations** in the standards development process to avoid duplication.
- Host → **India** is the **host country** and **Spices Board India** is the Secretariat for organising the sessions of the committee.
- Spices Board (**Ministry of Commerce and Industry**) is the **flagship organization** for the development and worldwide promotion of Indian spices.

### **Codex Alimentarius Commission (CAC)**

- What is it? → It is an **intergovernmental food standards body**, set up in **May 1963**.
- Bodies involved → It was established **jointly by** the UN's Food and Agriculture Organisation (**FAO**) and the World Health Organisation (**WHO**), within the framework of the Joint Food Standards Programme.
- Objective → To **protect consumer's health** and **ensure fair practices** in food trade.
- Members → Currently, **189 members** (188 UN member countries and the European Union).
  - **India** became a **member in 1964**.
  - Timor-Leste is the latest country to join it in 2018.
- **Voluntary in nature**, Codex standards can be general or specific and are recognised by WTO Agreements as reference standards for international trade and trade dispute settlement.
- Meeting → **Once a year** alternating between Geneva and Rome.
- Funding → **Through regular budgets of WHO and FAO** with all work subject to approval of the two governing bodies of the parent organizations.

## 30. Dogecoin

### Why in News?

- Dogecoin's value has risen phenomenally this week– adding around \$19.9 billion in the last 24 hours and now valued at \$34 billion.

### About

- Dogecoin is a **Cryptocurrency created in 2013** by software engineers **Billy Markus** and **Jackson Palmer**. It was created as a **faster alternative to Bitcoin**.
- Origin → Dogecoin was **started as a satire** on the numerous fraud crypto coins that had sprung up at the time. It takes its **name and logo from a Shiba Inu meme** that was viral several years ago.
- How is it different from Bitcoins? → **Bitcoins** fixed the **maximum possible number** as **21 million** (a figure that is estimated to be reached by 2040). But the **Dogecoin numbers** do not have an **upper limit** and there are **already more than 100 billion in existence**.
- The reason behind Dogecoin's Rise → The main reason believed to be behind Dogecoin's rise is its **listing on Coinbase** (Coinbase is the most popular virtual currency exchange in the US).

- Concerns → Cryptocurrencies are considered **highly volatile** and **may crash as fast** as they rise. This is because they do **not have any intrinsic value** such as **land** or **gold**. Further, they are also **susceptible to manipulation by small groups** who often hold large numbers of virtual currency in circulation.

### 31. Ways and Means Advances

#### Why in News?

- The Reserve Bank of India (RBI) decided to continue with the existing interim Ways and Means Advances (WMA) scheme limit of ₹51,560 crore for all States/ UTs shall for six months i.e., up to September 30, given the prevalence of COVID-19.

#### About

- Background → The WMA scheme for the Central Government was **introduced on April 1, 1997**, after putting an end to the four-decade old system of adhoc (temporary) Treasury Bills **to finance the Central Government deficit**.
- They are **temporary loan facilities** provided **by RBI** to the government to enable it to **meet temporary mismatches** between revenue and expenditure.
- The **government makes an interest payment to the central bank** when it borrows money.
- The rate of interest is the **same as the repo rate**, while the tenure is **three months**.
- The **limits** for WMA are **mutually decided** by the RBI and the Government of India.
- States are allowed an **overdraft facility** (to borrow in excess of WMA limit) of **21 days**.
- Significance of this move → The **increased limit** comes at a time when government expenditure is **expected to rise as it battles the fallout of a spreading Coronavirus**. The availability of these funds will government some **room to undertake short term expenditure** over and above its long term market borrowings.

### 32. Energy Transition Index 2021

#### Why in News?

- The World Economic Forum(WEF) has released the Energy Transition Index, 2021.

#### About

- What is it? → Energy Transition Index is an annual report **by the World Economic Forum** (WEF). It prepares the report in collaboration with Accenture.
- Purpose → The ranking aims to **enable policy-makers and businesses to plan** for a successful energy transition.
- ETI checks the readiness of countries for **transition to secure, sustainable, affordable, and inclusive energy systems**.
- Parameters → The index **ranks 115 countries** on the basis following three dimensions:
  - Economic development and growth,
  - Environmental sustainability and
  - Lastly, Energy security and access;

#### 📌 Key Takeaways

- Sweden tops** the index. It is followed by **Norway** and **Denmark**.

- **India ranks at the 87th** position among 115 countries in the Energy Transition Index (ETI).

#### 👉 World Economic Forum

- The World Economic Forum (WEF) is a **Swiss non-profit foundation** established in **1971**, based in **Geneva, Switzerland**.
- Recognized by the Swiss authorities as the international institution **for public-private cooperation**.
- Mission → Committed to **improving the state of the world** by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas.
- Some major reports published by WEF are →
  - **Global Competitiveness Report.**
  - **Global Gender Gap Report.**
  - **Global Risk Report.**
  - **Global Travel and Tourism Report.**

### 33. Large Area Certification

#### Why in News?

- 14,491 ha area of UT of A&N Islands becomes the first large contiguous territory to be conferred with organic certification under 'Large Area Certification' scheme.

#### About

- What is it? → Department of Agriculture and Farmers Welfare **under its flagship scheme** of Paramparagat Krishi Vikas Yojna (**PKVY**) has launched a **unique quick certification programme** "Large Area Certification" (LAC) to harness these potential areas.
- Features →
- Under LAC, **each village** in the area is **considered as one cluster/group**.
- All farmers with their farmland and livestock need to **adhere to the standard requirements** and on **being verified get certified** en-mass without the need to go under conversion period.
- Certification is **renewed on annual basis** through **annual verification** by a process of peer appraisals as per the process of PGS-India.

#### 👉 Benefits of LAC:

- As per the established norm of organic production systems, the areas having **chemical input usage history** are **required** to **undergo a transition period of minimum 2-3 years** to **qualify as organic**.
- During this period, farmers need to **adopt standard organic agriculture practices** and keep their farms under the certification process.
- On successful completion, such farms can be **certified** as **organic after 2-3 years**. The certification process also requires **elaborate documentation and time to time verification** by the certification authorities.
- Whereas under LAC requirements are **simple** and the **area can be certified almost immediately**.

### 34. Power Grid Infrastructure Investment Trust

#### Why in News?

- The Power Grid Corporation of India (PGCIL) launched its Infrastructure Investment Trust (InvIT) - PowerGrid Infrastructure Investment Trust (PGInvIT).

## About

- What is it? → It is the **first infrastructure investment trust** (InvIT) to be launched by a public sector company.
- It has offered a **price band of Rs 99-100 per unit** for the public issue.
- The InvIT will **raise Rs 4993 crore** as **fresh issuance** and PGCIL is also providing an **offer for sale** (OFS) of **Rs 2742 crore** of existing units.
- It **owns, construct, operate, maintain** and **invest in power transmission assets** in India.
- It is **registered with** Securities and Exchange Board of India (**SEBI**) as an InvIT.
- The Units of POWERGRID InvIT are proposed to be **listed on BSE Limited** (BSE) and National Stock Exchange of India Limited (**NSE**).
- It will be the **third InvIT after IRB InvIT** and **India Grid Trust** to be listed in India.
- Significance →
  - The net proceeds will be used to **provide loans to the initial portfolio assets for repayment** or **pre-payment** of their debt.
  - The government has allowed Power Grid to **monetise its other TBCB subsidiaries** through the InvIT route, which are under construction or will be acquired by it in the future.”

### Power Grid Corporation of India (PGCIL)

- It is a “**Maharatna**” **Central Public Sector Enterprise**.
- It is the **largest power transmission company** in India.
- It is engaged in project **planning, designing, financing, constructing, operating, and maintaining** power transmission projects across India.

## 35. Agriculture Infrastructure Fund

### Why in News?

- Agriculture Infrastructure Fund has crossed the Rs. 8000 crore mark after receiving 8,665 applications worth Rs. 8,216 crores.

### About

- What is it? → It is a **medium – long term debt** financing facility for investment in viable projects **for post-harvest management infrastructure** and **community farming assets** through interest subvention and credit guarantee.
- Duration → Financial Year **2020 to 2029**.
- Under the scheme, **Rs. 1 Lakh Crore** will be provided **by banks and financial institutions as loans** with **interest subvention of 3% per annum** and **credit guarantee** coverage under CGTMSE for loans up to Rs. 2 Crores.
- Eligible Beneficiaries →
  - Farmers, FPOs, PACS, Marketing Cooperative Societies, SHGs, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Start-ups, and Central/State agency or Local Body sponsored Public-Private Partnership Projects.
- Interest subvention →

- All loans under this financing facility will have **interest subvention** of **3% per annum up** to a **limit of Rs. 2 crore**.
- This subvention will be available for a **maximum period of seven years**.
- Credit guarantee →
  - **Credit guarantee coverage** will be available for eligible borrowers from this financing facility under **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)** scheme for a loan **up to Rs. 2 crore**.
  - The fee for this coverage will be paid by the Government.
  - In **case of FPOs** the credit guarantee may be availed from the facility created **under FPO promotion scheme** of Department of Agriculture, Cooperation & Farmers Welfare (DACFW).
- Management of the fund →
  - It will be managed and monitored through an **online Management Information System (MIS) platform**.
  - The **National, State** and **District level Monitoring Committees** will be set up to ensure real-time monitoring and effective feed-back.

### 36. New Umbrella Entity

#### Why in News?

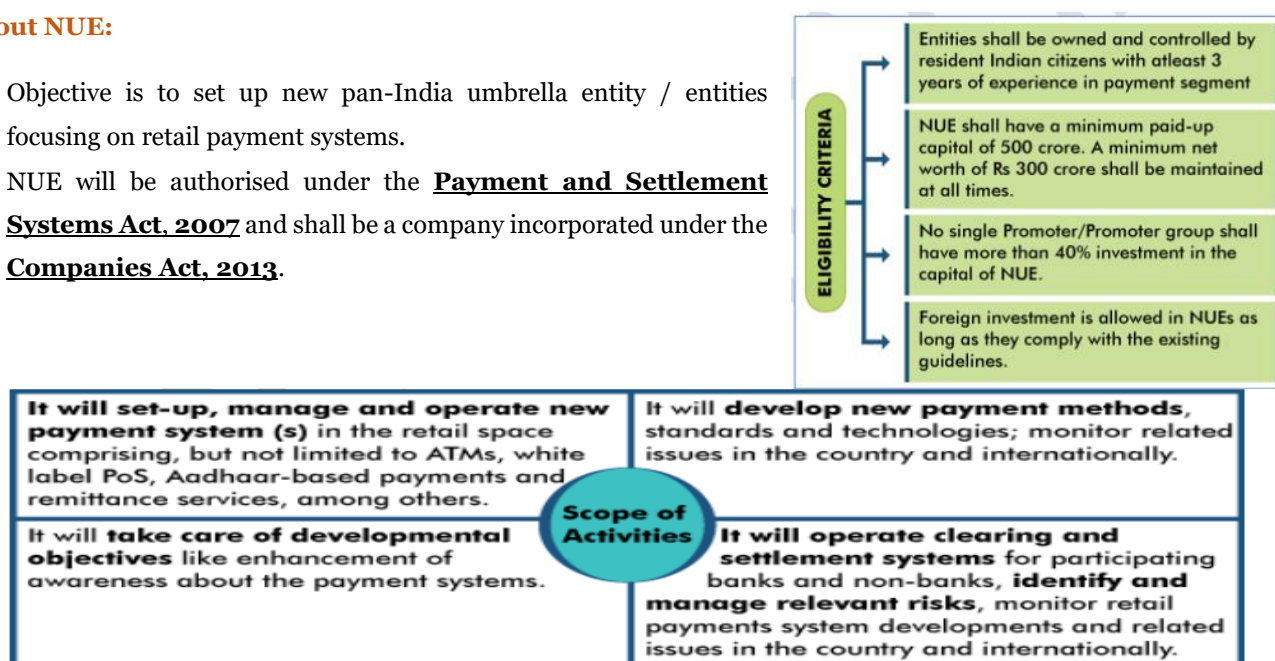
- Recently, Reserve Bank of India (RBI) extended the deadline to apply for NUE (New Umbrella Entity) to March 31.

#### About

- In August last year, RBI had released a framework for authorization of an umbrella entity for **retail payments** and had invited applications from desirous entities by February 26, 2021.
- According to reports, several companies have partnered with banks and major tech players to apply for NUEs.

#### About NUE:

- Objective is to set up new pan-India umbrella entity / entities focusing on retail payment systems.
- NUE will be authorised under the **Payment and Settlement Systems Act, 2007** and shall be a company incorporated under the **Companies Act, 2013**.



### Benefit of the move:

- More such entities will **encourage competition** and will offer more **retail payment solutions** to customers.
- NUE will offer innovative payment systems to **include** hitherto excluded cross-sections of the society and will also **enhance access, customer convenience and safety**.
- Just like NPCI runs UPI, IMPS and other payment modes, the NUEs will create **similar mechanisms** which will then be used by banks and fintech companies.
- Entities planning to establish these NUEs **aim to get an even bigger share in the digital payments sector**.
- As per recent reports, **one third of Indian households are using digital payments** in some form or the other.

### About National Payments Corporation of India (NPCI):

- NPCI is an umbrella organisation for **operating retail payments** and **settlement systems** in India.
- It is an initiative of **RBI and Indian Banks' Association** (IBA) under the provisions of the **Payment and Settlement Systems Act, 2007**.
- 10 core promoter banks are State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Union Bank of India, Bank of India, ICICI Bank, HDFC Bank, Citibank and HSBC
- It has been incorporated as a **"Not for Profit" Company** under **Companies Act 1956** with an intention to provide **infrastructure to the entire Banking system in India** for **physical** as well as **electronic payment** and settlement systems.

# Environment

## 1. Nacaduba sinhala ramaswamii Sadasivan

### Why in News?

- A group of lepidopterists have found a new butterfly species in India.

### About

- The discovery of the species Nacaduba sinhala ramaswamii Sadasivan, 2021 in the Agasthyamalais in the Western Ghats a decade ago has now found place in the Journal of Threatened Taxa.
- The new taxon of Lycaenid butterflies belongs to the Nacaduba genus.
- Line Blues are small butterflies belonging to the subfamily Lycaenidae and their distribution ranges from India and Sri Lanka to the whole of south-eastern Asia, Australia and Samoa.
- It is the first time that a butterfly species was discovered by an all-Indian research team from the Western Ghats.



## 2. Global Wind Report 2021

### Why in News?

- 2020 was a record year for the global wind power industry despite the impacts of COVID-19, but we are still falling short to meet the world's climate targets.

### About

- Released by → The Global Wind Energy Council (GWEC).
- The Global Wind Report highlights the role of wind power on the road to net zero emissions.

#### 👉 Key Findings of the report:

- Wind Energy → The world's capacity to generate electricity from wind jumped 53% in 2020. A total 93 gigawatts (GW) capacity was installed in the year.
- Current Global Wind Energy Capacity → At present, the world has a total wind energy capacity of 743 GW.
- China and the United States accounted for 75% of the new installations and over half the world's wind power capacity.
- India's Wind Power Capacity → Wind power generation capacity in India has significantly increased in recent years.
- As of February 2021, India's total installed wind power capacity was 38GW, the fourth largest installed wind power capacity in the world.

#### 👉 Global Wind Energy Council(GWEC)

- The Global Wind Energy Council(GWEC) was established in 2005 to provide a credible and representative forum for the entire wind energy sector at an international level.

- Aim → It's mission is to ensure that **wind power is established** as **one of the world's leading energy sources**, providing substantial environmental and economic benefits.
- Headquarters → **Brussels, Belgium**.

### 3. Amboli- biodiversity heritage site

#### Why in News?

- The Maharashtra government declared an area at Amboli in Western ghats in Sindhudurg district, where a rare freshwater fish species Schistura Hiranyakeshi was discovered, as a biodiversity heritage site.

#### About

- Schistura Hiranyakeshi is a **rare sub-species of Schistura**, a **freshwater loach**. The fish was named after the Hiranyakeshi river near Amboli village.
- Schistura is a **small and colourful fish** that lives in water and streams in an abundance of oxygen.
- Earlier, the State government had declared the **Glory of Allapalli** in Gadchiroli district, **Landor Khori Park** in Jalgaon, **Ganesh Khind** in Pune, **myristica swamp vegetation** in Sindhudurg district as biodiversity heritage sites.

#### Biodiversity Heritage Sites

- These are **notified areas of biodiversity importance** in India.
- The Indian **State Government can notify** the Biodiversity Heritage Sites in **consultation with local governing bodies** under Section 37 of Biological Diversity Act of 2002.
- These areas are considered **unique** and **fragile ecosystems**.
- They can be either **terrestrial**, **coastal** and **inland waters** or **marine ecosystems**.

### 4. Jammu and Kashmir Lakes

#### Why in News

- Srinagar's Dal Lake along with five other ones in Jammu and Kashmir are to be declared protected wetlands.

#### About

- Other lakes - **Wular Lake**, **Nigeen Lake** in the Kashmir region; **Sanasar Lake**, **Manasbal Lake** and **Purmandal lake** or **Chotta Kashi** (in Samba district) in the Jammu region.
- The **decision was taken in the meeting** of the Jammu and Kashmir Wetland Authority, chaired by Chief Secretary.
- Forest Department will **prepare digital inventory, documentation and geo-spatial database on wetlands**, to profile various wetlands of Jammu and Kashmir and recommend their notification under the **Environment Protection Act and Wetland (Conversation & Management) rules**.

#### 👉 Dal Lake:

- It is a **lake in Srinagar**, the summer capital of Jammu and Kashmir, India.
- It is **an urban lake**, which is the **second largest in the union territory** of Jammu and Kashmir.
- It is named the "**Lake of Flowers**", "**Jewel in the crown of Kashmir**" or "**Srinagar's Jewel**".

- The lake is also an important **source for commercial operations** in fishing and water plant harvesting

#### 👉 Wular Lake

- It is **one of the largest fresh water lakes in Asia**.
- It is sited in Jammu and Kashmir, India.
- The lake basin was formed as a **result of tectonic activity** and is **fed by the Jhelum River**.
- In **ancient times**, Wular Lake was also called **Mahapadmasar**.
- The lake is **one of the 42 Indian wetlands** designated as a **Ramsar site**.

#### 👉 Nigeen Lake

- It is a **mildly eutrophic lake** located in **Srinagar**, Jammu and Kashmir, India.
- It is sometimes considered **a part of the Dal lake** and is connected to it via a **narrow strait**.

#### 👉 Purmandal (also called Chhota Kashi)

- It is a village located on the **Devika River in Samba district**, Jammu and Kashmir, India.
- The village and its temples are a **pilgrimage site for Hindus**, who believe bathing in the river cleanses the soul.

## 5. Pong Dam Wildlife Sanctuary

### Why in News?

- As many as 27 migratory birds died on account of avian influenza in Himachal Pradesh's Pong Dam Wildlife Sanctuary.

### About

- The dam was **created in 1975** and was declared as a **wildlife sanctuary in 1983**.
- Location → Pong Dam Wildlife Sanctuary or Pong Dam Reservoir or Pong Dam Lake is in **Himachal Pradesh**.
- Ramsar Site → In 1994, Government of India declared Pong Dam Lake as a **"Wetland of National Importance"**. In **2002**, it **became a Ramsar Site** in November 2002 by government notification.
- Vegetation → The sanctuary area is covered with **tropical and subtropical forests**. Thus, it shelters a great number of Indian Wildlife animals.
- Rivers → The lake is **fed by the Beas River**. Its numerous perennial tributaries are Gaj, Neogal, Binwa, Uhl, Bangana, and Baner.
- Fauna → The sanctuary is a host to around **220 species of birds** belonging to **54 families**. Migratory birds from **all over Hindukush Himalayas** and also as **far as Siberia** come here during winter.

## 6. Mahendragiri Biosphere Reserve

### Why in News?

- The Odisha government has proposed a second biosphere reserve in the southern part of the state at Mahendragiri, a hill ecosystem having rich biodiversity.

### About

- It is around **470,955 hectares** and is spread over **Gajapati and Ganjam districts** in the Eastern Ghats.
- Transitional Zone → The hill ecosystem **acts as a transitional zone** between the flora and fauna of southern India and the Himalayas. Consequently, the region is an **ecological estuary of genetic diversity**
- Mythological Significance → Centre has included **Mahendragiri in the Ramayana Circuit**. The hilltop has ancient **temples of Kunti, Yudhistir, Bhima, Arjuna, Nakul** and **Sahadev of the Mahabharata**.
- Besides, the hill has water streams and the **origin of the Mahendratanya River**.
- Vegetation → The vegetation of the Mahendragiri hill complex are basically of four types – **Sal forests, mixed forests, grassland, and scrubs**.
- Tribe → Some of the major tribes that inhabit Mahendragiri are the **Soura tribe**, a particularly vulnerable tribal group, also the **Kandha tribe**.
- Flora → Mahendragiri accounts for **40%** of the **reported flora of Odisha**. **29-nine of the 41 species** of **threatened medicinal plants** of Odisha are found in the proposed biosphere reserve area.
- Fauna → The **Indian elephant** is the most important animal of Mahendragiri. The other wild animals include the **tiger, leopard, hyena, wild bear, deer, antelope, peacock, snake**.
- Besides, it is **home to 165 species of birds, 23 species of snakes, 15 species of amphibians**, three species of turtles, and 19 lizards.

### What are biosphere reserves?

- Biosphere Reserve (BR) is an international **designation by** United Nations Educational, Scientific and Cultural Organization (UNESCO) for representative **parts of natural and cultural landscapes extending over large areas** of terrestrial or coastal/marine ecosystems or a combination of both.
- Biosphere Reserves tries to **balance economic and social development** and **maintenance** of associated cultural values along with the preservation of nature.
- The concept of Biosphere Reserves was **launched in 1971** as a, part of United Nations Educational, Scientific and Cultural Organization (UNESCO)'s '**Man and Biosphere Programme**'.
- Criteria for Designation of Biosphere Reserve →
  - A site must contain a **protected and minimally disturbed core area** of value of nature conservation.
  - Core area must be a **bio-geographical unit** and should be large enough to sustain a viable populations representing all trophic levels.
  - The **involvement of local communities** and **use of their knowledge in biodiversity preservation**.
  - Areas **potential for preservation of traditional tribal** or **rural modes** of living for harmonious use of the environment.

## 7. Rosefinch

### Why in News?

- New species from Arunachal added to India's bird list.

### About Rosefinch

- The three-banded rosefinch is a **resident of southern China and a vagrant in Bhutan**.
- The new species of bird was found during an **intensive survey of finches across the Eastern Himalayas** as a part of an ongoing study.

- The survey team members spotted the **three-banded rosefinch** with a **flock of white-browed rosefinch**, a species commonly seen in this landscape.
- The altitudinal record of the sighting of this species from India is **higher than its previous known altitudinal record from China**. This has opened up interesting ecological research on this species.
- The **three-banded rosefinch** belongs to the **family Fringillidae**, which are **seed-eating passerine birds** with a **distinctively conical bill**.
- Little information is available on the ecology of this species.
- IUCN status → **Least Concern**.

## 8. Dolphin Census

### Why in News?

- The Odisha State Forest and Environment Department released the final data on the dolphin census. The census covers almost the entire coast of Odisha.

### About

- The **population of dolphins in Chilika**, India's largest brackish water lake, and along the Odisha coast has **doubled this year** compared with last year.
- Three species were recorded during the census, with **544 Irrawaddy**, **bottle-nose** and **humpback dolphins sighted this year**, compared with 233 last year.
- The **rise** in the **Irrawaddy dolphin population** in Chilika can be attributed to the **eviction of illegal fish enclosures**.

#### 👉 Irrawaddy Dolphins:

- Irrawaddy Dolphins (*Orcaella Brevirostris*) are **oceanic dolphins**. Thus, It **resides in brackish water** near coasts, river mouths, and estuaries in South and Southeast Asia.
- Features → They have a **bulging forehead** and **short beak**. Further, They pop out their head out of the water to breathe.
- Habitat → It extends from the **Bay of Bengal to New Guinea** and the **Philippines**.
- Rivers → They reside in **three rivers** namely The **Irrawaddy** (Myanmar), the **Mahakam** (Indonesian Borneo), and **the Mekong**.
- Population → As per estimations, there are **less than 7500 Irrawaddy Dolphins** in the world. More than 6,000 Irrawaddy dolphins have been reported from Bangladesh.
- IUCN Status → **Endangered**.

#### 👉 Humpback Dolphin

- Humpback dolphins stay in **relatively shallow nearshore waters** throughout their range. It includes most of the **coastlines in Australia, Africa, and Asia**.
- Species → There are **four species** of humpback dolphins with very little overlap between their ranges:
  - **Indo-Pacific humpback dolphin** (IUCN Status: **Vulnerable**)
  - **Indian Ocean humpback dolphin** (IUCN Status: **Endangered**)
  - **Atlantic humpback dolphin** (IUCN Status: **Critically Endangered**)

- **Australian humpback dolphin**(IUCN Status: **Vulnerable**).

#### **Bottlenose Dolphin:**

- Further, Bottlenose dolphins are the **most common members** of the **family of oceanic dolphins**.
- Bottlenose dolphins **inhabit warm and temperate seas** worldwide. Thus, they are **found everywhere** except for the Arctic and Antarctic Circle regions.
- Species → Following are three species of Bottlenose dolphins:
  - **Common bottlenose dolphin**\_(IUCN Status: **Least Concern**)
  - **Indo-Pacific bottlenose dolphin**\_(IUCN Status: **Near Threatened**)
  - **Burrnunan dolphin**\_(IUCN Status: Yet to be categorised).

## 9. Navegaon-Nagzira Tiger Reserve

### Why in News?

- Three labourers were killed and two others injured during an operation to douse a forest fire at Navegaon-Nagzira Tiger Reserve (NNTR) in Maharashtra.

### About

- Location → **Maharashtra**.
- It was notified as the **46th Tiger Reserve** of India in December 2013.
- NNTR comprised of the notified area of **Nawegaon National Park**, **Nawegaon Wildlife Sanctuary**, **Nagzira Wildlife Sanctuary**, **New Nagzira Wildlife Sanctuary** and **Koka Wildlife Sanctuary**.
- Flora →
- The major forest type is "**Southern Tropical Dry Deciduous Forest**".
- **Few thorny plants** are also found.
- **Bamboo** occurs in abundance.
- Fauna →
- Large Carnivores such as **leopards** and smaller carnivores like **wild dogs**, **wolf jackals**, **jungle cats** and also the good population of sloth bears are seen.
- The important herbivore includes **Cheetal**, **Sambar**, **Nilgai**, **Chousingha**, **Barking deer**, **Wild pig** and **Indian gaur**. **Mouse deer** has also been recorded from the area.
- **More than 300 species of birds** have been reported from the area.
- Other Protected Areas in Maharashtra →
  - Sahyadri Tiger Reserve.
  - Melghat Tiger reserve.
  - Great Indian Bustard Sanctuary.
  - Karnala Bird Sanctuary.
  - Sanjay Gandhi National Park.
  - Pench National Park.

## 10. Danube Sturgeon

### Why in News?

- According to a report released by the World Wildlife Fund (WWF), illegal sale of Danube Sturgeon, one of the most endangered species in the world, is rampant in the lower Danube (River) region, especially in Bulgaria, Romania, Serbia and Ukraine.

## About

- Sturgeons have **existed since the time of dinosaurs**, for about 200 million years. Some of the species can **grow up to eight metre** in length and **live more than a century**.
- They are called '**living fossils**' because their appearance has altered very little over the years.
- Because the **sturgeons live for so many years**, mature late and spawn with long intervals, they take a **long time to recover from environmental and human pressures**, according to WWF. This makes them **great indicators** for the **health of the river** and **other ecological parameters**.
- Habitat →
  - There are **27 species** of sturgeons and paddlefishes distributed across the **Northern hemisphere**. While some species **inhabit only freshwater**, most species are **anadromous**, spawning in freshwater but **spending much of their life history in marine or brackish environments**.
  - Danube sturgeons live mostly in the **Black Sea, migrating up the Danube** and other major rivers to spawn.
- Threats → **Over-exploitation** and **poaching, Blocked migration routes** through dams etc.
- Protection Status →
  - IUCN Red list: There are 6 species of sturgeon in the **Danube River**. Five of them are now listed as **critically endangered**.
  - CITES: **Appendix-II**.

## World Wildlife Fund for Nature

- It is the **world's leading conservation organization** and works in more than 100 countries.
- Establishment → **1961**.
- Headquartered → **Gland, Switzerland**.
- Mission → To **conserve nature** and **reduce the most pressing threats** to the diversity of life on Earth.
- Important Initiatives of WWF →
  - **TX2 Goal**
  - **TRAFFIC**
  - **Living Planet Report**
  - **Earth Hour**.

## 📍 Black Sea

- Black Sea is an **inland sea** located between far-southeastern Europe and the far-western edges of the continent of Asia and the country of Turkey.
- It **connects** to the **Mediterranean Sea first through the Bosphorus Strait**, then through the **Sea of Marmara** and the **Dardanelles Strait**, then south through the **Aegean Sea and the Sea of Crete**.
- Bordering Countries → **Romania, Bulgaria, Ukraine, Russia, Georgia, and Turkey**.



## 11. Monkeydactyl

## Why in News?

- Researchers have described a pterosaur species with opposable thumbs, which could likely be the earliest-known instance of the limb.

## About

- The pterosaur species were **reptiles, close cousins of dinosaurs** and the first animals after insects to **evolve powered flight**.
- They **evolved into various species**; while some were as **large as an F-16 fighter jet**, others were as **small as paper airplanes**.
- The new pterosaur fossil was discovered in the **Tiaojishan Formation of Liaoning, China**, and is thought to be **160 million years old**. It has been named ***Kunpengopterus antipollicatus***, also dubbed "**Monkeydactyl**".



## What has the team of researchers found?

- "***Antipollicatus***" in ancient Greek means "**opposite thumbs**", and it was attached to the name because the researchers' findings could be the **first discovery of a pterosaur with an opposed thumb**.
- By studying its forelimb morphology and musculature, they suggest that ***K. antipollicatus*** could have **used its hand for grasping**, which is likely an adaptation for arboreal life.

## 12. Rewaconodon indicus

### Why in News?

- The Tiki Formation in Madhya Pradesh, considered a treasure trove of vertebrate fossils, has now yielded a new species and two genera of cynodonts.

### About

- The researchers from the **Indian Institute of Technology Kharagpur**, who studied about 10 teeth samples collected from Tihki, Madhya Pradesh, have announced the finding of a new species, naming it ***Rewaconodon indicus***.
- The team has also identified **two new genera** under the cynodont species. The first was named ***Inditherium floris*** and the second was named ***Tikiodon cromptoni***.

### 👉 Cynodonts

- The cynodonts are **small rat-like animals** that lived about **220 million years ago**.
- Cynodonts are **important in evolutionary studies** as this group ultimately gave rise to the present-day mammals.
- Cynodonts and living mammals both **belong to a group of egg-laying vertebrates** (amniotes) called **synapsids**. The close relationship of cynodonts with living mammals is seen in their bones. They also have

differentiated teeth, a secondary palate in their mouths, which, like humans, allowed them to breathe and eat at the same time.

### 13. Great Indian Bustards

#### Why in News?

- Recently, a group of hunters shot down two Great Indian Bustards (GIBs) in a protected area of southern Punjab's Cholistan in Pakistan.

#### About

- The Great Indian Bustard is one of the heaviest flying birds in the world. It inhabits dry grasslands and scrublands on the Indian subcontinent.
- Habitat → It is endemic to the Indian subcontinent. In India, the population is confined mostly to Rajasthan and Gujarat. A small population occurs in Maharashtra, Karnataka and Andhra Pradesh.
- Conservation Status →
  - IUCN Red List → It is a critically Endangered species with less than 150 birds left in the wild.
  - CITES → Appendix I
  - Wildlife (Protection) Act, 1972 → Schedule I.
- Characteristics →
  - Great Indian bustards are tall birds with long legs and a long neck; the tallest individuals may stand up to 1.2 metres (4 feet) high.
  - The sexes are roughly the same size, with the largest individuals weighing 15 kg (33 pounds).
  - Males and females are distinguished by the colour of their feathers.
  - Food Habits → Great Indian bustards are omnivores. They prey on various arthropods, worms, small mammals, and small reptiles.
- Threats → The bird is under constant threats due to collision/electrocution with power transmission lines, hunting (still prevalent in Pakistan), habitat loss and alteration as a result of widespread agricultural expansion, etc.

#### 👉 Government's Initiatives:

- It is kept under the species recovery programme under the Integrated Development of Wildlife Habitats of the Ministry of Environment, Forests and Climate Change (MoEFCC).
- The MoEFCC has also launched a program called 'Habitat Improvement and Conservation Breeding of Great Indian Bustard-An Integrated Approach'.
  - The objective of the programme is to build up a captive population of Great Indian Bustards and to release the chicks in the wild for increasing the population.
- Rajasthan government has launched 'Project Great Indian Bustard' with an aim of constructing breeding enclosures for the species and developing infrastructure to reduce human pressure on its habitats.

### 14. Disk-footed Bat

#### Why in News?

- India's first bamboo-dwelling bat with sticky disks, has been found near Nongkhyllam Wildlife Sanctuary in Meghalaya.

## About

- The disc-footed bat (**Eudiscopus denticulus**) was recorded **near the Nongkhylllem Wildlife Sanctuary**.
- The **extent of adaptation for bamboo habitat** in this species is **not seen in the others**.
- The **flattened skull and sticky pads** enabled the bats to roost inside cramped spaces, clinging to smooth surfaces such as bamboo internodes.
- The disc-footed bat was also found to be **genetically very different** from all other known bats bearing disc-like pads.
- Scientists analysed the **very high frequency echolocation calls** of the disc-footed bat, which was suitable for **orientation in a cluttered environment** such as **inside bamboo groves**.
- Significance of this discovery →
  - It has raised Meghalaya's bat count to **66**, the most for any State in India.
  - It has also **helped add a genus and species** to the **bat fauna of India**.

## 15. National Climate Vulnerability Assessment Report

### Why in News?

- The Department of Science and Technology has released a report titled 'The Report Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework'.

## About

- It identifies the **most vulnerable states and districts in India** with respect to current climate risk and key drivers of vulnerability.
- It aids in **prioritizing adaptation investment, developing and implementing adaptation programs**.
- Participation → Around **24 states** and **2 Union Territories** participated in the exercise. The **DST** and the **Swiss Agency for Development & Cooperation (SDC)** organized it jointly.
- Indicators → **Several key drivers** of Vulnerability used by the report for the assessment, For instance:
  - percentage of the population living below the poverty line;
  - income share from natural resources;
  - Also, the proportion of marginal and small landholdings,
  - women's participation in the workforce, and;
  - the density of healthcare workers among others.

### 👉 Key Findings of the Report:

- Highly Vulnerable States → It identified **Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal** as states **highly vulnerable** to climate change.
- Lower-middle Vulnerable States → **Himachal Pradesh, Telangana, Sikkim and Punjab**.
- Low Vulnerable States → **Uttarakhand, Haryana, Tamil Nadu**, Kerala, Nagaland, Goa and Maharashtra.
- Highly Vulnerable Districts → Among all states, **Assam, Bihar, and Jharkhand** have **over 60% districts** in the category of highly vulnerable districts.

## 16. Blue Nature Alliance

### Why in News?

- Blue Nature Alliance has been launched with a goal to restore 7 million square miles of ocean in five years.

### About

- What is it? → The Blue Nature Alliance is a **global partnership** of **five core partners** and few other Non-Profit Organisations.
- The **core partners are** Conservation International, The Global Environment Facility, the Pew Charitable Trusts, Minderoo Foundation and Rob and Melani Walton Foundation.
- Aim → To **safeguard global ocean biodiversity**, **build resilience to climate change**, promote human well-being and enhance ecosystem connectivity.
- Targets → The alliance has a **target to:**
  - Conserve 18 million square kilometres of ocean in five years.
  - Protect 5% of the world's ocean in five years.
  - Help the world achieve 30% ocean conservation by 2030.
- Target Oceans → The Alliance has started by **targeting seven ocean locations**. This includes **Antarctica**, **Fiji**, **Canada**, **Seychelles**, **Palau**, the **Western Indian Ocean** and **Tristan da Cunha**, an **island in the South Atlantic Ocean**.
- The alliance will begin work by **working with local communities** and **national leaders**. It aims to establish new **marine protected areas** (MPAs) and improve the management of existing ones.

### Conservation International (CI)

- Conservation International (CI) is an **American nonprofit environmental organization** founded in **1987**.
- Objective → Its mission is to **spotlight and secure the critical benefits** that **nature provides to humanity**. Such as food, freshwater, livelihoods and a stable climate, etc.
- Headquarters → **Virginia, USA**.

## 17. World Earth Day

### Why in News?

- Every year, 22nd April is celebrated as Earth Day to raise public awareness about the environment and inspire people to save and protect it.

### About

- The year 2021 marks the **51st anniversary** of the annual celebrations.
- World Earth day 2021 theme → **'Restore Our Earth'**.
- The theme **focuses on natural processes**, **emerging green technologies** and **innovative thinking** to restore the world's ecosystems.
- It was celebrated for the **first time** in the **year 1970**.
- In **2009** the United Nations **designated April 22** as **'International Mother Earth Day**
- Aim → The celebration of earth day is to achieve the following objectives.
  - To **build the world's largest environmental movement** to drive transformative change for people and the planet.
  - To **diversify**, **educate** and **activate the environmental movement worldwide**.

- Origin → Earth Day was **first observed** in the year **1970**. The idea of commemorating such a day was advised by Gaylord Nelson, a US senator from Wisconsin, USA.
- Led by → The activities on Earth Day are **led by earthday.org** formerly known as **Earth Day Network**.
  - It is a **US-based international environmental NGO** and has a presence in 195 countries.
- Significance → The **Paris Agreement** brought **almost 200 countries together** in setting a common target to reduce global greenhouse emissions. It was **signed** on **Earth Day 2016**.

#### 📌 Other Important Days

- 22nd March: **World Water Day**.
- 22nd April: **Earth Day**.
- 22nd May : **World Biodiversity Day**.
- 5th June: **World Environment Day**.
- **Earth Overshoot Day**.

## 18. Blue Flag Beaches

### Why in News?

- Recently Odisha government's plan to get Blue Flag Certification for five beaches was opposed by the fishermen.

### About

- Blue Flag beaches are **considered the cleanest beaches** of the world.
- The Blue Flag is one of the **world's most recognised voluntary eco-labels awarded** to beaches, marinas, and sustainable boating tourism operators.
- Criteria for Certification →
  - In order to qualify for the Blue Flag, a **series of stringent environmental, educational, safety, and accessibility criteria** must be met and maintained.
  - There are around **33 criteria** that are to be **met to qualify** for a Blue Flag certification,
    - Such as the **water meeting certain quality standards**, having waste disposal facilities, being disabled- friendly, having first aid equipment, and no access to pets in the main areas of the beach.
  - Some criteria are voluntary and some compulsory.
- Awarded by → Denmark-based non-profit **Foundation for Environmental Education** (FEE) awards Blue Flag Certification.
- On the lines of Blue Flag certification, **India has also launched its own eco-label BEAMS** (Beach Environment & Aesthetics Management Services).
  - Beach Environment & Aesthetics Management Services that comes **under ICZM** (Integrated Coastal Zone Management) **project**.



- This was **launched by the Society of Integrated Coastal Management (SICOM)** and the Union Ministry of Environment, Forest and Climate Change (**MoEFCC**).

## 19. State of the Global Climate Report 2020

### Why in News?

- The World Meteorological Organization (WMO) has released its annual State of the Global Climate Report 2020.

### About Key Findings

- Temperature → **2020** was **one of the three warmest years** on record, despite a cooling La Niña. The other two warmest years were **2016** and **2019**.
- Greenhouse Gases → Concentrations of the major greenhouse gases continued to **increase in 2019 and 2020** despite a temporary reduction in emissions in 2020 due to the COVID-19 response.
- Oceans → In **2020**, the oceans had the **highest heat content** on the record. **Over 80%** of the ocean services area **experienced at least one marine heatwave** in 2020.
- Sea-level rise → Sea level has recently been **rising at a higher rate partly** due to the **increased melting of the ice sheets**.
- Related to India →
  - India experienced one of its **wettest monsoons since 1994**, with a **seasonal surplus of 9%** that led to severe floods and landslides.
  - **Cyclone Amphan** which hit Kolkata in May 2020 was the **costliest** tropical cyclone for the North Indian Ocean region. It brought about an **estimated loss of USD 14 billion**.

### 📌 World Meteorological Organization (WMO)

- WMO is an **intergovernmental organization** established by the ratification of the WMO Convention in **1950**.
- Origin → WMO originated from the International Meteorological Organization(IMO) which was established **after the 1873 Vienna International Meteorological Congress**.
- Members → **193 Member States and Territories**. India is one of the members.
- Significance → It is a **specialized agency of the United Nations** (UN).
- Headquarters → **Geneva, Switzerland**.

## 20. GloLitter Partnerships Project

### Why in News?

- Around 30 Countries from across the oceans have joined the GloLitter Partnerships Project to tackle marine plastic litter.

### About GloLitter Partnerships Project

- Launched by → the International Maritime Organization (**IMO**) and the Food and Agriculture Organization of the United Nations(**FAO**).
- The **Government of Norway** provided **initial funding** for the project.

- Aim → The project aims to **help the maritime transport and fishing sectors** to adapt to a **low-plastic future**. To achieve this goal, this initiative will assist developing countries to apply best practices for prevention, reduction, and control of marine plastic litter from those sectors.
- Participating Countries → **30 Countries** will be participating in the project. **India is one of the participating countries**.
- Significance →
  - The project will **promote compliance** with the **Voluntary Guidelines of the MARPOL Convention**. It contains regulations against discharging plastics into the sea.
  - Further, protecting the marine environment is also the **objective of** Sustainable Development Goal(**SDG**) **14**.

### 📌 MARPOL

- International Convention for the Prevention of Pollution from Ships (MARPOL) is one of the **main international conventions**. It aims at the **prevention of pollution of the marine environment** by ships from operational or accidental causes.
- Adopted in → The Convention was **adopted by** the International Maritime Organisation(**IMO**) on **2nd November 1973**.
- **India is a signatory** to the MARPOL Convention.
- Annexes → The convention currently includes **six technical Annexes**:
  - Annex I: Regulations for the Prevention of Pollution by Oil
  - Annex II: Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk
  - Annex III: Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form
  - Annex IV: Prevention of Pollution by Sewage from Ships
  - Annex V: Prevention of Pollution by Garbage from Ships
  - Annex VI: Prevention of Air Pollution from Ships.

### 📌 International Maritime Organization

- IMO is a **specialized agency of the United Nations**.
- founded in → **1948**.
- Purpose → IMO is responsible for **measures to improve the safety and security** of international shipping and to prevent pollution from ships.
- Headquarters → **London, United Kingdom**

## 21. Climate Resilient Grains

### Why in News?

- United Nations General Assembly unanimously approved the resolution sponsored by India to declare 2023 as the International Year of Millets.

### About Millets

- Millets are a **group of small-seeded grasses, widely grown as cereal crops** or grains for human food and as fodder.
- They are classified into Major Millets and Minor Millets based on their grain size.

Major millets	Minor millets	Pseudo millets
Sorghum (jowar), pearl millet (bajra), finger millet (ragi).	Foxtail, little, kodo, proso and barnyard millet	Amaranth (Rajgira) and Buckwheat (Kuttu). These are not part of the botanical family to which 'true' grains belong; however, they are nutritionally similar and used in similar ways to 'true' grains.

### Millets in India:

- India is the largest producer of millets in the world with a 41.0% global market share. India produced 11.5 million tonnes of millets in 2020.
- During 2017-18, the maximum area under millets was in Rajasthan, followed by Maharashtra and Karnataka.
- Major Millets grow in Kharif season (July to October): Pearl millet/bajra, finger millet/ragi (cereals), and jowar are kharif crops.

### Benefits of Millets production:

Health benefits	Ecological benefits	Economic security
<ul style="list-style-type: none"> <li>Aid in fighting malnutrition as they are rich in <b>rich in fibre, minerals, vitamins</b> and have more nutrient content. E.g., Finger millet has 839% calcium content of wheat and 3,440% that of rice.</li> <li>They are <b>Gluten-free</b> which is advantageous for people suffering from diabetes</li> <li>They are <b>anti-carcinogenic</b> foods and anti-hypertensive and help prevent obesity and heart diseases</li> <li>Millets <b>reduce inflammation</b> and improves digestion.</li> </ul>	<ul style="list-style-type: none"> <li>Millet crops <b>sequester carbon</b> from the atmosphere while paddy fields emit methane, a greenhouse gas.</li> <li>Millets are <b>less water intensive</b>. E.g., One rice plant requires nearly 2.5 times the amount of water required by a single millet plant of most varieties.</li> <li>They are hardy, <b>drought-tolerant</b>, and heat-resistant crops that generally do not succumb to pests and diseases.</li> <li>Millets can grow in areas with <b>less than 350 mm of rainfall</b> and the cultivation cycle completed within 70-100 days.</li> <li>They can <b>grow on low fertility soil</b> and many of them are also grown to reclaim soils.</li> </ul>	<ul style="list-style-type: none"> <li>Millets are called '<b>Famine reserves</b>' as they have a short growing season of 65 days and can keep well for two years or beyond.</li> <li><b>Low investment</b> needed for production as they do not require chemical fertilisers etc. E.g., Small millet grown in dry land districts of Karnataka, requires mere INR 5,000 per acre.</li> <li><b>High demand for export:</b> According to FAO, the global millet production was estimated at 28.4 million metric ton in 2019.</li> </ul>

## 22. SEEA Ecosystem Accounting (SEEA EA)

### Why in News?

- Recently, India implemented a new national statistical framework- SEEA Ecosystem Accounting (SEEA EA) that measures the services that natural ecosystems provide to combat environmental degradation and promote sustainability.

### About

- SEEA EA is an integrated statistical framework for organizing **biophysical data, measuring ecosystem services, tracking changes in ecosystem assets** and linking this information to economic and other human activity.

### Ecosystem accounting:

- It is a coherent framework for **integrating measures of ecosystems** and the flows of services from them with measures of economic and other human activity.
- In ecosystem accounting as described in the SEEA Ecosystem Accounting (SEEA EA), the accounting approach recognises that these **individual resources function in combination within a broader system** and **within a given spatial area**.
- SEEA EA was also adopted as **statistical standard by the United Nations Statistical Commission** recently.
- SEEA EA is built on five core accounts:**

Ecosystem Extent accounts	Ecosystem Condition accounts	Ecosystem Services flow accounts (physical and monetary)	Monetary Ecosystem Asset accounts	Thematic accounts
Serves as a common starting point for ecosystem accounting.	Organizes biophysical information on the condition of different ecosystem types.	Record the supply of ecosystem services by ecosystem assets and the use of those services by economic units like households, govt etc.	Record information on stocks and changes in stocks (additions and reductions) of ecosystem assets.	Organise data on themes of specific policy relevance.
Organizes information on the extent of different ecosystem types (e.g. forests, wetlands, agricultural areas, marine areas) within a country in terms of area.	Organizes data on selected ecosystem characteristics at specific points in time. Provide valuable information on the health of ecosystems.		Includes accounting for ecosystem degradation and enhancement.	Examples of relevant themes include biodiversity, climate change, oceans and urban areas.

### Important Terms and Definitions Natural Capital:

- It can be defined as the **world's stocks of natural assets** which include geology, soil, air, water and all living things.
- It is from this Natural Capital that humans derive a wide range of services, often called **ecosystem services**, which make human life possible.
- Quantifying and valuing the contribution natural assets can help countries **track over-exploitation and invest in protecting** and restoring ecosystems.
- Natural capital accounting → It is a tool that can help measure the full extent of a country's natural assets and give perspective on the **link between the economy, ecology and our environment**.
- Accounting for such goods may occur in **physical or monetary terms**.

### India's SEEA EA framework:

- India is one of 90 countries that have **successfully adopted the ecosystem accounting system** including the new framework for SEEA EA.
- India's this effort was led by the **Ministry of Statistics and Programme Implementation** (MoSPI) under the **Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES)** Project which aims to advance the theory and practice of ecosystem accounting in India.
- NCAVES mainstream natural capital accounting and the valuation of ecosystem services in data-driven decision and policymaking at the national, regional and local levels. NCAVES Project, **funded by European Union**, has been **jointly implemented by:** United Nations Statistics Division (**UNSD**), United Nations Environment Programme (**UNEP**) Secretariat of the Convention of Biological Diversity (**CBD**).

- In India, the NCAVES project is being implemented by the MoSPI in close collaboration with the **Ministry of Environment, Forest and Climate Change (MoEF&CC)** and the **National Remote Sensing Centre (NRSC)**.

# Science and Technology

## 1. DSIR-PRISM Scheme

### Why in News?

- Union Minister for Science & Technology inaugurates the Event for Publicity of the PRISM (Promoting Innovations in Individuals, Startups, and MSMEs) scheme.

### About

- Nodal Ministry → It is an initiative of the **Department of Scientific and Industrial Research** (DSIR).
- Aim → To **help an individual innovator** to **become a successful technopreneur**. It promotes, supports, and funds implementable and commercially viable innovations created for society.
- Eligibility → Under the initiative, an innovator of **Indian nationality** – **student, professional** and **common citizen** is eligible.
- Features → Eligible candidates are provided **with technical, strategic, and financial assistance** by DSIR-PRISM. Assistance is provided on the **stages** like idea development, prototype development, and pilot scaling and patenting.
- Sectors Covered → The proposals under the scheme will be accepted for the **following sectors**:
  - Green technology
  - Clean energy
  - Industrially utilizable smart materials
  - Waste to Wealth
  - Affordable Healthcare
  - Water & Sewage Management and
  - any other technology or knowledge-intensive area.
- Financial Assistance → The grant under the scheme is given in **two phases**:
  - **Phase I** →
    - Category-I: For **proof of concept/prototype/models**, a grant amount of around Rs. 2 lakhs to Rs. 20 lakhs.
    - Category-II: For fabrication of **working model/ process know-how/ testing**, a grant amount of around Rs. 2 lakhs to Rs. 20 lakhs.
  - **Phase II** → For **Enterprise incubation**, a grant amount of a maximum of around **Rs.50 lakhs**.

## 2. Asteroid Apophis

### Why in News?

- Recently, the National Aeronautics and Space Administration (NASA) has ruled out the possibility of the dreaded asteroid Apophis causing any damage to the Earth for the next 100 years.

### About

- Size → Apophis is a **near-Earth asteroid** with a relatively **large size** (about 335 meters wide).

- Name & Discovery → Named after the **ancient Egyptian god of chaos and darkness**, it was discovered in **2004**, after which NASA had said that it was one of the asteroids that posed the greatest threat to Earth.
- The astronomers used the **70-metre radio antenna** at the **Deep Space Network's Goldstone Deep Space Communications Complex** near Barstow, California in order to track Apophis' motion.
- Apophis is categorised as a **potentially hazardous asteroid (PHAs)**.

#### 👉 What are asteroids?

- Asteroids are **rocky objects** that **orbit the Sun**, **much smaller than planets**. They are also called **minor planets**.
- Asteroids are divided into **three classes**.
  - First, those found in the **main asteroid belt between Mars and Jupiter**, which is estimated to contain somewhere between 1.1-1.9 million asteroids.
  - The second group is that of **trojans**, which are asteroids that **share an orbit with a larger planet**.
    - NASA reports the **presence of Jupiter, Neptune** and **Mars trojans**.
    - In 2011, they reported an **Earth Trojan** as well.
  - The third classification is **Near-Earth Asteroids (NEA)**, which have orbits that pass close by the Earth.

### 3. Giga Mesh

#### Why in News?

- Recently, a women-led startup Astrome has developed 'Giga Mesh'.

#### About

- It is an **innovative wireless backhaul solution**, based on **patented millimeter wave wireless technology** for Mesh Architecture.
- It is an **innovative wireless product** that gives **fibre like bandwidth** at fraction of cost of fibre to help telecom operators deliver reliable low-cost internet services to suburban and rural areas.
- It is a **multi-beam E-band product** which packs **6 point-to-point E-band radios in one**, thereby distributing the cost of the device over multiple links.
- **Benefits of Giga Mesh**
  - It **reduces network congestion** and also makes the **existing infrastructure 5G ready**.
  - A single GigaMesh device can provide **upto 40 links with 2+ Gbps capacity each**, communicating upto a range of 10 kilometers.
  - The **high-speed multiple point-to-point (Multi-P2P)** communication yields up to 6 times reduction in capital expenditure (CapEx) per link.

### 4. NASA's InSight lander

#### Why in News?

- NASA's InSight lander detects two strong quakes on Mars. The lander is a part of NASA's InSight mission to Mars, launched in 2018.

#### About NASA's InSight Mission

- InSight **short for** Interior Exploration using Seismic Investigations, Geodesy and Heat Transport is a **NASA Mission**.
- Aim → This Mission aims at **studying the deep interiors of Mars**. It is the **first program** to **analyze the interior of the Red Planet**, beneath its surface i.e. its crust, mantle, and core.
- Part of → InSight mission is **part of NASA's Discovery Program** (1992).
  - Discovery Program is a **series of Solar System exploration missions**. NASA funds these missions through its Planetary Missions Program Office.

#### 👉 InSight Mission Lander

- NASA launched the **lander** under **NASA's InSight mission in 2018**.
- Purpose → It is a **robotic lander designed to study the deep interior of Mars** to learn how all celestial bodies with rocky surfaces, including Earth and the Moon, formed.
- Manufactured by → The lander was **manufactured by Lockheed Martin Space Systems**. NASA's Jet Propulsion Laboratory manages it. Further, European agencies built most of its scientific instruments.
- Scientific Instruments → The scientific instruments used for the mission are:
  - **seismometer** for detecting quakes;
  - **sensors** for gauging wind and air pressure;
  - **magnetometer** and a **heat flow probe** designed to take the planet's temperature.

## 5. Wolf–Rayet stars or WR stars

### Why in News?

- Aryabhata Research Institute of Observational Sciences (ARIES) tracks a rare supernova explosion. They traced the supernova explosion to one of the hottest kinds of stars called Wolf–Rayet stars or WR stars.

### About

- Astronomers **studied the supernovae explosion called SN 2015dj**.
- The explosion happened in the **galaxy NGC 7371 in 2015**.
- The ARIES **calculated the mass of the star collapsed** to form the supernovae.
- Based on that, they have found that the original star was a **combination of two stars**. One of them is a **massive WR star**. The other one is a **star much less in mass than the Sun**.

#### 👉 Wolf–Rayet stars:

- Wolf–Rayet stars are **highly luminous objects**. The surface temperature of WR stars is a **thousand times more than the Sun**.
- They are **massive stars**. Further, they have **completely lost their outer hydrogen**. So the WR stars **fusing helium** or heavier elements in the core.
- The study of certain types of massive luminous supernovae explosion can **help probe these stars** that **remain a mystery for scientists**.

#### 👉 Supernova

- Supernovae (SNe) are **highly energetic explosions** in the Universe releasing an enormous amount of energy.

- Long-term monitoring of these explosions helps us **understand the nature of the exploding star** as well as the **explosion properties**. It can also **help calculate the number of massive stars**.
- A supernova is the **explosion of a star**. It is the **largest explosion** that takes place in space. Supernovas are often seen in other galaxies. But supernovas are **difficult to see in our own Milky Way galaxy because dust blocks our view**. Further, a supernova happens where there is a **change in the core** or **center of a star**.

## 6. Oxygen Enrichment Unit

### Why in News?

- Central Mechanical Engineering Research Institute(CMERI) develops an oxygen enrichment unit(OEU) that could provide crucial support to COVID-19 patients.

### About Oxygen Enrichment Unit

- An oxygen enrichment unit is a **device** that **concentrates the oxygen from the surrounding air**. For that, it selectively **removes nitrogen** to **supply oxygen-enriched air**.
- The **concentrated Oxygen** is delivered to the patients **having respiratory diseases** through an oxygen mask or nasal cannula.
- Uses →
  - The device is **useful in remote places, homes, or hospital-like facilities** for patients with chronic obstructive pulmonary diseases (COPD), chronic hypoxemia, and pulmonary edema.
  - It may also be used as an **adjunct treatment** for **severe sleep apnea** (in conjunction with a continuous positive airway pressure unit).

### 📌 About Oxygen Enrichment Unit (OEU) developed by CMERI:

- The Oxygen Enrichment Unit (OEU) of CMERI is **indigenous**.
- Principle → The unit works on the **principle of pressure swing adsorption (PSA)**. It **utilizes zeolite columns** to selectively remove nitrogen from air under certain pressure thereby increasing the oxygen concentration.
- Benefits of this Oxygen Enrichment Unit(OEU) →
  - This unit is capable of **delivering up to 30 Litres Per Minute(LPM) Oxygen enriched air**, which is absent in the other commercially available units.
  - The available Oxygen Enrichment Units generally **work till 8000 ft from sea level**. However, this unit can **work up to the altitude of 14000 ft**. Thus, it is very **handy for usage** in the **high-altitude terrain battlefield** in contingencies.
  - Further, this unit will **help in High Flow Oxygen Therapy**. This therapy is a better method in the **treatment and management of COVID-19 patients**.
  - High-flow oxygen therapy is a form of **respiratory support** in the hospital. In this therapy, the oxygen in **conjunction with the compressed air** and **humidification travels at a higher rate** of flow compared to normal methods.
- Central Mechanical Engineering Research Institute(CMERI) → CMERI is an **apex R&D institute for mechanical engineering** that functions under the Council of Scientific and Industrial Research(CSIR).
- It is located in **West Bengal**.

## 7. African Swine Fever

### Why in News?

- An outbreak of suspected African swine fever (ASF) has killed 276 domestic pigs in Lunglei district of Mizoram.

### About

- What is it? → It is a **highly contagious and fatal animal disease** that infects and leads to an acute form of hemorrhagic fever in domestic and wild pigs.
- It was first **detected in Africa in the 1920s**.
- Causes → It is caused by a large **DNA virus of the Asfarviridae family**.
- Transmission → It is transmitted to pigs through:
  - **direct contact** with infected domestic or wild swines
  - **indirect contact** through ingestion of contaminated substances or
  - **contaminated material** such as food waste, feed or garbage or through biological vectors such as ticks.
- Human Transmission → It is **not a threat to human** beings since it only spreads from animals to other animals.
- Mortality Rate → It is **close to 100%** and since the **fever has no cure**, the only way to stop it spreading is by culling the animals.
- According to the FAO, “its **extremely high potential for transboundary spread** has **placed all the countries** in the region in danger and has raised the spectre of ASF once more escaping from Africa”.

### 👉 World Organisation for Animal Health(OIE)

- It is an **intergovernmental organisation** created in **1924** for improving animal health worldwide.
- Members → In 2018, the OIE consists of **182 Member Countries** and Territories. India is one of the member countries.
- Headquarters → **Paris, France**.
- It is also **recognised** as a **reference organisation** by the World Trade Organization(WTO).

## 8. Muon g–2 vs Standard Model

### Why in News?

- Recently, the newly published results of an international experiment hint at the possibility of new physics governing the laws of nature. The experiment, called Muon g–2 (g minus two), was conducted at the US Department of Energy’s Fermi National Accelerator Laboratory (Fermilab).

### About Key takeaways

- The experiment studied a **subatomic particle** called the **muon**.
- Its results do **not match** the **predictions of the Standard Model**, on which all particle physics is based.
- The results instead **reconfirm a discrepancy** that had been detected in an experiment 20 years ago.
- Concluded in 2001, the **Brookhaven experiment** came up with results that did **not identically match predictions** by the Standard Model.
- The **Muon g–2 experiment** measured this **quantity with greater accuracy**.

### What is the Standard Model?

- The Standard Model is a **rigorous theory** that **predicts the behaviour** of the **building blocks of the universe**.
- It lays out the **rules for six types of quarks, six leptons, the Higgs boson, three fundamental forces**, and how the subatomic particles behave under the influence of electromagnetic forces.
- The **muon** is **one of the leptons**.
- It is **similar to the electron**, but **200 times larger**, and much more unstable, surviving for a fraction of a second.

### What quantity was measured?

- **g-factor** was measured.
- It is a measure that **derives from** the **magnetic properties of the muon**.
- The rate at which the muon wobbles is described by the g-factor.
- This value is known to be **close to 2**, so scientists measure the **deviation from 2**. Hence the **name g-2**.
- The new experimental results (combined from the Brookhaven and Fermilab results) announced are:
  - g-factor: **00233184122**
  - anomalous magnetic moment: **00116592061**.

## 9. Hydrogen Sulphide (H<sub>2</sub>S)

### Why in News?

- Scientists have developed an electronic nose with biodegradable polymer and monomer that can detect hydrogen sulphide (H<sub>2</sub>S), a poisonous, corrosive, and flammable gas produced from swamps and sewers.

### About

- What is H<sub>2</sub>S? → H<sub>2</sub>S is the primary gas produced from the **microbial breakdown of organic matter** in the absence of oxygen, and this necessitates **easy detection of its emission from sewers and swamps**.
- Responding to this challenge, scientists from the Centre for Nano and Soft Matter Sciences (CeNS), **Bangalore**, an autonomous institute of the DST have developed an **exceptionally sensitive and selective H<sub>2</sub>S Gas sensor** developed by **impersonating the neuron** responsible for identification of airborne molecules or olfactory receptor neuron (ORN).
- The fabricated sensor consists of a heterostructure consisting of **two layers** →
  - the **top layer a monomer** and is **realized with a novel chemical tris** (keto-hydrazone), which is both porous and contains H<sub>2</sub>S specific functional groups, and
  - the **bottom layer** is the **active channel layer** which plays a **key role in altering the current** and mobility of charge carriers.

## 10. Narrow-Line Seyfert 1 (NLS1) galaxy

### Why in News?

- Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon.

## About

- This active galaxy called the **Narrow-Line Seyfert 1** (NLS1) galaxy, which is about **31 billion light-years away**, opens up avenues to explore more such gamma-ray emitting galaxies that wait to meet us.
- Scientists from **ARIES**, an autonomous institute of the Department of Science & Technology (DST) **studied around 25,000 luminous Active galactic nuclei** (AGN) **from the Sloan Digital Sky Survey** (SDSS), a major optical imaging and spectroscopic survey of astronomical objects in-operation for the last 20 years.
- They found a **unique object** that **emits high-energy gamma rays** located at a **high redshift**. They identified it as a gamma-ray emitting NLS1 galaxy, which is a rare entity in space.
- The **new gamma-ray emitting NLS1** was formed when the **Universe** was only about **4.7 billion years old** as compared to its current age of about 13.8 billion years.

### **Aryabhata Research Institute of Observational Sciences**

- ARIES is one of the **leading research Institutes** which specializes in observational Astronomy & Astrophysics and Atmospheric Sciences.
- Situated in → **Nainital, Uttarakhand**.
- Established in → **1955**.
- Primary objective → **To develop facilities for modern astrophysical research** in **stellar, solar & theoretical branches of astrophysics**. On some selected clear nights the visitors are also shown some celestial objects through the telescopes.

## 11. HGCO19 Vaccine

### Why in News?

- Recently, the Department of Biotechnology (DBT), Ministry of Science & Technology has announced that it has approved additional funding towards clinical studies of HGCO19 Vaccine.

### About

- It is India's '**first of its kind**' **mRNA-based COVID-19 vaccine**.
- It is developed by Pune-based biotechnology company **Gennova Biopharmaceuticals Ltd.**
- It is being funded under the '**Mission COVID Suraksha**- The Indian COVID-19 Vaccine Development Mission'.
- Gennova, in **collaboration with HDT Biotech Corporation USA**, has developed the COVID-19 mRNA vaccine HGCO19.

### What is mRNA Vaccine?

- The coronavirus vaccine **based on mRNA**, once injected into the body, will **instruct the body's cells** to **create copies of the spike protein**.
- The mRNA is coded to tell the cells to **recreate the spike protein** of the **coronavirus SARS-CoV-2**, which causes Covid-19.
- It is the spike protein which **appears as spikes on the surface of the coronavirus** that initiates the process of infection and it allows the virus to penetrate cells, after which it goes on to replicate.
- The mRNA vaccines **work by using mRNA or messenger RNA**, which is the molecule that essentially puts DNA instructions into action.

- The mRNA vaccines have the **advantage** that scientists are **not growing the virus in the lab**, which has been a hindrance sometimes to **create enough virus** or **viral particles to give in a vaccine**.

## 12. Aditya-L1 Support Centre

### Why in News?

- The Indian programme to study the Sun and the region between the Sun and the Earth from space – Aditya-L1 – is due to be launched next year.

### About

- It will **carry seven payloads** which have been developed **by various institutions** across the country.
- Once the mission is launched, there will be a need for a **ground support centre** to **monitor and coordinate the work** on its various payloads.
- This role will be played by the **ARIES facility** (short for Aryabhata Research Institute for observational Sciences) which is **situated near Nainital**.
- In January 2021, an **agreement was signed** to this effect based on the proposal submitted by the ARIES team. With about four to five personnel, this centre will **come up at Haldawani**, where ARIES is setting up a **data centre also**.
- The Aditya-L1 Support Centre (ASC) will **provide training through regular workshops** for the **guest users**.
- Apart from this, it will provide **ready-to-use Python and Java apps** for the satellite data and demos and handouts to facilitate the guest users.

### Aditya-L1 Mission

- What is it? → It is India's first scientific expedition **to study the Sun**.
- It will be **ISRO's**(Indian Space Research Organisation) **second space-based astronomy mission after AstroSat**, which was launched in 2015.
- ISRO categorises Aditya L1 as a **400 kg-class satellite** that will be launched using the Polar Satellite Launch Vehicle (PSLV) **in XL configuration**.
  - It will be inserted in a **halo orbit around the L1** ( Lagrangian point 1), which is 1.5 million km from the Earth.
- The space-based observatory will have **seven payloads** (instruments) on **board to study the Sun's corona, solar emissions, solar winds** and **flares**, and **Coronal Mass Ejections** (CMEs), and will carry out round-the-clock imaging of the Sun.

## 13. NASA's Ingenuity Mars Helicopter

### Why in News?

- Recently, NASA's miniature robot helicopter Ingenuity performed a successful takeoff and landing on Mars. It was the first powered, controlled flight on another planet.

### About

- Ingenuity is the **first helicopter to fly on Mars**. NASA's rover called **Perseverance carried it** to the Red Planet.

- Purpose → The helicopter's main task is to carry out a **technology demonstration** to **test the first powered flight** on Mars. Further, it also aims to **collect samples from the locations on Mars** where the rover cannot reach.
- Features →
  - NASA's Mars Helicopter Ingenuity is able to fly using **counter-rotating blades** that **spin at about 2,400 rpm**.
  - It also has a **wireless communication system** and is **equipped with computers, navigation sensors, and two cameras**.
  - Moreover, it is also **solar-powered** and is able to **charge on its own**.
- Note: The Ingenuity helicopter's mission is **experimental in nature** and is **completely independent** of the Perseverance rover mission.
- Importance of this Flight → Its performance during these experimental test flights will **help inform decisions** about **small helicopters for future Mars missions** — where they can perform a support role as robotic scouts, surveying terrain from above, or as full standalone science craft carrying instrument payloads.

#### 📌 **NASA's Perseverance Rover:**

- Perseverance is a **car-sized Mars rover** designed to **explore the crater Jezero on Mars** as part of NASA's Mars 2020 mission.
- Launched in → The rover was launched in **July 2020**. It landed at the **Jezero Crater of Mars** in February 2021.
- Purpose →
  - The rover is designed to **better understand the geology of Mars** and **seek signs of ancient life**.
  - It will also **collect and store a set of rock and soil samples** that could be returned to Earth in the future.
  - Further, it will also **test new technology** to benefit future robotic and human exploration of Mars.

## 14. RESPOND programme

### Why in News?

- Recently, Indian Space Research Organisation (ISRO) has announced that it will support eight joint research projects mooted by the Space Technology Cell (STC), IIT-Delhi.

### About

- ISRO started the **RESPOND (Research Sponsored)** programme in the **1970s**.
- Objective → objective of **encouraging academia** to **participate and contribute** in various Space related research activities.
- This is the **flagship programme of ISRO** to **promote extramural research** in emerging areas of Space at Academia.
- Under the Programme, ISRO provides **financial support** for **conducting research and development activities** related to Space Science, Space Technology and Space Applications in Academic Institutions in India.
- RESPOND is also **participating in the National Missions** like **IMPRINT** (IMPActing Research INnovation and Technology) programme and **Uchhatar Avishkar Yojana** (UAY).

#### 📌 **Uchhatar Avishkar Yojana**

- launched by → the **Ministry of Human Resource Development** in **2015**.

- Purpose → It **promotes innovation of a higher order** that **directly impacts** the needs of the Industry and thereby improves the competitive edge of Indian manufacturing.

#### 📌 **IMPRINT Programme**

- Background → The scheme was released in 2015 by the **Ministry of Human Resource Development** (now Ministry of Education).
- Purpose → It is a **first-of-its-kind Pan-IIT and IISc joint initiative** to **address the major science and engineering challenges** that India must address and champion to enable, empower and embolden the nation for inclusive growth and self-reliance.
- IMPRINT provides the **overarching vision** that **guides research** into areas that are predominantly socially relevant.

## 15. Brucellosis

### Why in News?

- Recently, Kerala launched preventive measures after a few cases of brucellosis, a zoonotic infection, have been detected in some dairy animals.

### About

- It is a **bacterial disease** caused by various **Brucella species**, which **mainly infect cattle, swine, goats, sheep** and dogs among others.
- It also known as **Malta fever** or **Mediterranean fever**.
- Humans generally acquire the disease **through direct contact** with infected animals or eating, **drinking contaminated animal products** or **by inhaling airborne agents**.
- Brucellosis is **endemic in India** causing huge economic losses to dairy industry due to →
  - Infertility
  - Abortion
  - Birth of weak off springs
  - Reduced productivity.
- Symptoms → **Fever, sweats, malaise, anorexia** (psychological disorder in which one eats less due to fear of weight gain), **headache** and **muscle pain**.
- Treatment and prevention →
  - It is usually **treated with antibiotics**, including rifampin and doxycycline.
  - **Avoiding unpasteurised dairy products** and **taking safety precautions** such as wearing rubber gloves, gowns or aprons, when handling animals or working in a laboratory can help prevent or reduce the risk of getting brucellosis.
  - Other preventive measures include **cooking meat properly, vaccinating domestic animals**, etc.

## 16. Harlequin ichthyosis

### Why in News?

- Recently, Odisha reported its first-ever case of a baby born with Harlequin Ichthyosis, a rare genetic skin condition.

### About

- What is it? → Harlequin ichthyosis is a **severe genetic disorder** that **mainly affects the skin**.
- Cause → The disease is caused **due to mutations** in the **ABCA 12 gene** inherited from the parents.

- The ABCA12 protein plays a **major role in transporting fats in cells** that make up the outermost layer of skin.
- Severe mutations in the ABCA12 gene **lead to the absence** or **partial production** of the ABCA12 protein.
- This results in a **lack of lipid transport**. As a result, **skin development is affected**, according to the severity of the mutation.
- Impact on Skin → The disease creates **large diamond-shaped plates** across the body that are **separated by deep cracks** (fissures). The skin becomes dry and scaly almost like fish skin and hence the term '**ichthyosis**', derived from '**ikthus**', Greek for fish.
- Cases → The disease affects one in **three million births**.
- Treatment → There is **no cure** for harlequin ichthyosis and treatment is centred around **protecting the skin** and **preventing infection**.

## 17. Virafin Drug

### Why in News?

- Drug Controller General of India(DCGI) has granted emergency use approval for pharma major Zydus Cadila's antiviral drug 'Virafin' to treat moderate COVID-19 in adults.

### About

- What is it? → Virafin is an **antiviral drug** that is subcutaneously administered (injected under the skin).
- It is manufactured by a pharma major named "**Zydus Cadila**".
- The drug was originally approved **for the treatment of liver disease** caused by the hepatitis B and C virus.
- The drug has now been **repurposed** for **treating the moderate COVID-19 disease**.
- It has been found that when the drug was given to Covid patients in the early stage, it has **shown significant improvement** in **moderate Covid cases**.
- The drug was also found to **reduce hours of supplemental oxygen required** by patients.
- Moreover, patients who were treated with the drug 'Virafin' were **tested Covid negative within 7 days**.
- Hence, after the emergency approval, the drug will now be available on the **prescription of a medical specialist** for **use in hospital/institutional setup**.

## 18. Oxygen concentrators

### Why in News?

- With oxygen cylinders in short supply across several states, the Oxygen concentrator is among the most sought after devices for oxygen therapy, especially among patients in home isolation and for hospitals running out of oxygen.

### About

- What is it? → Oxygen Concentrator is a **medical device**. It **filters oxygen** from the atmosphere and helps individuals **inhale it through a mask** or **cannula**.
- How does it work? →
  - Atmospheric air has about **78% nitrogen** and **21% oxygen** with other gases making up the remaining 1%.
  - The concentrator takes in this atmospheric air, **filters it through a sieve**. Further, it **releases the nitrogen back** into the air and **works on the remaining oxygen**.

- This **oxygen compressed** and **dispensed through a cannula**, is **90-95% pure**.
- A **pressure valve** in concentrators helps **regulate supply**, ranging from 1-10 litres of oxygen per minute.

### How is it different from oxygen cylinders and LMO?

- The **oxygen cylinder** gives you a **finite amount of oxygen**. When the cylinder is empty, it **needs to be refilled**. Whereas the **concentrator** pulls oxygen from the air. So it can provide a **consistent supply of oxygen**, and it only **needs a power source** to draw in Atmospheric air.
- Oxygen Concentrators are **portable** and **need no special temperature**. On the other hand, Liquid Medical Oxygen(LMO) needs to be stored and transported in cryogenic tankers.
- Oxygen from Concentrators is **not as pure as Liquid Medical Oxygen** (LMO) which is a **99% pure oxygen**. But it is good enough for mild and moderate Covid-19 patients with oxygen saturation levels of 85% or above. However, it is **not advisable for ICU patients**.
- Oxygen concentrators are the **easiest alternatives to cylinders** but can only supply **5-10 liters of oxygen per minute** (critical patients may need 40-50 liters per minute).
- Oxygen Concentrators are **more expensive** than Oxygen cylinders. But it is largely a **one-time investment**. While oxygen cylinders incur refilling and transportation costs.

## 19. Zhurong Rover

### Why in News?

- China's first Mars rover will be named Zhurong after a traditional fire god.

### About Zhurong Rover

- It is **China's first Mars rover** aboard the Tianwen-1 probe that arrived in Mars orbit in February 2020.
- It is named after a **traditional fire god**.
- The rover is **part of Chinese space plans** that include launching a **crewed orbital station** and **landing a human** on the moon.
- The rover's title fits with the Chinese name for Mars i.e. "**Huo Xing**" or **fire star**.
- The top candidate for the landing site is **Utopia Planitia**, a **rock-strewn plain** where the U.S. lander Viking 2 touched down in 1976.

### 👉 About Tianwen-1

- Its goals include **analysing and mapping** the **Martian surface and geology**, looking for water ice and studying the climate and surface environment.
- It is named after the ancient Chinese poem '**Questions to Heaven**'.
- It is an **all-in-one orbiter, lander** and **rover** which will search the Martian surface for water, ice, investigate soil characteristics, and study the atmosphere, among completing other objectives.
- It lifted off on a **Long March 5 rocket**, a launch system **developed by** the China Academy of Launch Vehicle Technology (CALT), from the **Wenchang launch centre**.
- It will be the first to place a **ground-penetrating radar** on the **Martian surface**, which will be able to study local geology, as well as rock, ice, and dirt distribution.

## 20. Trachoma

### Why in News?

- The World Health Organization (WHO) recently validated the Gambia for its elimination of trachoma as a public health problem. This makes it the second country after Côte d'Ivoire in the African Region to achieve this milestone.

### About

- Trachoma is a **neglected tropical eye disease**.
- Caused by → the infection due to the **bacterium Chlamydia trachomatis**.
- Transmission → Trachoma spreads **through personal contact** (via hands, clothes or bedding). It also transmits by flies that contact with the discharge from the eyes or nose of an infected person.
- Vulnerable Group → Trachoma **mainly affects children**. It is becoming **less common with increasing age**.
- Impact → Repeated infections in childhood lead to **scarring of the inner side of the upper eyelids**. This will result in the inward turning of the eyelid margin. This painful condition is known as **trachomatous trichiasis**. If **left untreated**, this condition can **result in visual impairment** and **blindness**.

### 👉 Global Elimination of Trachoma by the year 2020 (GET2020)

- The WHO in 1996 launched the **Global Elimination of Trachoma** by the year 2020 (GET2020).
- Purpose → It **supports countries** to **implement the SAFE strategy** in Trachoma elimination. Further, it also **strengthens national capacity** through **epidemiological assessment**, **monitoring**, **surveillance**, **project evaluation** and **resource mobilization**.

### 👉 SAFE Strategy

- WHO adopted the SAFE strategy in **1993**. Its mandate is to **provide leadership and coordination to international efforts** in eliminating trachoma as a public health problem. The SAFE strategy also reports on the **progress towards** that **eliminating Trachoma**.

## 21. Classical swine fever and Sheep Pox Disease Vaccine

### Why in News?

- ICAR-Indian Veterinary Research Institute has transferred the Technology for the Classical swine fever(CSF) & Sheep Pox Vaccines to M/s Hester Biosciences through Agrinnovate India Limited.

### About Classical swine fever

- What is it? → CSF also known as **hog cholera**. It is a **contagious viral disease** of domestic and wild swine(pigs).
- Caused by → It is caused by a virus of the **genus Pestivirus of the family Flaviviridae**.
- Transmission → The most common method of transmission is **through direct contact** between healthy swine and those infected with the CSF virus.
  - Humans are not affected** by this virus. Swine are the only species known to be susceptible.
- Treatment → The disease has a **100% mortality**. However, **Vaccination can prevent the spread** of the disease.

- Vaccine for CSF →
  - In India, the disease is **controlled by a lapinized CSF vaccine**. This vaccine is produced by killing large numbers of rabbits.
  - To avoid this, the ICAR-IVRI developed a **Cell Culture CSF Vaccine** (live attenuated). This is developed using the **Lapinized Vaccine Virus from a foreign strain**.
    - Live attenuated vaccines use a weakened (or attenuated) form of the germ that causes a disease.
  - The new vaccine has been **extensively tested for safety and potency**. It has been found to induce protective immunity from the 14th day of the Vaccination till 18 Months.

### 👉 Sheep Pox Disease

- Sheep Pox is a **highly contagious viral disease** of sheep.
- Caused by → a **poxvirus**.
- The disease is the **most severe of all the animal pox diseases**. It can result in some of the most significant **economic consequences** due to **poor wool and leather quality**.
- Transmission → The sheep pox virus is an **aerosol**. So it can be **transmitted via contact** with an infected animal.
- Treatment → There is **no treatment** for the sheep pox virus, thus efforts are directed towards prevention.
- Vaccine for Sheep Pox →
  - A live attenuated Sheep Pox Vaccine **using indigenous strain** was developed by the Institute for preventive vaccination in the sheep population.
  - The Vaccine is **safe, potent** and **immunogenic** [efficacious] **for sheep aged more than six months of age**. Also, it protects the Vaccinated animals for a period of 40 months.

### 👉 Agrinnovate India Limited:

- It is a **registered Company** under the **Companies Act, 1956**.
- It is **owned by the Government of India** in the Department of Agricultural Research and Education (DARE).
- Functions →
  - It aims to work on the **strengths** of **DARE's Indian Council of Agricultural Research** (ICAR)
  - Further, Agrinnovate India also **promotes the development and spread of R&D** and its outcomes through IPR protection, commercialization and forging partnerships for the public benefit.

## 22. Large Hadron Collider beauty (LHCb) experiment

### Why in News?

- The LHCb experiment at CERN (European Council for Nuclear Research) has announced the results of their latest analysis of data.

### About

- The LHCb experiment is one of the four large experiments at the **Large Hadron Collider (LHC) at CERN in Geneva**.
- It is **designed to study decays of particles containing a beauty quark**, the quark with the highest mass forming bound states.

- Beauty quarks are **produced during the collision of high-energy proton beams** in the Large Hadron Collider the particle accelerator at CERN.
  - **Quark are elementary subatomic particles** that interact by means of the strong force and are believe to be among the **fundamental constituents of matter**.
  - There are six types of quarks that differ from one another in their mass and charge characteristics, that are grouped in three pairs: **up and down**, **charm and strange**, and **top and bottom**.
  - Beauty quarks (bottom quark) are much **heavier than the up and down quarks and particles containing b quarks are also unusually long-lived**, which make them very useful to physicists looking for physics beyond the standard mode.
- As per **Standard Model the decay process** involves the conversion of a beauty quark into a strange quark with the production of an electron and antielectron or a muon and antimuon.
  - **Electrons are the subatomic particles that orbit the nucleus** of an atom and generally negative in charge. While antielectron is positively charged also called as positron.
  - **Muon is elementary subatomic particle similar to the electron** but 207 times heavier. It has two forms, the negatively charged muon and its positively charged antimuon.
- But **results at Large Hadron Collider beauty experiment (LHCb) shows anomalies** in decaying process than standard model with new fundamental force in addition to four fundamental ones.
  - Four fundamental forces of standard model are **Gravity, electromagnetism, weak nuclear interactions** responsible for radioactivity and strong nuclear forces that hold matter together.
- This anomalies in result gives hint of the **possible existence of a hypothetical particle** called a **leptoquark** has appeared as an unexpected difference in how beauty quarks decay to create electrons or muons.

### Large Hadron Collider (LHC):

- The Large Hadron Collider (LHC) is the world's **largest and most powerful particle accelerator** at CERN's accelerator complex.
- The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way.
- The beams inside the LHC are **made to collide at four locations around the accelerator ring**, corresponding to the positions of **four particle detectors ATLAS, CMS, ALICE and LHCb**.
- The project was officially approved in 1997, and construction began on a 16.5-mile-long (27 kilometers) ring that passed beneath the French-Swiss border capable of **accelerating particles up to 99.99 percent the speed of light and smashing them together**.
- In **2012**, the researchers at the LHC announced the **discovery of the Higgs boson**, particle named after physicist Peter Higgs.
  - Higgs boson is an **elementary particle gain their mass from a fundamental field (Higgs field)** through its interactions.

## 23. Black Hole's magnetic field

### Why in News?

- The scientists have first time observed magnetic field around a Black Hole.

### About Black Hole's magnetic field

- A black hole is a place in space where **gravity pulls so much that even light cannot get out** as gravity is so strong because matter has been squeezed into a tiny space.
- They are **invisible** and observed through space telescopes with special tools.
- Black holes can be **big or small**, the **smallest black holes are as small as just one atom**.
- Now, new image from **Event Horizon Telescope** (EHT) shows **polarised light**, waves oscillating in only one direction produced by matter at the edge of the black hole.
  - While, unpolarised light is made up of light waves oscillating in many different directions.
- **Light becomes polarized when it goes through certain filters** like, for instance, the lenses of polarized sunglasses, or when it is emitted in hot regions of space that are magnetized, hence it **suggests that presence of strong magnetic fields around the black hole**.
- New polarised image also gives compelling evidence for how strong magnetic fields around black holes can launch and sustain bright jet of matter and energy that emerges from its core and extends at least 100,000 light years away.
- Research suggests that the **magnetic fields are strong enough to push back on the hot gas** and help it resist gravity's pull.
  - Only the gas that slips through the field can start flowing inwards to the event horizon.

### Event horizon

- The **event horizon of a black hole is linked to the object's escape velocity** the speed that one would need to exceed to escape the black hole's gravitational pull.
- The event horizon is the threshold around the black hole where **the escape velocity surpasses the speed of light**.
- According to **Einstein's theory of special relativity**, nothing can travel faster through space than the speed of light.
- This means a black hole's event horizon is essentially the point from which nothing can return and said to be the ultimate prison wall one can get in but never get out.

### Event Horizon Telescope (EHT)

- The EHT is an **international collaboration** that has formed to continue the steady long term progress on **improving the capability of Very Long Baseline Interferometry** (VLBI) at short wavelengths.
- This **links radio dishes across the globe to create an Earth-sized interferometer**, to measure the size of the emission regions of the two supermassive black holes with the event horizons.

# Geography

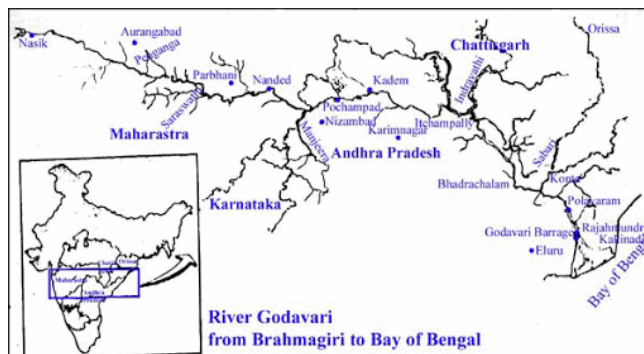
## 1. Godavari River

### Why in News?

- The Godavari water is to be released into the irrigation canals in East and West Godavari districts from the Polavaram irrigation project site up to 15th April 2021 against the previous deadline of 31st March 2021.

### About

- The Godavari is the **largest Peninsular river system**. It is also called the **Dakshin Ganga**.
- Origin → Godavari river **rises from Trimbakeshwar** near Nasik in Maharashtra and flows for a **length of about 1465 km** before outfalling into the Bay of Bengal.
- Drainage Basin → The Godavari basin extends over states of **Maharashtra, Telangana, Andhra Pradesh, Chhattisgarh** and **Odisha** in addition to smaller parts in **Madhya Pradesh, Karnataka** and **Union territory of Puducherry**.
- Tributaries → **Pravara, Purna, Manjra, Penganga, Wardha, Wainganga, Pranhita** (combined flow of Wainganga, Penganga, Wardha), **Indravati, Maner** and the **Sabri**.
- Cultural Significance → **Kumbh Mela** also takes place **on the banks** of the Godavari river in Nashik.
  - Other locations for Kumbh are the **Shipra river in Ujjain**, the **Ganges in Haridwar**, and the **confluence of the Ganges, Yamuna**, and the mythical **Saraswati river in Prayag**.
- Godavari River Dispute → Godavari river **water sharing** is **bone of contention** among Andhra Pradesh, Madhya Pradesh, Chhattisgarh, Odisha, and Karnataka.
- Important Projects on Godavari →
  - Polavaram Irrigation Project.
  - Kaleshwaram.
  - Sriram Sagar Project (SRSP)
  - Sadarmatt Anicut
  - Inchampalli.



### 📌 Polavaram Irrigation Project:

- Location → Polavaram Project is located in **Andhra Pradesh on the river Godavari**, near Polavaram village.
- Purpose → It is a **multi-purpose irrigation project** as the project once completed will provide **Irrigation benefits** and will **generate HydroElectric Power**.
- In addition, this project will also supply drinking water.
- It will facilitate an **inter-basin transfer** to the **Krishna river basin through its Right canal**.
- It will also provide **indirect benefits** such as **development of Pisciculture** (breeding and rearing of fish), tourism and urbanisation.

- The Project has been accorded **national project status** by the union government in 2014 (under Section-90 of Andhra Pradesh Reorganization Act, 2014).

## 2. Asian Desert Dust & Indian Summer Monsoon

### Why in News?

- Recently, a study details how the Indian monsoon gets influenced by the atmospheric dust particles swept up by winds from deserts in the Middle East (Asian Deserts).

### About Impacts of Desert Dust Particles

- Strong winds **carry the dust particles from the Middle East** into the atmosphere. Dust particles **absorb solar radiation** and become **extremely hot**.
- This causes **heating of the atmosphere**. Heat decreases the air pressure and **changes wind circulation patterns**.
- Further, it **increases the moisture transport capacity of air** and **increases precipitation and rainfall**.
- This phenomenon is termed an “**elevated heat pump**”. It is responsible for **driving moisture** from the sea to the Indian subcontinent.



### 👉 Positive Feedback Loop:

- Positive Feedback Loop is a **loop** where the **result of a reaction** leads to an **enhancement of that very reaction**.
- In this case too, a positive feedback loop plays a **role** when the **dust particles from the Middle East boost the power of Indian monsoons**.
- In turn, the **monsoons increase the winds** in the Middle East and subsequently produce more dust aerosols.

### 👉 Role of Iranian Plateau on Indian Summer Monsoon:

- Iranian Plateau also **influences the Indian Summer Monsoon**. The **hot air over the Iranian Plateau** can heat the atmosphere over the plateau. It further **strengthens the circulation** over the deserts of the Arabian Peninsula and increases dust emission from the Middle East [West Asia].

### 👉 Influence of Aerosols on Indian Summer Monsoon:

- Aerosol is a **suspension of fine solid particles** or **liquid droplets in air** or **another gas**. Aerosols can be natural or anthropogenic:
  - Examples of **natural aerosols** are fog, mist, dust, forest exudates, and geyser steam.
  - Examples of **anthropogenic aerosols** are particulate air pollutants and smoke.

- Some studies have found that **anthropogenic aerosols**, emitted from the Indian subcontinent, **can decrease summer monsoon precipitation**.
- While other studies have found that **absorbing aerosols** such as **dust** can **strengthen the monsoon circulation**.
- However, in this study, it was found that **anthropogenic aerosols** can **strengthen Indian summer monsoon rainfall**.

#### 📌 Major Deserts of the World:



### 3. Chilika was a part of the Bay of Bengal: Study

#### Why in News?

- The Chilika lake in Odisha, Asia's largest brackish water lake, was once part of the Bay of Bengal, a study by the marine archaeology department of the National Institute of Oceanography (NIO), Goa, has found.

#### About Formation

- The process of the formation of the Chilika might have begun in the later part of **the Pleistocene epoch**, around **20,000 years ago**.
- India's peninsular river **Mahanadi** carried a **heavy load of silt** and **dumped part of it** at its delta.
- As the sediment-laden river **met the Bay of Bengal**, **sand bars** were **formed** near its mouth.
- These created a **backflow of the sea water** into the **sluggish fresh water** at **the estuary**, resulting in the **huge brackish water lake**.



#### About Chilika

- Chilika is **64 kilometres long** in the north-south direction and **13.5 km wide** in the **east-west direction**.
- The **sea connected** with the lake near Satapada **through a shallow and narrow channel**.

- The connecting channel was **obstructed by shoals, sand spits and sandbars**, thus restricting the outflow of water and also checking the tidal flow into the lake.
- Chilika is **Asia's largest** and **world's second largest lagoon**.
- It is the **largest wintering ground** for **migratory birds** on the Indian sub-continent and is home to a **number of threatened species of plants and animals**.
- In **1981**, Chilika Lake was designated the **first Indian wetland** of international importance under the Ramsar Convention.
- Major attraction at Chilika is **Irrawaddy dolphins** which are **often spotted off Satpada Island**.
- The **large Nalabana Island** (Forest of Reeds) covering about 16 sq km in the lagoon area was **declared a bird sanctuary in 1987**.
- **Kalijai Temple** – Located **on an island in the Chilika Lake**.

## 4. Sadabahar

### Why in News?

- Shrikishan Suman (55 years), a farmer from Kota, Rajasthan, has developed an innovative mango variety called Sadabahar.

### About

- What is it? → Sadabahar is a **dwarf variety of mango** that can be grown regularly for round the year.
- Dwarf → Dwarf is used to **describe varieties or species** of plants and animals which are **much smaller than the usual size for their kind**.
- Key Features of Sadabahar →
  - The fruit is **resistant to most major diseases and common mango disorders**.
  - The fruit is **sweeter in taste** comparable to langra. (Langra is a variety of mango grown in Varanasi, Northern India, Bangladesh and Pakistan).
  - The fruit is **suitable for kitchen gardening, high-density plantation**, and can be grown in pots for some years too.
  - Besides, the flesh of the fruits is **deep orange with sweet taste** and the pulp has **very less fiber content** which differentiates it from other varieties.

### 👉 Recognition

- The innovative attributes of the variety have been **verified by the National Innovation Foundation (NIF)**, India, an **autonomous institution** of the Department of Science & Technology, Government of India.
- NIF has also **facilitated the plantation** of Sadabahar mango variety in the **Mughal Garden at Rashtrapati Bhawan** in **New Delhi**.
- This mango variety is also in the **process of being registered under** the ICAR-National Bureau of Plant Genetic Resources (**NBPGR**).
- Further, **Shrikishan Suman** has also been conferred with the **NIF's 9th National Grassroots Innovation and Traditional Knowledge Award** for developing this mango variety.

### 👉 NBPGR

- It was established in **1976** as the nodal agency at **national level for management of plant genetic resources** (PGR) for food and agriculture and to carry out related research and human resource development.

## 5. Red Sea

### Why in News?

- An Iranian freighter was hit by Israel in the Red Sea in retaliation for past Iranian strikes on its vessels. The blast struck the Iranian commercial vessel MV Saviz off the coast of Djibouti.

### About

- The Red Sea is a **semi-enclosed tropical basin**, bounded by **northeastern Africa**, to the west, and the **Arabian peninsula**, to the east.
- The **elongated and narrow-shaped basin** extends between the **Mediterranean Sea**, to the north-west, and the Indian Ocean, to the south-east.
- At the northern end, it separates into the **Gulf of Aqaba** and the **Gulf of Suez**, which is **connected to the Mediterranean Sea** via the **Suez Canal**.
- At the southern end, it is **connected to the Gulf of Aden**, and the **outer Indian Ocean**, via the **Strait of Bab-el-Mandeb**.
- It is **surrounded by desert** or **semi-desert areas**, with no major freshwater inflow.
- The Reason why it is called Red Sea → There are **various theories** as to how the name came about, with the most popular being a reference to the **seasonal blooms** of **Trichodesmium erythraeum** (a red-colored algae) near the water's surface.



## 6. Whitsun Reef

### Why in News?

- China's aggressive expansion in the South China Sea has found a new ground, Whitsun Reef, where 220 Chinese vessels are currently anchored under the Philippines' Exclusive Economic Zones (EEZ).

### About

- Whitsun Reef, also known as **Whitson Reef**, **Whitsum Reef**, and **Julian Felipe Reef**
- It is a reef at the **northeast extreme limit** of the Union Banks in the **Spratly Islands** of the **West Philippine Sea**.
- It is the **largest reef of the Union Banks**.



## 7. Umngot

### Why in News?

- Stiff resistance from at least 12 villages in Meghalaya has cast a cloud on a 210 MW hydroelectric project on Umngot, considered India's clearest river.

### About

- It is a **river in Meghalaya**.
- It is considered to be **India's clearest river**.
- The river **attracts many tourists** to Dawki bordering Bangladesh. The river is the **natural boundary between Ri Pnar** (of Jaintia Hills) **with Hima Khyrim** (of Khasi Hills).
- **Dawki Bridge**, is a suspension bridge over the Umngot River.



## 8. Doomsday Glacier

### Why in News?

- Researchers at Sweden's University of Gothenburg are now saying that fears related to the melting of Antarctica's Thwaites Glacier are worse than previously thought, owing to the supply of warm water flowing underneath at a rate underestimated in the past.

### About

- Also called the **Thwaites Glacier**, it is located in **Antarctica**.
- The Thwaites Glacier is **120 km wide** at its broadest, **fast-moving**, and **melting fast over the years**.
- Because of its size (1.9 lakh square km), it **contains enough water to raise the world sea level** by more than half a metre. Studies have found the amount of **ice flowing out of it** has **nearly doubled** over the past 30 years.
- Today, Thwaites's melting already **contributes 4% to global sea level rise** each year. It is estimated that it would **collapse into the sea in 200-900 years**.
- Thwaites is **important for Antarctica** as it slows the ice behind it from freely flowing into the ocean. Because of the **risk it faces** — and poses — **Thwaites is often called the Doomsday Glacier**.



## 9. Valley of the Fallen

### Why in News?

- Recently, the Spanish government has kick started the process to open up a mass grave at the 'Valley of the Fallen', where over 30,000 victims of the Spanish Civil War lay buried.

### About

- The Valle de los Caídos or Valley of the Fallen is built **on the slopes of a mountain range** on the **outskirts of Madrid**.



- It was constructed by **former dictator Francisco Franco** following the **Spanish Civil war** (1936-1939) as a **burial monument** and memorial Church.
- The valley was **built in part by political prisoners of Franco's regime** over a period of 18 years.

## 10. Tanzania

### Why in News?

- Its President John Magufuli had passed away in March who was an authoritarian leader and COVID-19 sceptic.

### About

- Tanzania is a **country in East Africa** within the **African Great Lakes region**.
- It borders **Uganda** to the north; **Kenya** to the northeast; **Comoro Islands and the Indian Ocean** to the east; **Mozambique** and **Malawi** to the south; **Zambia** to the southwest; and **Rwanda, Burundi**, and the **Democratic Republic of the Congo** to the west.
- **Mount Kilimanjaro**, Africa's highest mountain, is located in Tanzania.
- **Dodoma** is the capital of the country.



## 11. Chad

### Why in News?

- Chad's President Idriss Deby has been killed on the frontline against rebels in the north.

### About

- It is a **landlocked state** in **north-central Africa**.
- It is named after **Lake Chad**.
- The **Sahara Desert** roughly **covers one third** of the country.
- The south has large expanses of **wooded savannas** and **woodlands**.
- Chad is also a **part of the Sahel region**.
  - Sahel is a **semiarid region of western and north-central Africa** extending from Senegal eastward to Sudan.
  - It forms a **transitional zone** between the arid Sahara (desert) to the north and the belt of humid savannas to the south.
- Chad became an **oil-producing nation in 2003**, with the completion of a **USD 4bn pipeline linking its oilfields** to terminals on the Atlantic coast.



## 12. Kowloon peninsula

## Why in News?

- Hong Kong is set to grant a site on the western Kowloon peninsula, to China's national security office for its permanent base in the city.

## About

- The Kowloon Peninsula is a **peninsula** that forms the **southern part of the main landmass** in the **territory of Hong Kong**, alongside Victoria Harbour and facing toward Hong Kong island.
- The Kowloon Peninsula and the area of New Kowloon are collectively known as **Kowloon**.
- Geographically, the term "**Kowloon Peninsula**" may also refer to the area south of the **mountain ranges of Beacon Hill, Lion Rock, Tate's Cairn, Kowloon Peak**, etc.
- The peninsula covers **five** of the **eighteen districts of Hong Kong**.
- Kowloon Bay is located at the **northeast of the peninsula**.



## 13. Marib

## Why in News?

- Yemen's Houthi rebels have taken full control of the northwest Kassara battlefield, advancing close to the centre of Marib city despite heavy casualties.

## About

- Marib is the **capital city of Marib Governorate, Yemen**.
- It was the capital of the **ancient kingdom of Saba** which some scholars believe to be the **ancient Sheba of biblical fame**.
- It is located in the region of the **Sarawat Mountains**.
- Marib and its surrounding **oil fields** make up the **last significant pocket of government-held territory** in the north, the rest of which is under rebel control, including the **capital Sanaa**.
- The **loss of Marib** would be a major blow for the Yemeni government and for Saudi Arabia which has **supported its militarily since March 2015**, after the rebels captured Sanaa.



## 14. Sahel

## Why in News?

- Chad, the former French colony is now prime outpost of the West in fighting Islamist militants across the Sahel. France still has a strong military presence in the sahel region.

## About

- The Sahel is the **ecoclimatic and biogeographic realm of transition in Africa** between the Sahara to the north and the Sudanian savanna to the south.
- Having a **semi-arid climate**, it stretches across the **south-central latitudes of Northern Africa** between the Atlantic Ocean and the Red Sea.
- The **Sahel part of Africa includes** northern Senegal, southern Mauritania, central Mali, northern Burkina Faso, the extreme south of Algeria, Niger, the extreme north of Nigeria, the extreme north of Cameroon and Central African Republic, central Chad, central and southern Sudan, the extreme north of South Sudan, Eritrea, and the extreme north of Ethiopia.



# Polity

## 1. Article 244(A) of the Constitution

### Why in News?

- Congress leader Rahul Gandhi promised to implement Article 244 (A) of the Constitution to safeguard the interests of the people in Assam's tribal-majority districts.

### About

- Article 244(A) allows for creation of an '**autonomous state**' **within Assam** in certain tribal areas.
- Inserted into the Constitution in **1969**, it also has a **provision for a Legislature** and a **Council of Ministers**.

### 👉 How is it different from the Sixth Schedule of the Constitution?

- The Sixth Schedule of the Constitution — Articles 244(2) and 275(1) — is a **special provision** that allows for **greater political autonomy** and **decentralised governance** in **certain tribal areas** of the Northeast through autonomous councils that are administered by elected representatives.
- In Assam, the hill districts of **Dima Hasao**, **Karbi Anglong** and **West Karbi** and the **Bodo Territorial Region** are under this provision.
- **Article 244(A)** accounts for **more autonomous powers** to **tribal areas**.

## 2. Model Code of Conduct

### Why in News?

- Recently, the Trinamool Congress has alleged that Prime Minister's tour of Bangladesh amounts to a violation of the model code of conduct.

### About

- It is a **set of guidelines** issued by the Election Commission to **regulate political parties and candidates prior to elections**, to ensure free and fair elections.
- **Article 324 of the Constitution** gives the Election Commission the **power to supervise elections** to the Parliament and state legislatures.
- The MCC is operational from the date that the **election schedule is announced till the date that results are announced**.

### Key Provisions

- The parties **must inform the local police authorities** of the **venue and time of any meeting** in time to enable the police to make adequate security arrangements.
- If two or more candidates **plan processions along the same route**, organisers must establish contact in advance to ensure that the **processions do not clash**.
- All authorised party workers at polling booths should be **given identity badges** which should **not contain the party name, symbol or name of the candidate**.

- The **activities prohibited** under the MCC are:
  - Using caste and communal feelings to secure votes.
  - Criticizing candidates based on unverified reports.
  - Bribing or intimidation of voters.
  - Organising demonstrations or picketing outside houses of persons to protest their opinions.
- The party **must avoid advertising** at the **cost of the public exchequer** or **using official mass media** for publicity on achievements to **improve chances of victory in the elections**.
- The guidelines also **prohibit parties from making promises** that exert an undue.
- The ECI does **not have a judicial ability** to **penalise the violators** of the Model Code of Conduct.

### 3. Central Vigilance Commission

#### Why in News?

- Recently, the Central Vigilance Commission (CVC) has modified the guidelines pertaining to the transfer and posting of officials in the vigilance units of government organisations, restricting their tenure to three years at one place.

#### About

- The CVC was set up by the Government in **February, 1964** on the recommendations of the Committee on Prevention of Corruption, headed by **K. Santhanam**.
- The Parliament enacted **Central Vigilance Commission Act, 2003** (CVC Act) conferring **statutory status** on the CVC.
- It is an **independent body** which is only responsible to the Parliament.
- It submits its **report to the President of India**.
- Mandate → As the apex integrity institution, the Commission is mandated to **fight corruption** and to **ensure integrity in public administration**.
- Functions →
  - Exercise **superintendence over** the **functioning of the Delhi Special Police Establishment** (CBI) insofar as it relates to the investigation of offences under the Prevention of Corruption Act, 1988.
    - The CVC **receives complaints on corruption** or **misuse of office** and recommends appropriate action.
    - Following institutions, bodies, or a person can approach CVC: **Central government, Lokpal** and **Whistle blowers**.
  - CVC has **no investigation wing** of its own as it **depends on the CBI** and the Chief Vigilance Officers (CVO) of central organizations, **while CBI** has its **own investigation wing** drawing its powers from Delhi Special Police Establishment Act, 1946.
- Composition → It is a **multi-member Commission** consisting of a **Central Vigilance Commissioner** (Chairperson) and **not more than 2 Vigilance Commissioners** (Member).
- Appointment of Commissioners → They are **appointed by the President** of India on the **recommendations of a committee** consisting of Prime Minister, Union Home Minister and Leader of the Opposition in Lok Sabha (if there is no Leader of Opposition then the leader of the single largest Opposition party in the Lok Sabha).
- Term → Their term is **4 years** or **65 years**, whichever is earlier.

- Removal →
  - Removal is done by the President on grounds of bankruptcy, unsound mind, infirmity of body or mind, sentenced to imprisonment for a crime, or engages in paid employment or has acquired financial or other interest that might affect his judgment.
  - He can also be removed for proved misbehaviour or incapacity if the Supreme Court inquiry finds him guilty.
  - They can also resign by writing to the President.

## 4. AI Portal SUPACE

### Why in News?

- Recently, the Chief Justice of India has launched the Supreme Court Portal for Assistance in Court's Efficiency (SUPACE).

### About

- What is it? → It is a tool that collects relevant facts and laws and makes them available to a judge.
- It is an Artificial Intelligence (AI) portal which is designed to make research easier for judges, thereby easing their workload.
- It is not designed to take decisions, but only to process facts and to make them available to judges looking for an input for a decision.
- It is a perfect blend of human intelligence and machine learning and 'a hybrid system', which works better with human intelligence.
- Significance →
  - It will produce results customized to the need of the case and the way the judge thinks.
  - This will be time saving. It will help the judiciary and the court in reducing delays and pendency of cases.
  - AI will present a more streamlined, cost effective and time bound means to the fundamental right of access to justice.
  - It will make the service delivery mechanism transparent and cost-efficient.

## 5. Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021

### Why in News?

- The President of India has promulgated the Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021.

### About Key changes

- The ordinance seeks to dissolve certain existing appellate bodies and transfer their functions to other existing judicial bodies.
- It seeks to empower the Central Government to make rules for qualifications, appointment, term of office, salaries and allowances, resignation, removal and other terms and conditions of service of Members of Tribunals.
- It provides that the Chairperson and Members of the Tribunals will be appointed by the Central Government on the recommendation of a Search-cum-Selection Committee.

- It also provides the **composition of the Committee**, to be **headed by the Chief Justice of India** or a **Judge of Supreme Court** nominated by him.
- Tenure → **Chairperson** of a Tribunal shall hold office for a **term of 4 years** or **till he attains the age of 70 years**, whichever is earlier. **Other Members** of a Tribunal shall hold office for a **term of 4 years** or **till he attains the age of 67 years**, whichever is earlier.
- The Ordinance omits following Tribunals/ Appellate Authorities from the purview of Finance Act →
  - Airport Appellate Tribunal established under the Airport Authority of India Act, 1994.
  - Appellate Board established under the Trade Marks Act, 1999.
  - Authority for Advance Ruling established under the Income Tax Act, 1961.
  - Film Certification Appellate Tribunal established under the Cinematograph Act, 1952.

### 👉 About Tribunals

- Tribunal is a **quasi-judicial institution** that was set up to deal with problems such as **resolving administrative or tax-related disputes**.
- For this purpose, Tribunals were added to the Constitution by **Constitution (Forty-second Amendment) Act, 1976** as **Part XIV-A** which has only two articles:
  - **Article 323-A** deals with Administrative Tribunals.
  - **Article 323-B** deals with tribunals for other matters.

## 6. Copyright (Amendment) Rules, 2021

### Why in News?

- The Government of India notifies Copyright (Amendment) Rules, 2021.

### About

- In India, the copyright regime is **governed by the Copyright Act, 1957** and the **Copyright Rules, 2013**. The Copyright Rules, 2013 were last amended in the year 2016.
- It aims at **adopting electronic means** as a primary mode of communication and working in the Copyright Office. It is to **match with the technological advancement in the digital era**.
- Objective of the amendments → Further, It will **bring the existing rules in parity with other relevant legislations**.

### Key Provisions of the Amendments:

- Elimination of Publication in Official Gazette → Amendment **eliminates the requirement of publication of a copyrights journal** in the **Official Gazette**. The said journal would be available at the website of the Copyright Office.
- Annual Transparency Report → The **copyright societies** will **require making an Annual Transparency Report public**, for each financial year.
- Merging of Boards → The amendments **harmonised the Copyright Rules with the provisions of Finance Act, 2017** whereby the Copyright Board has been **merged** with Appellate Board.

- Registration of Software Works → The **compliance requirements for registration** of software works have been **largely reduced**. Now the applicant has the liberty to file the first 10 and last 10 pages of source code or the entire source code if less than 20 pages.
- Increased Time Limit → The **time limit** for the response to an application for registration as a copyright society is **now 180 days**. Now the Central government can **examine the application more comprehensively**.

## 7. Durbar Move

### Why in News?

- Recently, a tradition is set to be broken in Jammu and Kashmir, with only “sensitive records” being taken from Jammu to Srinagar, unlike in previous years when the entire administration and records would be shifted during “Durbar Move”.

### About

- What is it? → It is a **bi-annual shifting of the Civil Secretariat** and **other offices** of the state government **from Jammu to Srinagar in summer**, and vice versa in winter.
- It is done as Jammu & Kashmir has two capitals i.e. **Kashmir during summer** and **Jammu during winter**.
- Duration → The secretariat is located in **Srinagar from May to October** and in **Jammu from November to April**.
- Origin → It is a **tradition started 149 years ago** started by the erstwhile **Dogra rulers** who hailed from Jammu, but had expanded their boundaries to Kashmir.
- It was **started by Maharaja Ranbir Singh** in the **year 1872** to escape extreme weather conditions in these places.
  - He was the **third son of Gulab Singh**, the founder of the Jammu and Kashmir state.

## 8. People are free to choose religion: SC

### Why in News?

- In a recent case, the Supreme Court has said people are free to choose their religion.

### About

- A petition was filed in the court claiming there is **mass religious conversion** happening “**by hook or by crook**” across the country.
- The petition alleged that the **court should direct the Centre and the States** to **control black magic, superstition** and **religious conversion** being done through threats, intimidation or bribes.

### What has the Supreme Court said?

- The Supreme Court **refused to entertain the petition**. It observed that there is **no reason why a person above 18 can't choose his religion**.
- The Court observed that the **fundamental right under Article 25** provides people to **freely profess, practise and propagate religion**. It is subject to public order, morality and health.

- Further, the court said that the **Religious faith is a part of the fundamental right to privacy**. Hence, every person is the final judge of their own choice of religion. Courts cannot sit in the judgment of a person's choice of religion or a life partner.
- Note → In **Justice K.S. Puttaswamy vs. Union of India** (2017), the Supreme Court ruled that Fundamental Right to Privacy is **intrinsic to life and liberty**. Thus, it comes under **Article 21 of the Indian constitution**.

## 9. Chief Election Commissioner

### Why in News?

- Recently, the President has appointed Shri Sushil Chandra, the senior-most Election Commissioner, as the Chief Election Commissioner in the Election Commission of India.

### About

- The Election Commission is a **permanent and an independent body** established by the Constitution of India directly to **ensure free and fair elections** in the country.
- The body administers **elections to the Lok Sabha, Rajya Sabha, and State Legislative Assemblies** in India, and the offices of the President and Vice President in the country.
- Structure of ECI →
  - The Election Commission shall consist of the **Chief Election Commissioner** (CEC) and such number of **other election commissioners**, if any, as the **President may from time to time fix**.
  - Presently, it consists of the **CEC** and **two Election Commissioners**.
    - At the state level, the election commission is helped by the Chief Electoral Officer who is an IAS rank Officer.
- Appointment & Tenure of Commissioners →
  - The **President appoints** CEC and Election Commissioners.
  - They have a **fixed tenure of six years**, or **up to the age of 65 years**, whichever is earlier.
  - They enjoy the **same status** and **receive salary and perks** as available to **Judges of the Supreme Court** (SC) of India.
- Removal →
  - They can **resign anytime** or **can also be removed** before the expiry of their term.
  - The CEC can be removed from office only through a **process of removal similar to that of a SC judge by Parliament**.

## 10. Judgments and Orders Portal

### Why in News?

- Dr Justice Dhananjaya Y. Chandrachud, Judge, Supreme Court of India and Chairperson, e-Committee of the Supreme Court inaugurated a Judgments and Orders Portal and an e-Filing 3.0 module.

### About

- What is it? → Judgments and Orders search portal is a **repository of judgments** pronounced by various High Courts in the country.
- Purpose → It provides a **facility to search judgments** and **final orders** based on multiple search criteria.

- Features → The main features of the portal are:
  - **Free text search facilitates** user to search judgments based on any keyword or combination of multiple keywords
  - Also, **users can search judgments** based on various criteria like bench, case type, case number, year, petitioner/ respondent name, judge name, etc.

#### 👉 **e-Filing 3.0 module:**

- The E-Filing 3.0 module allows the **electronic filing of court documents**.
- Under the module, there will be **no need for lawyers** or **clients to visit the court premises** for filing a case. Further, the filing process can take place even when the court, client, and lawyer are at three different locations.

#### 👉 **E-Courts Project**

- eCourts is a **Pan-India Project**. These are **available for the District Courts** across the country.
- Monitoring → The **Department of Justice**, Ministry of Law and Justice, **monitors and funds** this project.
- Background → The Project was conceptualised on the **basis of the National Policy and Action Plan**. The national policy aims at Implementation of Information and Communication Technology (ICT) in the Indian Judiciary in 2005. Similarly, the aim of the project is to **transform the Indian Judiciary by ICT-enabled courts**.
- Objectives → The main objectives of the Project are:
  - To **provide efficient & time-bound citizen-centric service delivery**.
  - To **develop, install & implement decision support systems** in courts.

#### 👉 **E-Committee:**

- Formation → The e-Committee was **set up in 2004**.
- Purpose → It provides a **guide map for use of information technology** and **administrative reforms** in the Indian judiciary.
- For that, the committee **assists the CJI** in **formulating a national policy** on the **computerization of the judiciary**.

## 11. National Commission for Scheduled Castes

### Why in News?

- National Commission for Scheduled Castes (NCSC) launched an Online Grievance Management Portal for Scheduled Caste.

### About NCSC

- Status → National Commission for Scheduled Castes (NCSC) is a **constitutional body**.
- It was set up **under Article 338** to safeguard the interests of the scheduled castes (SC) in India.
- By the **amendment in 2003**, the erstwhile National Commission for SC and ST was replaced by **two separate Commissions** from the year 2004 which are: National Commission for Scheduled Castes (**NCSC**) and National Commission for Scheduled Tribes (**NCST**)-under Article 338-A.
- Composition →

- The National Commission for SCs consists of a **chairperson**, a **vice-chairperson**, and **three other members**.
- They are **appointed by the President** by warrant under his hand and seal. The President also determines their conditions of service and tenure of office.
- Functions of NCSC →
  - To **investigate and monitor all matters** relating to the constitutional and other legal safeguards for the SCs and to evaluate their working;
  - To **inquire into specific complaints** with respect to the deprivation of rights and safeguards of the SCs;
  - Also, to **participate and advise on the planning process** of socio-economic development of the SCs and to evaluate the progress of their development under the Union or a state;
  - Lastly, To **present the report** on working of those safeguards **to the President**, annually.

#### **About the Online Portal**

- It has been designed in **collaboration with the Bhaskaracharya Institute for Space Applications and Geoinformatics (BISAG-N)**, a Centre of Excellence under the Ministry of Electronics and Information Technology.
- It will facilitate an **end-to-end e-filing of complaints and grievances** and their tracking.
  - It is for submission of complaints about atrocities against citizens who belong to the Scheduled Castes.
- It is **"intended to make the hearing processor"** similar to **India's e-Courts project** and allow grievance redressal for the country's scheduled caste population in a "time bound manner".
- It will **supplement** the **physical submission** of complaints and grievances.

## 12. Abhijit Sinha committee

### Why in News?

- The Nagaland government has decided to form a joint consultative committee (JCC) involving all traditional tribal bodies and, civil society organisations for taking an exercise to register the State's indigenous inhabitants.

### About

- Headed by → The JCC will be headed by **Home Commissioner Abhijit Sinha**.
- The decision was taken at a meeting on the **issue of preparing the Register of Indigenous Inhabitants of Nagaland (RIIN)**.
- In July **2019**, **the Nagaland government launched the RIIN**, seen as a variant of Assam's National Register of Citizens that **excluded 19.06 lakh people out of about 3.3 crore applicants**.
- The exercise was **put on hold after some civil society** and **extremist groups opposed its stated objective** of preventing outsiders from obtaining fake indigenous certificates for seeking jobs and benefits of government schemes.
- **December 1, 1963** — the day **Nagaland attained Statehood** — was the **cut-off date** for determining the **"permanent residents"** of the State. Apart from non-Nagas, the **"outsiders"** implied Nagas living in areas beyond the boundaries of Nagaland could be left out of the RIIN.

## 13. Memorandum of Procedure

## Why in News?

- The Supreme Court of India has laid down a timeline for the Centre to clear names recommended by the High Court Collegiums. This order is essentially contrary to the Memorandum of Procedure(MoP).

## About

- Memorandum of Procedure(MoP) is **an agreement between the judiciary and the government**.
- It contains a **set of guidelines** for making appointments to the Supreme Court and High Court.
- Significance: The MoP is a **crucial document as the Collegium system** of appointing judges is a judicial innovation that is **not mandated** through legislation or text of the Constitution.

## Evolution of MoP

- The MoP evolved based on three SC decisions – the **First Judges Case** (1981), **Second Judges Case** (1993), and the **Third Judges Case** (1998).
- In 2016, the MoP **re-negotiations took place** following the Supreme Court's decision to strike down the **National Judicial Appointments Commission(NJAC)**.
- However, a judicial order can **overturn the negotiations** as an order of the SC is the law of the **land binding the government**.

## MoP on the appointment of High Court Judges:

- MoP starts with the **recommendation of the High Court Collegium** to the center for the appointment of other judges. The **Chief Justice of the High Court(HC) heads** the **collegium**.
- Once the **center receives recommendations**, it asks for the **opinion of state governments** and the input from the **Intelligence Bureau** (IB).
- The government then **forwards the files**, along with the **IB inputs** to the **Supreme Court collegium**.
- If the Supreme Court collegium **clears the names**, the **files return to the central government**. It then either notifies the appointments or sends them back with objections or its views.
- At this stage, the **Supreme court collegium** can **seek additional inputs** on the **government's opinion**. Accordingly, it can **either reject** or **reiterate the proposal**.
- If the **collegium reiterates its decision**, then, **under the MoP**, the government is bound to notify the appointments.
- However, the MoP does **not specify a timeframe** for the central government to act on a collegium decision.

## 14. Appointment of ad-hoc Judges

### Why in News?

- To deal with mounting backlog of cases, the Supreme Court cleared the way for appointment of retired judges as ad-hoc judges in High Courts under Article 224A of the Constitution.

### About

- There are almost **40% vacancies remaining** in the **regular appointments** (both permanent and additional judges) over the last two years.

- So, the court ruled that the Chief Justice of a High Court may **initiate** the **process of recommending a name** if,
  - Number of judges' vacancies is **more than 20%** of **the sanctioned strength**,
  - Cases in a particular category are **pending for over five years**,
  - **More than 10% of pending cases** are **over 5 years old**, or percentage of the rate of disposal is lower than the institution of the cases **either in a particular subject matter** or **generally in the court**.
- Appointment Procedure →
  - The Chief Justice of a High Court should **prepare a panel of judges** after **personal interaction** with the concerned judge to take their consent.
  - The appointments can **follow the procedure laid down** in the **Memorandum of Procedure** for appointment of judges.
  - Since the nominees have been judges before, the **need to refer the matter to the IB** or **other agencies** would **not arise**, shortening the time period.
  - A Chief Justice should **start** the **recommendation process three months in advance** for such appointment.
- Tenure → Generally for a period between **two and three years** (may vary on the basis of the need.)
- Number → The **number of ad-hoc judges** in the court should be in the **range of 2 to 5 for the time** being (Depending on the strength of the High Court and the problem faced by it.)
- Work → Since the goal was to **clear the backlog**, the ad-hoc judges can be **assigned more than five-year-old cases**; however, this would not affect the High Court Chief Justice's discretion to allot any other matter.
  - The ad-hoc appointees are **barred from performing any other legal work - advisory, arbitration or appearing** in court for clients.
  - If a Division Bench needs to be constituted to **hear a matter**, it would **comprise** of **only ad-hoc judges** (not a mix of ad-hoc and sitting judges).
- Allowances → Their emoluments and allowances should be **on a par with a permanent judge** of that **court minus the pension**.
- They will be entitled to allowance/perks/perquisites as are **available to permanent/additional judge(s)**.

# International Relation

## 1. New Development Bank

### Why in News?

- Recently, the Union Finance Minister has urged the New Development Bank (NDB) to consider working closely with India's new development financing institution for funding infrastructure.

### About

- What is it? → It is a **multilateral development bank** operated **by the BRICS states** (Brazil, Russia, India, China and South Africa).
- It was agreed to by BRICS leaders at the **5th BRICS summit** held in **Durban, South Africa** in **2013**.
- It was established in **2014**, at the **6th BRICS Summit** at **Fortaleza, Brazil**.
- Purpose → The bank is set up to **foster greater financial and development cooperation** among the five emerging markets.
- Headquartered → **Shanghai, China**.
- Voting → Unlike the World Bank, which assigns votes based on capital share, in the New Development Bank **each participant country** will be **assigned one vote**, and none of the countries will have veto power.
- Roles and functions → The Bank will **mobilise resources for infrastructure and sustainable development projects** in BRICS and other emerging economies and developing countries, to **supplement existing efforts** of multilateral and regional financial institutions for global growth and development.
- In **2018**, the NDB received **observer status in the United Nations General Assembly**, establishing a firm basis for active and fruitful cooperation with the UN.

## 2. BIMSTEC

### Why in News?

- 17th BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Ministerial meet, chaired by Sri Lanka, was held recently.

### About

- What is it? → BIMSTEC is a **regional organization** consisting of members from South Asia and South-East Asia.
- Founded → It was **founded in 1997** through the **Bangkok Declaration**.
- Headquarters → **Dhaka, Bangladesh**.
- Objective → The organization aims to **harness shared, accelerated growth through mutual cooperation** on multiple areas of common interests. The members will achieve this by using regional resources and geographical advantage.
- Members: It comprises seven Member States →
  - Five from South Asia including **Bangladesh, Bhutan, India, Nepal, Sri Lanka**
  - Two from Southeast Asia including **Myanmar** and **Thailand**.
- Chairmanship → BIMSTEC Chairmanship **rotates among member countries** (alphabetically).

- Significance → Nearly **1.5 billion people** or **22% of the global population** comes under the BIMSTEC. Together, BIMSTEC has a combined gross domestic product (GDP) of **\$2.7 trillion**.
- Sectors → Currently, the BIMSTEC is involved in **15 sectors**. This includes sectors such as **trade, technology, agriculture, tourism, fisheries, energy, and climate change** among others for sectoral cooperation.
- First Summit → The First Summit Meeting of the Heads of the BIMSTEC Countries was held in **Bangkok, Thailand in 2004**.

### 3. UN Women

#### Why in News?

- India contributes USD 300,000 to the UN Women to support gender equality and women empowerment.

#### About

- What is it? → UN Women is the **United Nations entity**, dedicated to **promoting gender equality** and the **empowerment of women**.
- Established in → **2010** by the United Nations General Assembly to accelerate the progress on meeting women's needs worldwide.
- Headquarter → **New York, United States**.
- UN Women formed by **merging the four previously distinct parts** of the UN system which are →
  - Division for the Advancement of Women (**DAW**)
  - International Research and Training Institute for the Advancement of Women (**INSTRAW**)
  - Office of the Special Adviser on Gender Issues and Advancement of Women (**OSAGI**)
  - United Nations Development Fund for Women (**UNIFEM**).
- The main roles of UN Women are →
  - To support **inter-governmental bodies**, such as the Commission on the Status of Women in their **formulation of policies, global standards, and norms**.
  - To **help the Member States** to **implement these standards, standing ready to provide suitable technical and financial support** to those countries that request it, and to forge effective partnerships with civil society.
  - Furthermore, to **hold the UN system accountable** for its own commitments on gender equality. It includes regular monitoring of system-wide progress.

### 4. World Cities Culture Forum

#### Why in News?

- The Chief Minister of Delhi will represent Delhi and India at the World Cities Culture Forum (WCCF).

#### About

- Establishment → WCCF was established in **London in 2012** with eight cities.
- Role → It enables the policy makers of member cities to **share research and intelligence**, and **explores the vital role of culture** in their future prosperity.
- Managed By → The activities of the World Cities Culture Forum are organised and delivered by **BOP Consulting**, a **specialist consulting firm**, on behalf of the Greater London Authority, London's Municipal Government.

- Member Cities → It has **43 participating** member cities.
  - Participating member cities include **London, Hong Kong, Amsterdam, Edinburgh, Lisbon, San Francisco, Shanghai**, etc.
  - **Delhi** is **invited this year** but it is not a part of member cities.

### World Cities Culture Summit:

- Forum members collaborate via a programme of events including **themed symposia, regional summits and workshops**. These events feed into the annual World Cities Culture Summit.
- Hosted on a **rotating basis by member cities**, this unique gathering allows city leaders to **share ideas and knowledge** about the **role of culture** as an organising principle for the sustainable city of the future.
- It is attended by **Deputy Mayors for Culture** and **Heads of Culture** from the member cities.
- 2021 Theme → **The Future of Culture**.

### World Cities Culture Report

- **Delhi** will also be **part of** the World Cities Culture Report - the **most comprehensive global dataset on culture in cities**.
- It is published by the forum **every three years**, with data and details on **innovative projects** from cities across the world. The **last report was published in 2018**.

## 5. E9 Initiative

### Why in News?

- Recently, Minister of State for Education will be attending consultation meeting of Education Ministers of E9 countries on E9 initiative.

### About

- Aim → The initiative will aim to **accelerate recovery and advance** the **Sustainable Development Goal 4** agenda by driving rapid change in education systems.
- Theme of the Meeting → **“E9 initiative: Scaling up digital learning to accelerate progress towards Sustainable Development Goal 4”**
- This consultation meeting will be the **1st of the 3 phase process** to **co-create** a **Digital Learning initiative**. The target population will be **marginalized children** and **youth especially girls**.
- The initiative will also focus on **three** of the **2020 Global Education Meeting priorities** namely:
  - support to teachers;
  - investment in skills
  - narrowing of the digital divide.

### 👉 E9 Partnership

- Background → Launched in **1993** at the **UNESCO’s Education For All (EFA) Summit** in New Delhi.
- Member Countries → The United Nations is spearheading the initiative with **nine countries** namely **Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria, and Pakistan**.

- Purpose → The E9 forum aims to **achieve the goals of UNESCO's Education For All(EFA) initiative**. It **strengthens political will** and **collective effort** to ensure quality education and lifelong learning opportunities for all.
- The forum represents over **half of the world's population** and **70% of the world's illiterate adults**.
- Significance → E-9 Initiative has become a forum for the countries to **discuss their experiences related to education, exchange best practices**, and monitor EFA-related progress.

#### 📌 Education For All(EFA) Summit:

- Education For All(EFA) is a **global movement led by UNESCO** (United Nations Educational, Scientific and Cultural Organization).
- Aim → Aim to **meet the learning needs** of all children, youth, and adults.
- Background → EFA was adopted by **The Dakar Framework** in **2000** at the World Education Forum in Senegal, Africa.

## 6. North Atlantic Treaty Organization

### Why in News?

- Ukrainian President Volodymyr Zelensky has urged NATO to speed up his country's membership in the alliance, saying it was the only way to end fighting with pro-Russia separatists.

### About

- What is it? → It is an **intergovernmental military alliance** established by the North Atlantic Treaty (also called the **Washington Treaty**) of **April 4, 1949**, by the United States, Canada, and several Western European nations.
- Headquarters → **Brussels, Belgium**.
- Purpose → Its purpose is to **guarantee the freedom and security** of its members through political and military means.
  - Political Objective → It **promotes democratic values** and **enables members to consult and cooperate** on defence and security-related issues to solve problems, build trust and, in the long run, prevent conflict.
  - Military Objective → It is committed to the **peaceful resolution of disputes**. If diplomatic efforts fail, it has the military power to undertake crisis-management operations.
- Significance → It constitutes a system of **collective defence** whereby its independent member states **agree to mutual defence** in **response to an attack by any external party**.
- Composition →
  - Since its founding, the admission of new member states has increased the alliance from the **original 12 countries to 30**. The most recent member state to be added to NATO was **North Macedonia** on 27 March 2020.
  - NATO membership is open to "**any other European state** in a **position to further the principles of this Treaty** and to **contribute to the security of the North Atlantic area**."

## 7. International Virtual Election Visitors Programme

## Why in News?

- Election Commission of India hosts International Virtual Election Visitors Programme(IEVP) 2021.

## About

- The Election Commission of India (ECI) **organized IEVP 2021**.
- Attended by → **Election Management Bodies(EMBs)/ Organisations from 26 countries** and three International Organisations attended it.
- Focus of the programme: The programme aims to provide the participants with an overview of →
  - The **large canvas of the Indian electoral process**.
  - New initiatives taken by ECI on **voter facilitation, transparency and accessibility of the electoral system**.
  - ECI's response to the **changing needs of training and capacity building** and **New formats** necessitated by COVID-19
  - **insights into the elections underway** in different states.

### 👉 Association of World Election Bodies(A-WEB)

- Association of World Election Bodies(A-WEB) was **established in 2013** in **South Korea**. It is the **largest association** of Election Management Bodies (EMBs) worldwide.
- Purpose → **achieving sustainable democracy** around the world.
- Chaired by → A-WEB is currently **chaired by India** for the **2019-21 term**.
- Members → At present A-WEB has **115 EMBs as Members & 16 Regional Associations/Organisations** as Associate Members.
  - ECI is very closely associated with the process of formation of A-WEB since 2011.
- Secretariat → **Seoul, South Korea**.
- Programmes → A-WEB undertakes **Election Visitor and Observation Programmes** in various countries. These programs aim to **study various election management practices** and **share knowledge** with other Member of EMBs.

## 8. OPEC

## Why in News?

- A recent resurgence in Covid-19 infections coupled with a decision by OPEC+ (a keep producers' block) to increase crude oil production has contributed to a fall in crude oil prices.

## About

- What is it? → The Organization of the Petroleum Exporting Countries (OPEC) is an **intergovernmental organization** of **13 countries**.
- History → It was **founded in 1960** in Baghdad by the first five members (Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela).
- Since 1965, it is **headquartered in Vienna, Austria**, although Austria is not an OPEC member state.
- OPEC members → **Algeria, Angola, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, the Republic of the Congo, Saudi Arabia, the United Arab Emirates and Venezuela**.

- OPEC+ → A larger group called OPEC+ was formed in **late 2016** to have **more control on the global crude oil market**.
- The stated mission of the organization is to "**coordinate and unify the petroleum policies** of its member countries and ensure the stabilization of oil markets".

## 9. Raisina Dialogue

### Why in News?

- The Prime Minister has delivered a video address at the Inaugural Session of the Raisina Dialogue.

### About

- Raisina Dialogue is an **annual multilateral conference on geopolitics and geoeconomics**.
- Organized by → The **Ministry of External Affairs** and the **Observer Research Foundation** have been jointly organizing it since 2016.
- Purpose → The conference **discusses cooperation** on the **most challenging international policy matters**.
- Participation → The dialogue involves a **variety of global policymakers** including heads of state, cabinet ministers, and local government officials.
  - In addition, the Dialogue also **welcomes major private sector executives**, as well as members of the media and academia.
- Significance → The design of the dialogue **follows Singapore's Shangri-La Dialogue**.
- In 2021, the conference was hosted in a **hybrid format with in-person conversations and digital discussions**.
- Theme for 2021 → **#ViralWorld: Outbreaks, Outliers, and Out of Control**.

### 👉 Observer Research Foundation (ORF)

- Observer Research Foundation (ORF) is an **independent think tank** based in **New Delhi**. It has three centres in Mumbai, Chennai and Kolkata.
- Purpose → It seeks to **lead and aid policy thinking** towards **building a strong and prosperous India** in a fair and equitable world. Also, it aims to help discover and inform India's choices. Further, it also carries Indian voices and ideas to forums shaping global debates.
- Significance → It also provides **non-partisan, well-researched analyses** and **inputs to diverse decision-makers** in governments, business communities, and academia, and civil society around the world.

## 10. UN Food Systems Summit 2021

### Why in News?

- India Holds National Dialogue on UN Food Systems Summit 2021.

### About

- The **first-ever UN Food Systems Summit** is expected to hold in **September 2021**. For that, the United Nations Secretary-General has called for members to participate.

- Purpose → The summit will **strategize the actions** for **positive change in Agri-food systems** in the world. It will help to **realize the vision** of the **2030 Agenda for Sustainable Development**.
- Focus → The Summit will focus **on levers and pathways to shape food systems** nationally and globally.
- Significance → The summit will be held as **part of the Decade of Action to achieve** the Sustainable Development Goals (**SDGs**) **by 2030**.
- Action Tracks → The Summit's Action Tracks offer stakeholders **to learn and share new actions, partnerships** and **to amplify existing initiatives**. The five Action Tracks are:
  - **Track 1:** Ensure access to safe and nutritious food for all.
  - **Track 2:** Shift to sustainable consumption patterns.
  - **Track 3:** Boost nature-positive production.
  - **Track 4:** Advance equitable livelihoods.
  - **Track 5:** Build resilience to vulnerabilities, shocks, and stress.

### 👉 Why food systems?

- The term “**food system**” refers to the **constellation of activities involved in producing, processing, transporting, and consuming food**.
- Food systems **touch every aspect of human existence**. The health of our food systems **profoundly affects the health of our bodies** as well as the **health of our environment**, our economies, and our cultures.
- Hence, when they function well, food systems have the **power to bring us together as families, communities, and nations**.

## 11. Boao Forum

### Why in News?

- The opening ceremony of the Boao Forum for Asia Annual Conference 2021 was held in Boao, south China's Hainan Province.

### About

- This year's conference was attended by **more than 2,600 guests** from over **60 countries** and regions.
- Theme → “**A World in Change: Join Hands to Strengthen Global Governance and Advance Belt and Road Cooperation**.”

### 👉 Boao Forum

- Formation → The Boao Forum for Asia was **initiated in 2001 by 25 Asian countries** and **Australia** (increased to 28 in 2006).
- Status → It is a **non-profit organisation**.
- Purpose → It has provided a **high-end platform for political, business and academic leaders** in Asia and the world.
- Significance →
  - The Forum is committed to **promoting regional economic integration** and bringing Asian countries even closer to their development goals.
  - It has made positive contributions to the **promotion of regional economic integration, common development** and the building of a more prosperous and harmonious Asia.

- It is **modelled on** the **World Economic Forum** held annually in Davos, Switzerland.
- Headquartered → **China**.

## 12. Country of Particular Concern

### Why in News?

- The USCIRF (US Commission on International Religious Freedom) has recommended classifying India as a Country of Particular Concern (CPC). It is due to the worst violations of religious freedom in India in 2020.

### About CPC

- USCIRF **recommends** the Country of Particular Concern (CPC) **designation to the US State Department**. It recommends countries **engaged in severe violations of religious freedom** under IRFA (International Religious Freedom Act) 1998.
- The **IRFA 1998 promotes religious freedom** as a foreign policy of the United States.
- Why is the country given the CPC designation? → The countries that receive this designation either **engage in or tolerate systematic, ongoing, glaring violations of religious freedom**.
- In addition to its CPC recommendations, the USCIRF established a Special Watch List countries. The list includes countries which does **not fit in the CPC criterion**, but **still engage in** or **tolerate severe violations** of religious freedom.
- Note → The recommendations given by the USCIRF are **non-binding on the US Government**.

### 👉 About the USCIRF

- USCIRF is an **independent, bipartisan US federal government commission**, dedicated to defending the universal right to freedom of religion or belief abroad.
- It is an **advisory body** to the US Congress.
- USCIRF's **2021 Annual Report assesses religious freedom violations** and **progress** during calendar year 2020 in 26 countries and makes independent recommendations for US policy.
- It is Headquartered at **Washington DC**.

## 13. United Nations Economic and Social Council (ECOSOC)

### Why in News?

- India has been elected to three key bodies of the UN ECOSOC. These bodies are the Commission on Crime Prevention and Criminal Justice (CCPCJ), Executive Board of UN Women, Executive Board of the World Food Programme.

### About UN- ECOSOC

- Established in → **1945**.
- It is **one of the six main organs of the United Nations**.
- Other organs are **UNSC, UNGA, Trusteeship Council, ICJ**, and **UN secretariat**.
- Headquarters → **New York, United States**.

- Aim → To **serve as a forum** for **discussing international economic and social issues**. It also works towards formulating policy recommendations addressed to the Member States and the United Nations system.
- Members → The Council consists of **54 Member States**. The UNGA will elect them for a **three-year term**.

#### 📌 **Commission on Crime Prevention and Criminal Justice (CCPCJ):**

- What is it? → CCPCJ is a **functional commission** of the **UN-ECOSOC**
- Purpose → The commission serves as the primary organ that **guides the activities of the United Nations**. Especially in the fields of crime prevention and criminal justice.
- Members → CCPCJ has **40 member states** that are **elected by ECOSOC**.
- Headquarters → **Vienna, Austria**.

#### 📌 **World Food Programme(WFP)**

- Background → Both the Food and Agriculture Organization (**FAO**) and United Nations General Assembly (**UNGA**) founded the WFP in **1961**.
- Aim → To **eradicate hunger and malnutrition** with the ultimate goal of eliminating the need for food aid itself.
- Significance → It is a **member of** the **United Nations Development Group** and **part of its Executive Committee**.
- Funding → **Voluntary donations** from world governments, corporations and private donors will entirely fund the operations of WFP.
- Members → The Executive Board of WFP consists of **36 states members**. The board provides **intergovernmental support, policy direction and supervision** of the activities of WFP.
- Nobel Prize → WFP was awarded the **Nobel Peace Prize in 2020**.
- Headquarters → **Rome, Italy**.

## 14. Organisation for the Prohibition of Chemical Weapons(OPCW)

### Why in News?

- India's Comptroller and Auditor General(CAG) GC Murmu selected as an external auditor to Organization for the Prohibition of Chemical Weapons(OPCW). His term will be for 3 years, starting in 2021.

### About

- What is it? → OPCW is an **intergovernmental organisation** and the implementing body for the Chemical Weapons Convention.
- Background → This convention is in force **since 1997** and **193 members**.
- Aim → To achieve the **vision of a world free of chemical weapons** by implementing the provisions of the Chemical Weapons Convention.
- Objectives →
  - **Destroying all existing** chemical weapons under international verification.
  - **Monitoring chemical industry** to prevent chemical weapons from re-emerging.
  - **Providing assistance and protection** to States Parties against chemical threats.
- Powers →

- The OPCW is authorized to **perform inspections to verify** that **signatory states** are complying with the convention.
- It can also **perform testing of sites and victims** of suspected chemical weapons attacks.
- Members → It has **193 members** including India.
- Headquarters → **The Hague, Netherlands**.
- Significance → The OPCW was awarded the **Nobel Peace Prize in 2013**.
- Relations with UN → OPCW is not a **United Nations(UN) organization**. However, by the 2001 Relationship Agreement between the OPCW and the UN, the OPCW reports on its inspections and other activities to the UN through the office of the Secretary-General.

## 15. Project DANTAK

### Why in News?

- Project DANTAK is commemorating its Diamond Jubilee in Bhutan.

### About

- Background → Project DANTAK was established in **1961** under the **leadership of the Third King of Bhutan** and then **Indian Prime Minister Jawahar Lal Nehru**.
- Objective → It was established with the objective of **developing roads, telecommunication networks** and **other such landmark infrastructure**-related projects in Bhutan.
- Nodal Agency → **Border Roads Organisation(BRO)**.

### Key Achievements of the Project

- Project DANTAK **completed** the road connecting **Samdrup Jongkhar to Trashigang** in **1968**. In the same year, Thimphu was connected to Phuentsholing.
- Some other notable projects executed by the project include the **construction of Paro Airport, Yonphula Airfield, Thimphu** – Trashigang Highway, Telecommunication & Hydro Power Infrastructure, Sherubtse College, Kanglung and India House Estate.
- The **medical and education facilities** established by DANTAK in **far-flung areas** were often the first in those locations
- Further, the project also established **food outlets** along the road. The **famous Takthi Canteen** midway between Phuentsholing and Thimphu is a compulsory stop for travellers.

## 16. Supply Chain Resilience Initiative

### Why in News?

- India, Japan and Australia formally launched the Supply Chain Resilience Initiative (SCRI) to build resilient supply chains in the Indo-Pacific region as they seek to reduce dependence on China.

### About

- Aim → The initiative aims to **create a virtuous cycle** of **enhancing supply chain resilience** to attain strong, sustainable, balanced, and inclusive growth in the region.
- Projects → The initial projects under the SCRI will be:

- **Sharing of best practices** on supply chain resilience and
- **Organizing Investment promotion events** and **buyer-seller matching events**. It will provide stakeholders an opportunity to explore the possibility of diversification of their supply chains.
- Policy Areas → The possible policy measures may include:
  - **supporting** the **enhanced utilization of digital technology** and
  - **supporting trade** and **investment diversification**.
- Meeting → The meeting by the trade ministers of three countries will be convened **at least once a year**. It will be **helpful in the implementation** of the SCRI as well as to consult on how to develop the Initiative.
- Significance → The SCRI aims to **reduce dependence on China** amid a likelihood of recharging of supply chains in the Indo-Pacific region amid the **Covid-19 pandemic**.

#### 👉 What do you mean by Supply Chain Resilience?

- It is the capability of the supply chain of a country to **handle any kind of disruption** and **function normally in difficult times**. One approach is **diversifying the source** of supply across a group of supplying nations instead of being dependent on just one or a few.
- Need → Disruption of supplies from a particular country can happen **due to natural calamities** such as pandemics or man-made events such as armed conflicts. It can **adversely impact** the **destination country's economic activities**.

## 17. Human Rights Watch

### Why in News?

- Human Rights Watch said that Israel is committing the crime of “apartheid” by seeking to maintain Jewish “domination” over Palestinians and its own Arab population.

### About

- What is it? → Human Rights Watch (HRW) is an **international non-governmental organization**.
- Headquartered in → **New York City**.
- Purpose → that **conducts research** and **advocacy on human rights**.
- Background → Human Rights Watch was co-founded by **Robert L. Bernstein** and **Aryeh Neier** as a **private American NGO in 1978**, under the name Helsinki Watch, to monitor the then-Soviet Union's compliance with the **Helsinki Accords**.
- The group **pressures governments, policy makers, companies**, and individual human rights abusers to **denounce abuse** and **respect human rights**, and the group often works on behalf of refugees, children, migrants, and political prisoners.
- Human Rights Watch in **1997** shared in the **Nobel Peace Prize** as a **founding member** of the **International Campaign to Ban Landmines** and it played a leading role in the 2008 treaty banning cluster munitions.

# Society

## 1. Anandam: The Centre of Happiness

### Why in News?

- Union Education Minister inaugurates Ānandam: The Center for Happiness in IIM Jammu, to help students live a stress-free life.

### About

- The Centre for Happiness-Anandam established with the aim to **help reduce the mental pressure of students and faculty**. They undergo stress **due to deadlines, coursework, and teaching load**.
- Origin of Name → The Center for Happiness acquires name '**Ānandam**' from **Indian wisdom tradition**. There the **state of pure consciousness is anandam**.
- Thus, it doesn't only aim for happiness but also on **knowing the truth, doing good, and enjoying the beauty around**.
- Categories → The Centre has five broad categories — **counseling, holistic wellness, elective courses on happiness development, research and leadership, faculty development**.
- At the center, students and teachers will **participate in regular physical exercises**. Moreover, they will be able to **practice breathing exercises** such as prāṇāyāma and mindfulness and practice meditation and contemplation.
- Significance → Incorporating happiness in the academic curriculum of students is a **very crucial step towards empowering our nation**. This step will take our education system to **newer heights**, similar to the times of ancient Indian universities **like Nalanda and Takshashila**.

### 📌 Gross National Happiness (GNH)

- Gross national happiness (GNH) is a term coined by the **Fourth King of Bhutan, Jigme Singye Wangchuck** in the **1970s**.
- GNH **measures economic and moral progress** as an alternative to gross domestic product measurement in Bhutan.
- The concept implies that **sustainable development** should take a **holistic approach towards notions of progress**. Thus, it gives equal importance to non-economic aspects of well being.
- In **2012**, for the **first time**, the World Happiness Report was **released by the United Nations Sustainable Development Solutions Network** based on Gross Happiness Index at global level.

## 2. Global Gender Gap Report

### Why in News?

- Recently, the World Economic Forum released the Global Gender Gap Report 2021.

### About

- The Gender Gap Index serves as a compass to **track the progress** on their **towards gender parity of the countries** in **four areas**,

1. Political Empowerment,
  2. Economic Participation and Opportunity,
  3. Educational Attainment and
  4. Health and Survival.
- It also examines the **drivers of gender gaps** and **outlines the policies** and **practices** needed for a gender-inclusive recovery.
  - The index scores the countries **from 0 (inequality) to 1 (equality)**.

#### 👉 Key Findings

- Among 156 countries ranked by the Gender Gap Report 2021, **Iceland** is the **most gender-equal country** in the world.
- **India** has ranked **140th rank**, becoming the third-worst performer in South Asia. India has **closed 62.5%** of its gender gap till date.
- For India, **most of the decline occurred** on the **political empowerment subindex**. The **decline also** took place on the **economic participation** and **opportunity subindex**, and health and survival subindex.
- The estimated earned income of women in India is **only one-fifth of men's**, which puts the country among the **bottom 10 globally** on the economic participation and opportunity subindex.

#### 👉 World Economic Forum

- The World Economic Forum is the International Organization for **Public-Private Cooperation**.
- It was established in **1971** as a **not-for-profit foundation** and is headquartered in **Geneva, Switzerland**. It is **independent, impartial** and not tied to any special interests.
- The Forum strives in all its efforts to **demonstrate entrepreneurship** in the **global public interest** while upholding the highest standards of governance.
- Some major reports published by WEF are → **Energy Transition Index**, **Global Competitiveness Report**, **Global IT Report**, **Global Risk Report**, **Global Travel and Tourism Report**.

### 3. National Policy for Rare Diseases, 2021

#### Why in News?

- Caregivers to patients with 'rare diseases' and affiliated organisations are dissatisfied with the National Policy for Rare Diseases, 2021.

#### About

- Aim → The policy aims to **lower the incidence** and **prevalence of rare diseases** based on an integrated and comprehensive preventive strategy.
- The strategy includes **awareness generation**, **counselling programmes**, **providing affordable Health Care** among others.

#### 👉 Highlights of the National Policy for Rare Diseases, 2021

- Categorisation → The policy has **categorised rare diseases** in **three groups**
  - disorders amenable to one-time curative treatment;

- those requiring long term or lifelong treatment;
- and diseases for which definitive treatment is available but challenges are to make optimal patient selection for benefit.
- Government Support →
  - The government will provide **Financial support of up to Rs. 20 lakh** under the Umbrella Scheme of **Rashtriya Arogya Nidhi** for treatment of those rare diseases listed **under Group 1**.
  - Moreover, Beneficiaries for such financial assistance would **not be limited to BPL families**. About **40% of the population, eligible** under Pradhan Mantri Jan Arogya Yojana, will also be eligible for assistance.
  - Further, for **group 2**, the State Governments can consider **supporting specific patients**. It includes a rare disease that can be managed with **special diets** or **hormonal supplements** or **other relatively low-cost** interventions (Diseases listed under Group 2).
- Voluntary Crowdfunding → The government has said that it will assist in **voluntary crowd-funding** for the **treatment of Group 3**. It is because it will be **difficult to fully finance the** treatment of high-cost rare diseases of Group 3.
- The policy also envisages creation of a **national hospital based registry of rare diseases** so that adequate data is available for definition of rare diseases and for research and development related to rare diseases within the country.

#### What is a rare disease?

- A rare disease, also referred to as an **orphan disease**, is any disease that **affects a small percentage** of the population.
- It has a prevalence of **1 or less per 1000 population**.
- Most rare diseases are **genetic**, and are present **throughout a person's entire life**, even if symptoms do not immediately appear.
- The commonly reported rare diseases, include → **Haemophilia, Thalassemia, Sickle cell anaemia, auto-immune diseases among others**.

## 4. Integrated Health Information Platform

### Why in News?

- The Union Minister of Health, Harsh Vardhan launched the Integrated Health Information Platform (IHIP).

### About

- The Integrated Health Information Platform (IHIP) is the **next generation highly refined version** of the presently used Integrated Disease Surveillance Programme (**IDSP**).
- According to the minister, **India is the first country** in the world **to adopt** such an advanced disease surveillance system.
- The new version of IHIP will house the **data entry and management for India's disease surveillance program**.
- In addition to **tracking 33 diseases** now as compared to the earlier 18 diseases, it shall **ensure near-real-time data in digital mode**, having done away with the paper-mode of working.

- Terming this as the **world's biggest online disease surveillance platform**, he stated that it is in sync with the National Digital Health Mission.

## 5. Anamaya Initiative

### Why in News?

- Union Minister of Health and Family Welfare and Union Minister of Tribal Affairs launches the Anamaya Initiative— a Tribal Health Collaborative.

### About

- What is it? → Anamaya is a **multi-stakeholder initiative** of the **Ministry of Tribal Affairs**. Piramal Foundation and Bill and Melinda Gates Foundation (BMGF) are supporting it.
- Objectives → Anamaya Initiative **aims to converge efforts** of various Government organizations to **improve the health and nutrition status** of the tribal communities of India.
- It also aims to **build a sustainable health ecosystem** that will **address the key health challenges** of the **tribal population**.
- **Key Features →**
  - It will bring **together governments, philanthropists, national and international foundations, NGOs/CBOs** for the health of the tribal communities.
  - Initially, It will **function in 50 Aspirational tribal districts** (with more than 20% ST population) across 6 high tribal population states.
  - Further, over a **10-year period**, the work of the Anamaya will be **extended to 177 tribal Districts**. The Ministry of Tribal Affairs will select the districts.

### 📁 Initiatives launched by Ministry of Tribal Affairs

- **ALEKH →** It is a **e-newsletter** that is to be released on **quarterly basis**. It will showcase the **works of different stakeholders** involved in improving health and nutrition of tribals.
- **Swasthya Portal →** It aims to **provide health and nutrition related information** of the tribal population of India.
- **Piramal Swasthya →** It will act as **Centre of Excellence for Knowledge Management for Health and Nutrition**. The centre will constantly engage with the Ministry of Tribal and provide valid information. This will help in policy making and decision processes.
- **GOAL (Going Online As Leaders) →** It is the **joint initiative of Facebook and the Ministry of Tribal Affairs** to **empower tribal youth** through mentorship, leadership training and digital literacy skills.
- **Empowering Tribals, Transforming India C** It is an **Online Performance Dashboard** that provides **updated & real-time details** of the schemes as well as initiatives launched by the Ministry of Tribal Affairs to achieve the Sustainable Development Goals(SDGs).

## 6. SARTHAQ

### Why in News?

- The Department of School Education and Literacy unveiled an implementation plan for school education called SARTHAQ in pursuance of the goals and objectives of the National Education Policy (NEP) 2020.

## About

- SARTHAQ → **'Students' and Teachers' Holistic Advancement through Quality Education.**
- Launched in pursuance of the **goals of NEP2020** and to **assist States/UTs** in this task.
- The programme aims at **providing an all-around development for the students** at the primary and secondary level.
- It will also **establish a safe, secure, inclusive and conducive learning environment** for students as well as teachers.
- The major focus is to **define activities in such a manner** which **clearly delineate goals, outcomes and timeframe** i.e., it links recommendation of NEP with 297 Tasks along with responsible agencies, timelines and 304 outputs of these tasks."
- Outcomes envisaged after the implementation of SARTHAQ →
  - It will **pave way for curriculum reforms** including new national and state curriculum frameworks for school education as well as early childhood care and education.
  - The programme will focus on the **improvement of the enrollment ratio of children at all levels** and a reduction in dropouts and out of school children.
  - It will provide **access to quality ECCE** and **Universal Acquisition of Foundational Literacy and Numeracy by Grade 3.**
  - It will **implement vocational education**, sports, arts, knowledge of India, 21st-century skills, values of citizenship, awareness of environment conservation in the curriculum.
  - It will focus on **experimental learning.**
  - It will also **improve the quality of Teacher Education Programmes.**

## 7. Aahaar Kranti

### Why in News?

- Union Health Minister, Dr Harsh Vardhan will launch a new mission called 'Aahaar Kranti'.

## About

- Launched by → **Vijnana Bharati** (Vibha) and **Global Indian Scientists' and Technocrats' Forum** (GIST).
- Aim → The mission will aim to **spread the message** of the **need for a nutritionally balanced diet**. Further, it will highlight the **importance of being accessible to all local fruits and vegetables.**
- Motto → **'Uttam Aahaar Uttam Vichaar'** or **'Good Diet-Good Cognition'**.

### Key Features of the Mission:

- Components → The mission will work on **multiple dimensions simultaneously.** It will seek to promote:
  - Better awareness
  - Better nutrition and
  - Also, better agriculture.
- These messages will be imparted through the curriculum in the form of **'what's** and **'why's of nutrition,** or **through the forms of games.**
- The **content** will be available **both online and offline** and in **all vernacular languages** besides English and Hindi. It will aim to **reach out to as many as possible.**

- The mission will especially focus on **training teachers**. Who in turn will pass on the **message to the students** and through them to **their families** and **finally the society at large**.
  - Such a strategy was adopted for the eradication of Polio, and it turned out to be a grand success.
- The mission will also **utilize India's rich knowledge** of **Ayurveda-based nutrition to practice**.

### Significance

- The mission will **address** the **current situation of hunger in abundance**. It will work to arouse the people to the **values of India's traditional diet, local fruits and vegetables**, and a **balanced diet**.
- International level →
  - Further, the **United Nations** also **declared 2021** as the **International Year of Fruits and Vegetables**. Hence, the Aahaar Kranti Mission vibes very well with this.
  - Moreover, **UN sustainable goal # 3** also emphasizes human well-being. It reads, "**Ensure healthy lives and promote well-being for all at all ages**."

## 8. Report on Racial Discrimination against Northeast People

### Why in News?

- Indian Council of Social Science Research (ICSSR) releases a study on racial discrimination and hate crimes against people from the northeastern States.

### About

- Conducted by → The **Centre for Criminology and Victimology at the National Law University(NLU), Delhi** conducted the study, under the aegis of the ICSSR.
- Purpose → The study **analysed the prevalence of hate crimes against the people of the North East** region in six metropolitan cities — **Mumbai, Pune, Delhi, Chennai, Bengaluru** and **Hyderabad**.

### 👉 Key Findings of the Study

- Racial Discrimination → Around **78%** of the interviewed people from the region believes that **physical appearance** was the **most important reason for prejudice**.
- **Offensive and abusive language** were **most common** across all six cities. **Mumbai** recorded the **highest** offensive and abusive language-related crime(**74%**). It was followed by Chennai (72%), Pune (67.3%), Delhi (64%), Hyderabad (48.7%) and Bengaluru (43.3%).
- The incidence of non-reporting of the incidents was **32.3%**. Further, as many as **34% of persons faced a common issue of refusal to file FIR by the police**.

### 👉 Indian Council of Social Science Research

- History → It was **established in 1969** by the Government of India on the recommendation of the then Planning Commission
- Location → **New Delhi**.
- Status → It is an **autonomous organisation** funded by Ministry Of Human Resource Development (MHRD).
- Functions → ICSSR provide **grants for projects, fellowships, international collaboration, capacity building, survey, publications** etc. to promote research in social sciences in India.

## 9. Poshan Gyan

### Why in News?

- Recently, the Chairman of NITI Aayog has launched 'Poshan Gyan'.

### About

- What is it? → It is a **national digital repository** on **health and nutrition**.
- Launched by → **NITI Aayog**, in partnership with **Bill and Melinda Gates Foundation** and **Centre for Social and Behaviour Change**, Ashoka University.
- Features → The Poshan Gyan repository is **conceptualized as a resource, enabling search of communication materials** on **14 thematic areas** of health and nutrition across diverse languages, **media types, target audiences and sources**.
- The content for the repository was sourced from the **Ministries of Health and Family Welfare** and **Women and Child Development** and **developmental organizations**.

## 10. State of World Population report 2021

### Why in News?

- The United Nations Population Fund's (UNFPA) flagship 'State of World Population Report 2021' titled 'My Body is My Own' was launched.

### About

- Published by → the **United Nations Population Fund** (UNFPA).
- Focus of the Report → **Bodily autonomy** is the first time the focus of the report. Bodily autonomy defined as the **power and agency to make choices about your body** without fear of violence or having someone else decide for you.
- Examples of Violation of Bodily Autonomy → **Some examples of violation of bodily autonomy** include:
  - child marriage
  - female genital mutilation
  - lack of contraceptive choices leading to unplanned pregnancy,
  - unwanted sex exchanged for a home and food
  - when people with diverse sexual orientations and gender identities cannot walk down a street without fear of assault or humiliation.

### 👉 Highlights of the report

- Nearly **half the women from 57 developing countries** do **not have the right to make decisions** regarding their bodies, including using contraception, seeking healthcare or even on their sexuality.
- In countries where data is available, **only 55% of women** are **fully empowered to make choices** over healthcare, contraception and the ability to say yes or no to sex.
- Facts about India in the Report →
  - In India, according to **NFHS-4** (2015-2016), only about **12% of currently married women** (15-49 years of age) **independently make decisions** about their own healthcare.
  - For a **quarter of women** (23%), it is the spouse that **mainly takes decisions** about healthcare.

## 📌 United Nations Population Fund

- It is a **subsidiary organ** of the **UN General Assembly** and **works as a sexual and reproductive health agency**.
- The UN Economic and Social Council (**ECOSOC**) **establishes its mandate**.
- Establishment → It was established **as a trust fund in 1967** and began operations in **1969**.
- In **1987**, it was officially **renamed** the **United Nations Population Fund** but the original abbreviation, 'UNFPA' for the United Nations Fund for Population Activities was retained.
- Objective → UNFPA works directly to **tackle Sustainable Development Goals** on health (**SDG3**), education (**SDG4**) and gender equality (**SDG5**).
- Fund → UNFPA is **not supported by the UN budget**, instead, it is entirely supported by **voluntary contributions** of donor governments, intergovernmental organizations, the private sector, foundations and individuals.
- Headquarters → **New York, United States**.

## 11. Gender Samvaad

### Why in News?

- The Ministry of Rural Development has organized the Gender Samvaad Event.

### About

- Gender Samvaad is a **cooperation between** Deendayal Antyodaya Yojana-National Rural Livelihoods Mission(**DAY-NRLM**) and Initiative for What Works to Advance Women and Girls in the Economy (**IWWAGE**).
- Aim → It aims to **generate greater awareness** about gender-related interventions under DAY-NRLM across the country. It focuses on **hearing opinions from the states and the field**.
- Activities under Gender Samvaad: Gender Samvaad provides states with opportunities to →
  - **Understand best practices/initiatives** that other states are undertaking to improve women's organisations.
  - **Understand gender interventions** globally;
  - **Engage with experts** and other colleagues on suggestions regarding how to handle issues/implementation barriers;
  - **The creation of a 'gender repository'**. It will have resource materials on best practices for gender interventions across the country/other countries;
  - **Build advocacy on the need** to focus on gender issues across State and National Rural Livelihoods Missions.

## 📌 About IWWAGE

- Initiative for What Works to Advance Women and Girls in the Economy (IWWAGE) is an **initiative of LEAD**.
- LEAD is an **action-oriented research center** of IFMR Society (a not-for-profit society registered under the Societies Act).
- Aim → To **build on existing research and generate new evidence** to inform and facilitate the agenda of women's economic empowerment.

## 12. Global Youth Mobilization Initiative

### Why in News?

- United Nations agencies, youth organisations, and WHO have come together to launch the Global Youth Mobilization initiative for local Solutions.

### About

- Launched on **April 19, 2021**.
- Aim → To **address the negative impact of the pandemic** on young people and support them to build back better.
- Funding → Young people from **around the world** can **apply for funding**. It will **support innovative Local Solutions** to address the impact of the COVID-19 pandemic.
- An initial **\$2 million** (nearly Rs 15 crore) be **available in four tiers**, from \$500 through to \$5,000 and an **“accelerator” programme** will **scale and replicate the most promising solutions**, with further funding lined up over the coming months.
- It is being **supported by six of the world’s largest youth organisations** →
  - World Alliance of Young Men’s Christian Associations.
  - World Young Women’s Christian Association.
  - World Organization of the Scout Movement.
  - World Association of Girl Guides and Girl Scouts.
  - The International Federation of Red Cross and Red Crescent Societies.
  - The Duke of Edinburgh’s International Award.

## 13. Pradhan Mantri Garib Kalyan Anna Yojana

### Why in News?

- The Union government announced that 5 kg of food grains would be provided to 80 crore beneficiaries under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) for the months of May and June 2021.

### About

- Pradhan Mantri Garib Kalyan Anna Yojana was announced as **part of the relief package** during the **COVID-19 pandemic**.
- Aim → To **ensure sufficient food** for the poor and needy during the coronavirus crisis.
- Ministry → The **department of Food and Public Distribution** under the Ministry of Consumer Affairs, Food and Public Distribution.
- Features → Under the scheme, about **80 Crore** National Food Security Act(**NFSA**) **beneficiaries are eligible** for an **additional quota of free-of-cost foodgrains** (Rice/Wheat) at a scale of **5 Kg per person per month** over and above their regular monthly entitlement.
- Duration → The scheme was **announced in 2020** for three months till July. Later it was **extended till November 2020** to combat the economic impact of the COVID-19 pandemic on the poor.
  - However, the scheme is **functional once again**. As many States are undergoing curfews and the high rates of coronavirus infections, leading to a slowdown in economic activity.

## 14. Ladakh Ignited Minds project

### Why in News?

- To provide better educational opportunities for Ladakhi students, the Indian Army has initiated the project Ladakh Ignited Minds: A Centre of Excellence and Wellness.

### About

- On behalf of Indian Army, **Fire and Fury Corps** has **signed a couple of MoUs with** partner Hindustan Petroleum Corporation Limited (**HPCL**) and executing agency, a Kanpur based NGO, **National Integrity and Educational Development Organization** (NIEDO), **in Leh**.
- Aim → The project is aimed at **providing better training facilities** to **disadvantaged Ladakhi students** to give them opportunity to study in niche educational institutes.
- Implementation →
- Fire and Fury Corps of Indian Army with the support of HPCL and execution agency NIEDO will **provide a holistic training** for Ladakhi youth.
- In the first batch, **comprising 20 girls, 45 students from Leh and Kargil districts**, would get training for JEE and NEET entrance examinations.

## 15. State of the world's indigenous people

### Why in News?

- Recently, the UN Department of Economic and Social Affairs released State of the world's indigenous peoples: Rights to Land, territories and resources report released.

### About Indigenous peoples

- Indigenous peoples are **inheritors and practitioners of unique cultures and ways of relating to people and the environment**.
- They have retained **social, cultural, economic** and **political characteristics** that are distinct from those of the dominant societies in which they live.
- Indigenous peoples in India comprise an estimated **population of 104 million** or **8.6% of the national population**, almost 90% of them living in rural areas.
  - In India, **705 ethnic groups** are **notified as Scheduled Tribes** (STs) spread **across 30 States or Union Territories**, these are considered to be India's indigenous peoples that includes 75 identified PVTGs.
  - Inherent rights of indigenous peoples:
    - **Collective and individual right** to their ancestral land, territories and resources also, exercise control and management of their right to lands, territories and resources;
    - **To self-government** by their own institutions and authorities within their lands and territories;
    - **To fair and equitable benefit sharing** from conservation and development actions involving their lands, territories, resources, and people
    - **To conserve, develop, use** and protect their traditional knowledge.

### Provisions in India to protect rights of indigenous people

- **Fifth Schedule of Constitution of India (Article 244)**
  - It envisages a special system of administration for certain areas designated as scheduled areas and tribal areas in any state except the four states of Assam, Meghalaya, Tripura and Mizoram

- Features of administration in the Fifth Schedule areas:
  - **Declaration of Scheduled Areas** with President of India in consultation with governor of the state concerned.
  - **Tribes Advisory Council**
  - **Law applicable to Scheduled Areas** with governor empowered to direct that any particular act of Parliament or the state legislature does not apply to a scheduled area.
  - **Constitution requires the president to appoint a commission to report** on the administration of the scheduled areas and the welfare of the scheduled tribes in the states.
- **Sixth Schedule of the Constitutions**
  - It deals with the administration of the tribal areas in the **four states of Assam, Meghalaya, Tripura and Mizoram**.
- **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (LARR) Act, 2013**
  - Under act, consent of 80% land owners required for private projects, 70% land owners required for Public-Private Partnership projects and no consent is required for government projects.
  - Act exempts 13 laws (such as the National Highways Act, 1956 and the Railways Act, 1989) from its ambit.
  - If land acquired under the Act remains unutilised for five years from taking possession, it must be returned to the original owners or a land bank.
  - The Act provides the option of employment to one member of an affected family as part of the rehabilitation and resettlement award.
  - The Act provides for the establishment of a Land Acquisition, Rehabilitation and Resettlement (LARR) Authority which may be approached in case a person is not satisfied with an award under the Act.
- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**
  - It is **to recognize and vest the forest rights and occupation** for forest dwelling Scheduled Tribes and other traditional forest dwellers (OTFD).

# Security

## 1. Exercise Vajra Prahar

### Why in News?

- Recently, Special Forces of India and the USA conducted the joint military exercise 'VAJRA PRAHAR 2021' in Himachal Pradesh.

### About

- What is it? → Exercise Vajra Prahar is a **Special Forces joint military training exercise**. It takes **place alternately** in India and the US **since 2010**.
- Aim → The exercise enables **sharing of best practices and experience in areas** such as joint mission planning capabilities and operational tactics.

#### 👉 Other Exercises of India with the USA:

- Exercise Yudh Abhyas** (Army).
- Cope India** (Air Force).
- Red Flag** (USA's multilateral air exercise).
- Malabar Exercise** (trilateral naval exercise of India, USA and Japan).

#### 👉 Special Forces

- Special Forces of India refer to those Special forces units that are **specifically organised, trained, and equipped to conduct and support special operations**.
- The **three branches** of the Indian Armed Forces have separate special forces units namely:
- Para SF → **Parachute Regiment** (Special Forces) is the **special force of the Indian Army**. This unit formed in **1966** in the aftermath of the 1965 Indo-Pakistan war.
- MARCOS → Marine Commando Force also called **MARCOS** established in **1987**. It is the **special forces unit of the Indian Navy**.
- Garud Commando Force → It was established in **2004**. They are the special forces of the **Indian Air Force (IAF)**.
- Note:** There are **other special forces** that are out of military control. They **operate under civilian organizations** such as the Home ministry's National Security Guard.

## 2. Exercise SHANTIR OGROSHENA 2021

### Why in News?

- Multinational Military Exercise SHANTIR OGROSHENA 2021 (Front Runner of the Peace) will be held at Bangladesh.

### About

- It will held to commemorate the **birth centenary of Bangladesh** 'Father of the Nation' **Bangabandhu Sheikh Mujibur Rahman** and mark **glorious 50 years of liberation**.

- **Indian Army will participate** in the exercise along with contingent of **Royal Bhutan Army**, **Sri Lankan Army** and **Bangladesh Army** from 04 Apr to 12 Apr 2021.
- Theme of the exercise is “**Robust Peace Keeping Operations**”.
- Military observers from **USA**, **UK**, **Turkey**, **Kingdom of Saudi Arabia**, **Kuwait** and **Singapore** will also be in attendance throughout the exercise.

### 3. Joint Logistics Node

#### Why in News?

- Chief of Defence Staff operationalises the third Joint Logistics Node (JLN) in Mumbai.

#### About

- The JLN has been established with an aim of **integrating the military’s logistics**. Further, it aims to **set up and improving the military’s war-fighting ability**.
- This is the **third Node** to be set up. The two other logistics hub were operationalised in **Guwahati** and **Port Blair** in January 2021.
- Purpose → The JLN will provide **integrated logistics cover** to **all three armed forces**. Especially for their small arms ammunition, rations, fuel, general stores, civil hired transport, aviation clothing, spares, and also engineering support.
- Advantages → The JLN will also provide advantages like **saving manpower**, **economic utilization of resources** apart from financial savings.
- Significance → It is a step towards **theaterisation of commands**. It consists of **units from all 3 forces** i.e. Navy, Army and Airforce.
  - It will be **helpful in conducting all future wars** by the tri-service in an integrated manner.
  - Such commands will come under the **operational control of an officer from any of the three services**, depending on the function assigned to that command.

### 4. Front Hard Armour Panel (FHAP) jacket

#### Why in News?

- Defence Minister Rajnath Singh has congratulated DRDO and DMSRDE Kanpur for developing a Light Weight Bullet Proof Jacket.

#### About

- Developed by → **DRDO lab** Defence Materials and Stores Research and Development Establishment (**DMSRDE**), **Kanpur**.
- The Front Hard Armour Panel (FHAP) jacket was tested at **Terminal Ballistics Research Laboratory** (TBRL), **Chandigarh** and **met relevant BIS standards**.
- Each gram of BPJ **weight reduction is crucial in enhancing soldier comfort** while ensuring the survivability.
- This technology **reduces the weight of the medium sized BPJ** from **10.4 to 9.0 kilogrammes**.
- Very specific materials and processing technologies have been **developed in the laboratories for the purpose**.

## 5. Left Wing Extremism

### Why in News?

- A team of security forces was attacked by a People's Liberation Guerilla Army (PLGA) unit in the Tarrem area near the Sukma-Bijapur district border, Chhattisgarh. Several security personnel were killed and many were injured.

### About Left Wing Extremism

- Left-wing extremists, popularly known as **Maoists worldwide** and as **Naxalites in India**.
- The term Naxalism derives its name from the **village Naxalbari of West Bengal**. It originated as a **rebellion against local landlords** who bashed a peasant over a land dispute.
  - The rebellion was **initiated in 1967**, with an objective of **rightful redistribution of the land** to working peasants under the leadership of **Kanu Sanyal** and **Jagan Santhal**.
- The movement has **spread across the Eastern India** in less developed areas of states such as **Chhattisgarh, Odisha** and **Andhra Pradesh**.
- It is considered that **Naxals support Maoist political sentiments** and **ideology**.
  - Maoism is a form of communism developed by **Mao Tse Tung**. It is a **doctrine to capture State power** through a combination of armed insurgency, mass mobilization and strategic alliances.
- Note → **PLGA** was founded in **2000**. It has been declared as a **terrorist organisation** and **banned** under the Unlawful Activities (Prevention) Act-1967 (UAPA).

### 👉 Government Initiatives to Fight LWE

- Greyhounds → It was raised in **1989** as an **elite anti-naxal force**.
- Operation Green Hunt → It was started in **2009-10** and **massive deployment of security forces** was done in the naxal-affected areas.
- LWE Mobile Tower Project → To **improve mobile connectivity** in the LWE areas, the Government in **2014**, approved installation of mobile towers in LWE affected States.
- Aspirational Districts Programme → Launched in **2018**, it **aims to rapidly transform the districts** that have shown relatively lesser progress in key social areas.

## 6. Advanced Chaff Technology

### Why in News?

- Defence Research and Development Organisation (DRDO) has developed an Advanced Chaff Technology to safeguard the naval ships against enemy missile attack.

### About

- Defence Laboratory Jodhpur (DLJ)**, a DRDO laboratory, has indigenously developed **three variants** of this technology namely
  - Short Range Chaff Rocket (**SRCR**),
  - Medium Range Chaff Rocket (**MRCR**) and
  - Long Range Chaff Rocket (**LRCR**) meeting Indian Navy's requirements.
- Chaff is a **passive expendable electronic countermeasure technology** used worldwide to **protect naval ships** from enemy's radar and Radio Frequency (RF) missile seekers.

- The importance of this development lies in the fact that **very less quantity of chaff material deployed in the air acts as decoy to deflect enemy's missiles for safety of the ships.**

## 7. INS Viraat

### Why in News?

- INS Viraat, the Navy's decommissioned aircraft carrier, has become the "private property" of a ship-breaker who has already torn down 40% of its body, chiefly for scrap, the Supreme Court told a private company, that wants to turn the vessel into a maritime museum-cum-adventure centre.

### About

- The **second Centaur-Class aircraft carrier** initially **served the Royal British Navy** as HMS Hermes in 1959 and was later sold to India in the 1980s.
- It holds the **world record** for being the longest-serving warship of the world.
- Housed → Fighters Sea Harriers of INAS 300 (**White Tigers**), Anti Submarine aircraft Sea King Mk 42B (**Harpoons**), Sea King Mk 42 C and the SAR helicopter **Chetak**, indigenous Advance Light Helicopters 'Dhruv' and the Russian twin rotor **Kamov-31**, etc.
- Operations → **Operation Mercy** (1974), **Operation Jupiter** (1989), **Operation Parakram** (2001-02), etc.
- Exercises → **Malabar** (USA), **Varuna** (French), **Naseem-Al-Bahar** (Oman Navy), **TROPEX** (annual theatre-level exercises), etc.
- It was **decommissioned in 2017**.
  - India acceded to the **Hong Kong International Convention for Safe and Environmentally Sound Recycling of Ships, 2009** in November 2019 and passed the Recycling of Ships Bill, 2019.
  - The multilateral convention **emphasises on safe and environmentally sound recycling of ships.**

## 8. Exercise La Pérouse

### Why in News?

- Recently, the navies and aircraft of India, the US, Japan and Australia will be participating in La Perouse Joint Exercise.

### About

- What is it? → It is a **French multinational naval exercise.**
- Aim → The exercise will **witness complex and advanced naval operations** including surface warfare, anti-air warfare and air defence exercises, weapon firing exercises, cross deck flying operations and seamanship evolutions such as replenishment at sea.
- Participants → **French Navy, Indian Navy, Royal Australian Navy (RAN), Japan Maritime Self Defence Force (JMSDF) and United States Navy (USN)** are participating in the exercise.
- Location → The exercise is being conducted in the **Eastern Indian Ocean Region.**
- Significance → **Indian Navy is participating** in the exercise for the **first time**. The participation will **showcase high levels of synergy, coordination and interoperability** between the friendly navies.
- Indo-French Joint Exercises →
  - **Desert Knight-21** and **Garuda** (Air exercise)
  - **Varuna** (Naval exercise)

- **Shakti** (Army exercise).

## 9. PS Zoroaster

### Why in News?

- Indian Prime Minister will gift a Fast Patrol Vessel named PS Zoroaster to Seychelles during the virtual event.

### About

- Built by → Fast Patrol Vessel (FPV) PS Zoroaster will be built by **Garden Reach Shipbuilders & Engineering**.
- Purpose → It is **useful for multi-purpose operations** such as patrolling, anti-smuggling, anti-poaching, and search and rescue (SAR).
- Significance → This will be the **fourth Fast Patrol Vessel**, gifted by India to Seychelles. Other gifted vessels by India include **PS Topaz** (2005), **PS Constant** (2014), **Patrol Boat Hermes** (2016).

### 📌 Also Remember

#### Solar Power Plant

- India will also hand over a **1 MW Solar Power Plant** at **Romainville Island of Seychelles**.
- The plant is a **part of the 'Solar photovoltaic Democratization Project'**. India is implementing this project in Seychelles under grant assistance.
- The solar plant project will generate around **14 lakh units of power annually**.

#### Magistrate Court

- Also, India and Seychelles will jointly inaugurate the **new Magistrates' Court Building** in **Victoria, Seychelles**.
- This Court Building is **India's first major civil infrastructure project** in Seychelles, built with grant assistance.



## 10. NanoSniffer

### Why in News?

- Union Education Minister Ramesh Pokhriyal 'Nishank' launched NanoSniffer, the world's first Microsensor based Explosive Trace Detector (ETD).

### About

- This **home-grown Explosive trace detector device** (ETD) - NanoSniffer can **detect explosives in less than 10 seconds** and it also identifies and categorizes explosives into different classes.
- It **detects all classes of military, conventional** and **homemade explosives**. It gives visible & audible alerts with sunlight-readable color display.

- NanoSniffer is a **100% Made in India product** in terms of **R&D** and **manufacturing**. It has been developed by NanoSniff Technologies, an IIT Bombay incubated startup and has been marketed by Vehant Technologies, a spin-off from a former IIT Delhi incubated startup Kritikal Solutions.
- This **affordable device** will reduce India's dependence on imported explosive trace detector devices.

## 11. Freedom of Navigation Operation

### Why in News?

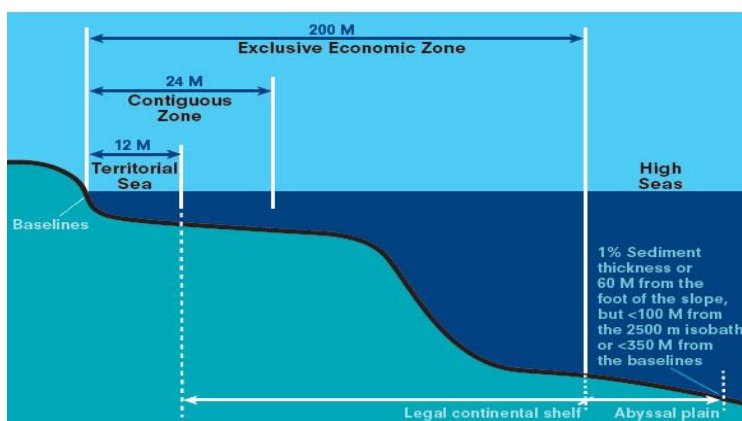
- The US Navy has publicly declared it conducted “freedom of navigation operations” in India’s Exclusive Economic Zone (EEZ) near Lakshadweep earlier this week, without deliberately seeking New Delhi’s prior consent.

### About FONOP

- Freedom of Navigation Operations involves passages **conducted by the US Navy** (USS John Paul Jones (DDG 53)).
- The US Navy will conduct such operations in the **exclusive territorial waters** of **coastal nations**.
- Purpose → These operations denotes that the **United States did not agree to the exclusive maritime claims of coastal nations**. Thus preventing those claims from becoming accepted in international law.
- According to the US Department of Defense (DoD), the **FONOP Program** has **existed for 40 years**. So far, the program continuously reaffirmed the US policy of exercising and **asserting its navigation** and **freedom rights around the world**.
- India’s Response → India has **protested the U.S. decision** to conduct a patrol in the Indian Exclusive Economic Zone (EEZ) in the western Indian Ocean.

### Exclusive Economic Zone (EEZ)

- According to UNCLOS, Exclusive Economic Zone (EEZ) is an **area of the sea** in which a **sovereign state has special rights** regarding the **exploration and use of marine resources**.
- This includes **energy production from water and wind**. It stretches from the baseline to **200 nautical miles** from the coast of the country.



### Indian Law

- As per India’s Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976:
  - The EEZ of India is an **area beyond and adjacent to the territorial waters**, and the limit of such zone is **two hundred nautical miles** from the baseline.
  - India’s **limit of the territorial waters** is the line every point of which is at a distance of **twelve nautical miles** from the nearest point of the appropriate baseline.
  - All **foreign ships** (other than warships including sub-marines and other underwater vehicles) shall **enjoy the right of innocent passage through the territorial waters**.

- Innocent passage: It is the passage that is **not prejudicial to the peace, good order or security of India**.

#### 📌 **United Nations Convention on the Law of the Sea 1982**

- The UNCLOS is an international treaty that provides a **regulatory framework** for the **use of the world's seas and oceans**.
- It lays down a **comprehensive regime of law and order** in the **world's oceans and seas** establishing **rules governing all uses** of the oceans and their resources.
- It enshrines the notion that **all problems of ocean space** are **closely interrelated** and need to be **addressed as a whole**.
- **India ratified UN Law** of the Seas in **1995**, the **US has failed** to do it so far.

## 12. Dhruv MK III: Advanced Light Helicopter

### Why in News?

- Recently, Indian Naval Air Squadron (INAS) 323, the first unit of the indigenously built ALH (Advanced Light Helicopter) Dhruv Mk III aircraft, was commissioned into the Indian Navy.

### About

- The indigenously designed and developed Advanced Light Helicopter (ALH-DHRUV) is a **twin engine, multi-role, multi-mission new generation helicopter** in **the 5.5 ton weight class**.
- Manufactured by → It is a **multi-role chopper** with the **Shakti engine** manufactured by **Hindustan Aeronautics Limited** (HAL).
- Features →
  - The aircraft, a step up from Mk 1, will be **able to mitigate low visibility during search and rescue operations even at night**.
  - It has a **0.7 mm gun**, which will give a huge capability from a LIMO (low intensity maritime operations) standpoint.
  - The **automatic flight control system** is **hugely superior** to the previous one.
- Role → The Mk III version of the ALH has an **all glass cockpit** and will be **used for search and rescue, special operations** and **coastal surveillance**.

## 13. Exercise Khanjar

### Why in News?

- India and Kyrgyzstan Special Forces started a military exercise named "Exercise Khanjar" in Bishkek, Kyrgyzstan.

### About

- What is it? → Exercise Khanjar is a **Joint Special Forces Military Exercise** between **India and Kyrgyzstan**.
- Aim → The exercise aims **to boost the strategic partnership** between India and Kyrgyzstan. It also focuses on high-altitude, mountains and counter-extremism drills.
- Background → The exercise was **started in the year 2011**. This is the Eighth Edition of the Exercise.

#### 📌 **Other Exercises by Special Forces of India:**

#### **Exercise Vajra Prahar**

- Exercise Vajra Prahar is a **Special Forces joint military exercise** between **India and the US**.
- This exercise takes **place alternately** in **India and the US**.
- Aim → The aim of the exercise is to **enable sharing of best practices** and **experiences in areas** such as joint mission planning capabilities and operational tactics.

#### 📌 **Kyrgyzstan**

- Kyrgyzstan is a **landlocked country** in Central Asia **bordering Kazakhstan, China, Tajikistan** and **Uzbekistan**.
- Its capital is **Bishkek**.
- It is often referred to as '**Central Asia's only democracy**'.
- The **mountainous region of Tian Shan** covers **over 80%** of the country.

## 14. KRI Nanggala

### Why in News?

- The Indian Navy dispatched its deep submergence rescue vessel (DSRV) from Visakhapatnam to support the Indonesian Navy in the search and rescue efforts for its submarine KRI Nanggala that went missing with 53 personnel aboard.

### About

- KRI Nanggala (402) is a **diesel-electric attack submarine** of the **Indonesian Navy**, one of two Cakra-class submarines (Type 209 design).
- On **21 April 2021**, it went **missing** in deep waters during a SUT torpedo drill north of Bali.
- The boat is named after the **Nanggala**, a **divine and powerful short spear** that was **owned by Prabu Baladewa** (the elder brother of Kresna), a recurring character in wayang puppet theatre.
- Note: Indian Navy had received an **alert through** the International Submarine Escape and Rescue Liaison Office(**ISMERLO**) **regarding the missing Indonesian submarine**.

#### 📌 **Deep Submergence Rescue Vessel(DSRV)**

- DSRV is a **type of deep-submergence vehicle** used for the **rescue of downed submarines** and **clandestine missions**.
- India is **amongst the few countries** in the world capable of undertaking the search and rescue of a disabled submarine through a DSRV.
- Features → The Indian Navy's DSRV system consists of:
  - Firstly, Side Scan Sonar → It can locate a **disabled submarine up to 1,000-metre depth** using side-scan sonar and remotely operated vehicle.
  - Secondly, Submarine Rescue Vehicle → It **links with the submarine** to **rescue the trapped personnel**. Thus, it can also provide emergency supplies to the submarine.
  - Third, Diver Decompression Chambers and hyperbaric medical equipment → It can **decompress submariners**, after rescue from a sunken submarine.

#### 📌 **International Submarine Escape and Rescue Liaison Office(ISMERLO)**

- ISMERLO aims to **facilitate an international response** for **distressed submarines**. The office also aims to improve the ability to respond to a call for assistance, through coordination.
- Established by → NATO and the Submarine Escape and Rescue Working Group (**SMERWG**) **in 2003**.
- Reason → The office was established **following** the **disaster of the Russian submarine K-141 Kursk**.
- Significance → Although **established by NATO**, the Office supports all nations and pursues the involvement of global submarine-operating nations.

## 15. Exercise VARUNA 2021

### Why in News?

- The 19th edition of the Indian and French Navy bilateral exercise 'VARUNA-2021' is scheduled to be conducted in the Arabian Sea from 25th to 27th April 2021.

### About

- Background → The **Indian and French Navies** have been conducting bilateral maritime exercises **since 1993**. Since 2001, these exercises have been called 'VARUNA'.
- This is the **first time** that the **United Arab Emirates** (UAE) is **participating** in the Varuna maritime exercise.
- From the Indian Navy's side, guided missile stealth destroyer **INS Kolkata**, guided missile frigates **INS Tarkash** and **INS Talwar**, Fleet Support Ship **INS Deepak**, with **Seaking 42B and Chetak integral helicopters**, a **Kalvari class submarine** and **P8I Long Range Maritime Patrol Aircraft**, will **participate** in the exercise.
- VARUNA-21 highlights growing **bonhomie** and **showcases increased levels of synergy, coordination** and **inter-operability** between the two friendly navies.

### Other Indo-French Joint Exercises:

- **Desert Knight-21** and **Garuda** (Air exercise)
- **Varuna** (Naval exercise)
- **Shakti** (Army exercise).

## 16. Single Crystal Components

### Why in News?

- DRDO has developed single crystal blades technology and supplied 60 of these blades to Hindustan Aeronautics Limited (HAL) as part of their indigenous helicopter development program for helicopter engine application.

### About

- It is **part of a program** taken up **by Defence Metallurgical Research Laboratory** (DMRL), a premium laboratory of DRDO, to **develop five sets** (300 in number) of single crystal high pressure turbine (HPT) blades using a nickel-based super alloy.
- Helicopters used in **strategic and defence applications** need **compact and powerful aero-engines** for their reliable operation at extreme conditions.
- To achieve this, **state-of-the-art Single Crystal Blades** having **complex shape and geometry**, manufactured out of **Nickel based superalloys** capable of withstanding high temperatures of operation are used.

- Very few countries in the world such as USA, UK, France and Russia have the capability to design and manufacture such Single Crystal (SX) components.
- Special ceramic composition had to be formulated for making strong ceramic moulds which can withstand metallostatic pressure of liquid CMSX-4 alloy at 1500°C and above during casting operation.

## 17. Python-5

### Why in News?

- Indigenously-developed Tejas Aircraft has been cleared to carry fifth-generation Python-5 air-to-air missile as part of its weapons package.

### About

- Python-5 is a fifth-generation air-to-air missile (AAM) manufactured by Israeli Rafael Advanced Defense Systems.
- The Python-5 Missile was first used in the 2006 Lebanon war. During the war, it destroyed two Iran made UAVs.
- Key Features →
  - The missile can be launched from very short to beyond-visual ranges with greater kill probability and excellent resistance.
  - Python-5 is capable of “lock-on after launch” (LOAL). The missile also has a full-sphere/all-direction (including rearward) attack ability.
  - The missile also features an advanced seeker with an electro-optical and imaging infrared homing seeker. This seeker scans the target area for hostile aircraft, then locks on for the terminal chase.

### ✎ Light Combat Aircraft (LCA) Tejas

- It is a single-engine, fourth-generation, multirole light fighter aircraft designed by the Aeronautical Development Agency (ADA).
- Developed by → It was developed in collaboration with Hindustan Aeronautics Limited(HAL) for the Indian Air Force(IAF) and Indian Navy.

## 18. Critical Infrastructure

### Why in News?

- Recently, Ministry of Power (MoP) claimed that State sponsored Chinese hacker groups had targeted various Indian power centres.

### About

- MoP claimed that no data breach/ data loss has been detected as attempts from these groups have been thwarted after government cyber agencies warned about their activities.
- National Critical Information Infrastructure Protection Centre (NCIIPC) warned about the threat from a malware called Shadow Pad.
- Also, a recent report in New York Times claimed that Red Echo, a hacker group affiliated with the Chinese government, targeted India's critical power grids through Shadow Pad malware (type of malicious software designed to harm or exploit any programmable device, service or network).

### About Critical Infrastructure (CI):

- CI describes the **physical and cyber systems and assets** that are so **vital to a country** that their incapacity or destruction would have a debilitating impact on national security and the economic and social welfare of a state.
- Chemicals, Dams, emergency services, Power & Energy, Banking & financial services, government facilities, healthcare, information technology, transportation, nuclear reactors etc. are considered parts of CI of a country.

### Critical Infrastructure protection in India:

- In **2014**, India established the National Critical Information Infrastructure Protection Centre (**NCIIPC**) to **regulate and protect the nation's Critical Information Infrastructures (CIIs)**.
- CIIs, as **defined by** the **Information Technology Act of 2000**, are vital computer resources that, if incapacitated or destroyed, will leave a debilitating impact on national security, economy, public health or safety across both public and private sectors.
- CI organizations in multiple sectors such as power and utilities, telecommunications and transport, and strategic and public enterprises operate according to the guidelines issued by NCPIIC.
- These guidelines cover entire cyber security lifecycle including planning, implementation, operations, disaster recovery, and business continuity planning as well as reporting and accountability.
- **Indian Computer Emergency Response Team (CERT-In)**: National nodal agency for responding to computer security incidents.
- **National Cyber Security Coordinator (NCSC)** under National Security Council Secretariat coordinates with different agencies at the national level for cyber security matters.
- **National Cyber Coordination Centre** to generate necessary situational awareness of cyber security threats and enable timely information sharing for proactive, preventive and protective actions.
- A **new Division** under the Ministry of Home Affairs for Cyber and Information Security.
- **Guidelines** have been **issued for Chief Information Security Officers** (CISOs) regarding their key roles and responsibilities for securing applications / infrastructure and compliance.
- **Cyber Swachhta Kendra** (Botnet Cleaning and Malware Analysis Centre) has been launched for detection of malicious programs and provide free tools to remove the same.

# History and Culture

## 1. Hoysala inscription found near Arsikere

### Why in News?

- An inscription of the Hoysala period and pedestals were found close to the site where a government engineering college is coming up at Kellengere near Arsikere. The stone inscription was in Kannada. It is a Jain inscription.

### About Hoysala Empire

- The Hoysala Empire was a **Kannadiga power originating from the Indian subcontinent** that ruled most of what is now Karnataka, India between the **10th and the 14th centuries**.
- The capital of the Hoysalas was initially **located at Belur** but was later **moved to Halebidu**.
- The Hoysala rulers were originally from **Malenadu**, an elevated region in the Western Ghats.
- In the **12th century**, taking advantage of the internecine warfare between the Western Chalukya Empire and Kalachuris of Kalyani, they **annexed areas of present-day Karnataka** and the **fertile areas north of the Kaveri delta** in present-day Tamil Nadu.
- By the **13th century**, they **governed most of Karnataka, minor parts of Tamil Nadu** and **parts of western Andhra Pradesh** and **Telangana** in the Deccan Plateau.

## 2. Lingayat

### Why in News?

- PM bows to His Holiness Dr. Sree Sree Sree Sivakumara Swamigalu on his Jayanti. He was a Lingayat religious figure.

### About Lingayat

- Lingayatism is a **Shaivite Hindu religious tradition** in India.
- Initially known as **Veerashaivas**, since the **12th century** adherents of this faith are known as **Lingayats**.
- Lingayatism was founded, or **revived by** the 12th-century philosopher and statesman **Basava in Karnataka**.
- Lingayatism is generally considered a **Hindu sect** as **their beliefs include many Hindu elements**.
- Worship is centered on **Shiva** as the **universal god in the iconographic form of Ishtalinga**.
- Lingayatism emphasises **qualified monism**, with **philosophical foundations** similar to those of the **11th–12th-century South Indian philosopher Ramanuja**.
- Lingayatism **rejects any form of social discrimination** including the caste system.

### 👉 Shivakumara Swamigalu

- He was a Lingayat religious figure and **head of the Siddaganga Matha in Karnataka**. He was described as the most esteemed adherent of Lingayatism.
- He was known as **"Nadedaaduva Devaru"** or the **"Walking God"** among his followers.
- He was considered as the **incarnation of Basaveshwara**, the 12th century **social reformer**, as he accepted all irrespective of their religion or caste.
- Social Work →
  - He had founded **132 institutions for education and training**.

- He founded **Sri Siddaganga Education Society**.
- Under the swami's guidance, an **agricultural fair** was also held annually to help the local people.
- Awards →
  - In 2007, he was awarded the **Karnataka Ratna** (highest civilian award in Karnataka).
  - In 2015, he was awarded the **Padma Bhushan** (the third highest civilian award in India).

### 3. Megalithic era caves found

#### Why in News?

- The ancient rock-cut cave of megalithic period that was found during the renovation of Ananta Padmanabha Temple of Puttige Mutt at Paniyadi in Udupi.

#### About

- The cave belongs to **800 BC** and is of **2,000 years old in antiquity**.
- Similar megalithic rock-cut caves have been found at **Pavanje Subrahmanya Temple, Sooda Subrahmanya Temple, Sasturu Subrahmanya Temple** and elsewhere in coastal Karnataka.
- This discovery is unique in **understanding the antiquity of the Phanis**. Pani and Haadi, together forming **Paniyadi**, means settlement of **Phanis**.
- Phanis were **referred to in the Mahabharatha** and the **Puranas** as an ancient original inhabitant of the country.
- Places such as **Paniyur, Paniyadi in Udupi district** indicate the **existence of Phanis settlements** in the past.
- Phanis were **famous for their Naga worship** while Naga was their totemic emblem.
- Paniyadi's presiding deity **Ananta Padbhanabha** was also related with **Naga worship**.
- Iconographically, he was **Para Vasudeva, a Vaisnavate god**. He sits on the Naga coil and the Naga hood stands high on his head.
- A similar icon found in **Keelinje near Udupi belongs to 10th Century AD**, while the **Paniyadi deity belongs to 14th Century AD**.
- The idol of the **presiding deity, Ananta Padmanabha**, is a unique one as it is in a sitting posture atop Adi Sessa.



### 4. Babu Jagjivan Ram

#### Why in News?

- On the 114th birth anniversary of Babu Jagjivan Ram, PM Modi and others paid tribute to Jagjivan Ram, a crusader for social justice.

#### About

- Jagjivan Ram (1908 – 1986), known popularly as **Babuji**, was an **Indian independence activist** and **politician from Bihar**.
- He was instrumental in the foundation of the **All India Depressed Classes League**, an organisation dedicated to attaining equality for untouchables, in 1935.

- In 1946, he became the **youngest minister in Jawaharlal Nehru's interim government**, the first cabinet of India as a Labour Minister.
- He was also a **member of the Constituent Assembly of India**, where he ensured that social justice was enshrined in the Constitution.
- He was the **Defence Minister of India during the Indo-Pak war of 1971**, which resulted in the creation of Bangladesh.
- He left Congress in 1977 and joined the Janata Party alliance, along with his Congress for Democracy. He later served as the **Deputy Prime Minister of India (1977–79)**.
- To propagate his ideologies, the **'Babu Jagjivan Ram National Foundation'**, has been set up by Ministry of Social Justice, Govt. of India in Delhi.

## 5. Lost Golden City in Egypt

### Why in News?

- Egypt announced the discovery of what is being touted as the most important find since the unearthing of King Tutankhamun's tomb almost 100 years ago.

### About

- A three-millennia-old "**lost golden city**" from the era of **18th-dynasty king Amenhotep III**, who ruled ancient Egypt from 1391 to 1353 B.C., was found in the **southern province of Luxor**, near some of the country's best-known monuments.
- The newly discovered city is located on the **west bank of the Nile river**, close to the **Colossi of Memnon**, **Medinet Habu** and **the Ramesseum**, or mortuary temple of King Ramses II, all of which are popular tourist destinations.
- With **mud-brick houses**, **artefacts**, and **tools discovered** from the reign of the Pharaohs, some are even calling the find an "**ancient Egyptian Pompeii**".



## 6. Lilavati Award

### Why in News?

- Union Minister of Education has presented the AICTE Lilavati Awards 2020 on women empowerment to the winners.

### About

- Lilavati Award is an initiative of the **All India Council for Technical Education (AICTE)**. It aims to **recognise efforts** by AICTE-approved institutions to **treat women with equality and fairness**.
- Named after → The award has got its name after the **12th-century book** called "**Lilavati**". The **Mathematician Bhaskara II** wrote this book.

- Objective → To **create awareness about issues** like sanitation, hygiene, health, nutrition, literacy, employment, technology, credit, marketing, innovation, skill development, natural resources, and rights among women.
- Areas Covered → **Women's health, self-defence, sanitation, literacy, entrepreneurship, and legal awareness.**
- Theme → **Women Empowerment**
- Prize → In each sub-category, the **top three winners** will **receive award certificates** as well as prize money.
  - The first prize winner will get **Rs. 1 lakh**, the second winner will get **Rs. 75,000** and the third winner will **get Rs. 50,000.**
- Significance → The award ensures the **participation of women** and enables them to **hold higher positions** in educational institutions.

## 7. Jyotirao Phule

### Why in News?

- He was born on April 11, 1827, and his birth anniversary is celebrated as Jyotiba Phule Jayanti every year.

### About

- Birth → Born in **1827 in Satara** district of Maharashtra.
- Title of Mahatma → 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.
- Along with his wife, **Savitribai Phule**, he is regarded as **pioneers of women's education in India.**
- The couples were the first native Indians to open the **first indigenously-run school for girls** in India in **August 1848** at Pune in Maharashtra.
- Later, the Phules started **schools for children** from the **then untouchable castes** such as **Mahar and Mang.**
- In 1863, he opened a **home for pregnant Brahmin widows** to give birth in a safe and secure place.
- He opened an **orphanage home** to avoid infanticide. In this regard, he is believed to be the **first Hindu to start an orphanage** for the unfortunate children.
- In 1868, Jyotirao decided to construct a **common bathing tank** outside his house to exhibit his **embracing attitude towards all human beings** and **wished to dine with everyone**, regardless of their caste.
- 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).

## 8. Jallianwala Bagh Massacre

### Why in News?

- The Prime Minister of India commemorated 102 years of the Jallianwala Bagh tragedy that took the lives of hundreds of innocent Indians.

### About

- The Jallianwala Bagh massacre took place on **13th April 1919 in Amritsar, Punjab**.
- The tragedy, also known as the **Massacre of Amritsar** exposed the **inhuman approach** of the British when the British troops under **General Reginald Edward Dyer opened fire into an unarmed crowd**.

#### 👉 **Prelude to the Event:**

- The massacre of April 1919 **wasn't an isolated incident**, rather an incident that happened with a **multitude of factors** working in the background.
- During **World War I (1914–18)** the British government of India enacted a series of **repressive emergency powers** that were intended to **combat subversive activities**.
- The **Anarchical and Revolutionary Crimes Act of 1919** popularly known as **Rowlatt Act (Black Act)** which was passed on 10th March, 1919, authorized the government to **imprison or confine, without a trial**, any person associated with seditious activities which led to nationwide unrest.
- On 13th April 1919, a crowd of **at least 10,000 men, women and children** gathered in Jallianwala Bagh to request the **release of Dr. Saifuddin Kitchlew and Dr. Satyapal**.
  - The two prominent leaders who were a **symbol of Hindu-muslim unity**, organised a **peaceful protest** against the Rowlatt act. They were arrested and taken out of the city.
- Brigadier-General Dyer on hearing about the meeting, **deployed his troops** and **ordered them to open fire**. The only exit to the park was sealed and indiscriminate firing took place **killing hundreds of innocent civilians**.

#### 👉 **Post Jallianwala Bagh Incident:**

- On October 14, 1919, the **Disorders Inquiry Committee** was formed to inquire about the massacre. It later came to be known as the **Hunter Commission**.
- Considered "**The Butcher of Amritsar**" in the aftermath of the massacre, General Dyer was **removed from command** and **exiled to Britain**.
- **Rabindranath Tagore** and **Mahatma Gandhi**, as a sign of condemnation, **renounced** their **British Knighthood** and **Kaiser-i-Hind medal** respectively.
- In **1922**, the infamous **Rowlett Act** was **repealed by the British**.

## 9. Attingal revolt

### Why in News?

- The observance of the 300th anniversary of the Attingal Revolt of 1721, the first organised rebellion against the English East India Company, began at the Velloppilly Samskrithi Bhavan.

### About

- Also referred as **Anjengo Revolt**.
- It refers to the **massacre of 140 East India Company soldiers** by native Indians and the following **siege of Fort Anjengo**.
- The Attingal Outbreak is often regarded as the **first organized revolt** against British authority in Malabar, Cochin and Travancore.

- Reasons → The main reasons behind the resentment **was large scale corruption** and the **manipulation of black pepper prices** by the Company.
- The chief factor at the Anjengo factor, **Gyfford refused to hand over** the **customary gifts** meant for the Rani of Attingal to the agents of the local feudal lords (Pillamar) and **tried to hand them directly to the Rani** at the **head of a force of 140 soldiers** on 15 April 1721.
- This show of force had the **opposite effect** and the **local people rebelled, attacked** and **destroyed** the entire force and then laid siege to the fort.
- Outcome → Following the turn of events, the Company and the Rani of Attingal entered **into an agreement** under which →
  - the Company was **compensated for all losses** sustained during the attack on Anjengo
  - was also given the **sole monopoly** of trade in pepper
  - the **right to erect factories** in places of its choice.

## 10. Konyak Community

### Why in News?

- Naga tribe declines to pay 'taxes' to extremist groups.

### About

- The Konyak are a **Naga people** and are **recognised among other Naga by their tattoos**, which they have all over their face and hand.
- The **facial tattoos** were **earned for taking an enemy's head**.
- They have the **largest population** among the Nagas.
- The Konyaks can be found in the **Mon district of Nagaland, India** and in **Myanmar**, in the **Tirap and Changlang districts of Arunachal**.
- The Konyak language belongs to the **Northern Naga sub-branch** of the **Sal subfamily of Sino-Tibetan**.
- Characteristics →
  - They are known as **headhunters of North East India**.
  - In the recent past, they were known as **war loving** and **often attacked nearby villages** of **other tribes** taking the heads of opposing warriors as trophies to hang in the Morong (a communal house).
  - The number of heads indicated the **power of a warrior** and **the tribe and became a collective totem**.

## 11. Lingaraja Temple

### Why in News?

- Recently, the Odisha Government has restricted public entry into the Lingaraj Temple after four sevayats (priests) tested positive for the novel coronavirus.

### About

- Lingaraj Temple → It is a **Hindu temple dedicated to Shiva** and is one of the oldest temples in **Bhubaneswar, Odisha**.
- Built by → It is believed to be built by the kings from the **Somavamsi dynasty** with later **additions from the Ganga rulers**.

- Architecture → The temple is a **classic example** of **Kalinga style of architecture**.
- Style → It is built in the **Deula style** that has four components: **vimana** (structure containing the sanctum), **jagamohana** (assembly hall), **nata mandira** (festival hall) and **bhoga-mandapa** (hall of offerings).
- The other attraction of the temple is the **Bindusagar Lake**, located in the north side of the temple.
- On the western banks of Bindusagar, lies the garden of **Ekamra Van** named after the **Hindu mythological texts** where Bhubaneswar the **capital city of Odisha** was referred as Ekamra Van or a forest of a single mango tree.
- Other Important Monuments in Odisha →
  - **Konark Sun Temple** (UNESCO World Heritage Site)
  - **Jagannath Temple**
  - **Tara Tarini Temple**
  - **Udaygiri and Khandagiri Caves**

### 📌 Kalinga Architecture

- The Indian temples are broadly divided into **Nagara**, **Vesara**, **Dravida** and **Gadag styles of architecture**.
- However, the temple architecture of Odisha corresponds to **altogether a different category** for their **unique representations** called **Kalinga style of temple architecture**.
- This style broadly comes **under the Nagara style**.
- **The Architecture:**
  - In Kalinga Architecture, basically a temple is made in **two parts**, a **tower and a hall**. The tower is called **deula** and the hall is called **jagmohan**.
  - The **walls of both the deula** and the **jagmohan** are **lavishly sculpted** with architectural motifs and a profusion of figures.
  - The most repeated form is the **horseshoe shape**, which has come from the earliest times, **starting with the large windows** of the **chaitya-grihas**.
  - It is the deula which makes **three distinct types** of temples in Kalinga Architecture →
    - **Rekha Deula**.
    - **Pidha Deula**.
    - **Khakhara Deula**.

## 12. World Heritage Day

### Why in News?

- Every year, 18th April is celebrated as 'International Day for Monuments and Sites', also known as 'World Heritage Day'.

### About

- The theme for this year is "**Complex Pasts: Diverse Futures**".
- Globally, the day is **promoted by the International Council on Monuments and Sites** (ICOMOS).
- The aim of the Day is to **create awareness about Heritage among communities**.

### 📌 UNESCO's World Heritage Sites:

- A World Heritage Site is a place that is **listed by UNESCO** for its **special cultural** or **physical significance**.

- The list of World Heritage Sites is **maintained by** the international '**World Heritage Programme**', **administered by the UNESCO World Heritage Committee**.
- This is embodied in an **international treaty** called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

### **ICOMOS**

- It is a **global non-governmental organization** associated with UNESCO.
- Located in → **Paris, France**.
- Mission → Its mission is to **promote the conservation, protection, use and enhancement of monuments, building complexes** and sites.
- It is an **Advisory Body** of the **World Heritage Committee** for the implementation of the World Heritage Convention of UNESCO.
  - As such, it reviews the nominations of cultural world heritage and ensures the conservation status of properties.
- Its **creation in 1965** is the logical outcome of initial conversations between architects, historians and international experts that began in the early twentieth century and that materialized in the adoption of the Venice Charter in 1964.

## 13. Sri Ramanujacharya

### Why in News?

- Vice President M Venkaiah Naidu paid tributes to the great philosopher, saint & social reformer, Shri Ramanujacharya Ji on his Jayanti.

### About

- Born in **1017 CE** in **Tamil Nadu**.
- He is the most **respected Acharya** in the **philosophy of Sri Vaishnavism**.
- He was also referred to as **Ilaya Perumal** which means the radiant one.
- His philosophical foundations for **devotionalism** were **influential to the Bhakti movement**.
- He is famous as the **chief proponent of Vishishtadvaita subschool** of Vedānta.
- He wrote **influential texts**, such as **bhāṣya on the Brahma Sutras** and the **Bhagavad Gita**, all in Sanskrit.

### What is Vishishtadvaita?

- It is a **non-dualistic school** of **Vedanta philosophy**. It is non-dualism of the qualified whole, in which **Brahman alone exists**, but is characterized by **multiplicity**.
- It can be described as **qualified monism** or **qualified non-dualism** or **attributive monism**.
- It is a school of Vedanta philosophy which believes in **all diversity subsuming to an underlying unity**.

## 14. Khajuraho Temples

### Why in News?

- Ministry of Tourism had recently organised webinar on “Khajuraho – Temples of Architectural Splendour” under Dekho Apna Desh.

## About

- Khajuraho Temples (in **Madhya Pradesh**) are among the **most beautiful medieval monuments** in the country.
- Timeline → Built **between 950-1050 AD** by the **Chandela Dynasty**.
- Religion/Deity → The monuments include **Hindu** and **Jain temples**.
- Location → The temple site is situated **within Vindhya Mountain range**.
- Architecture style → The temples are famous for their **Nagara-style architectural symbolism**.
- These Temples got the status of **UNESCO's World Heritage Sites** in **1986**.
- Reported for the first time by **Abu Rihan al Biruni** in **AD 1022** and the **Arab traveller Ibn Battuta** in **AD 1335**.

## 15. Mahavir Jayanti

### Why in News?

- The Prime Minister of India greeted the people on occasion of 'Mahavir Jayanti' (25th April 2021). Mahavir Jayanti is one of the most auspicious festivals in the Jain community.

## About

- Also known as → **Mahaveer Janma Kalyanak**.
- What is it? → Mahavir Jayanti is the birth anniversary of **24th** and **last Jain Tirthankar Lord Mahavir**.
- When observed? → As per the Gregorian calendar, the holiday occurs either in **March or April**.
- Celebrations: It is one of the **most important religious festivals for Jains**. The followers of Lord Mahavir celebrate this festival by **chanting prayers, offering Prasad** and **participating in chariot processions**.

### 👉 About Lord Mahavira

- Mahavira was **born to King Siddhartha of Kundagrama** and **Queen Trishala**, a **Lichchhavi princess** in the year 540 BC in the Vajji kingdom, identical with modern day **Vaishali in Bihar**.
- Mahavira belonged to the **Ikshvaku dynasty**.
- Lord Mahavir was named **Vardhamana**, which means "**one who grows**".
- He **abandoned worldly life** at the **age of 30** and attained '**kaivalya**' or omniscience at the **age of 42**.
- Mahavira taught **ahimsa** (non-violence), **Satya** (truth), **asteya** (non-stealing), **brahmacharya** (chastity) and **aparigraha** (non-attachment) to his disciples and his teachings were called Jain Agamas.
- **Ordinary people** were **able to understand** the teachings of Mahavira and his followers because they **used Prakrit**.
- It is believed that the **Mahavira passed away** and attained moksha (liberation from the cycle of birth and death) at the **age of 72 in 468 BC** at a place called **Pavapuri** near **modern Rajgir in Bihar**.

## 16. Kumbh Mela

### Why in News?

- Recently Kumbh Mela started at Haridwar, Uttarakhand.

## About

- After more than 100 years the kumbh Mela is being held earlier because of specific auspicious dates.
- Generally, it is celebrated **once in 12 years** and the previous kumbh in **Haridwar was held in 2010**, while next one was to be held in 2022.
- Kumbh Mela is a mass congregation of pilgrims who gather to take a bath/dip (**Shahi Snan**) in a sacred river.
- People from **irrespective of caste, creed or gender** are present in the festival and believe that by bathing in the river one is freed from their past sins (karma), and, thus, one becomes eligible for liberation from the cycle of birth and death.
- The geographical location for the Kumbh Mela spans across **four cities** within India.
  1. **Prayagraj (Uttar Pradesh)**- confluence of Ganga, Yamuna, and the mythical Saraswati
  2. **Haridwar (Uttarakhand)**- Ganga river
  3. **Ujjain (Madhya Pradesh)**- Shipra river
  4. **Nasik (Maharashtra)**- Godavari river
- Types of Kumbh Mela and its occurrence →
  - **Kumbha Mela**: held at all four places every 3 years
  - **Ardha Kumbha Mela**: held at Haridwar and Prayagraj every 6 years
  - **Purna Kumbha Mela**: held only at Prayagraj every 12 years
  - **Maha Kumbha Mela**: held only at Prayagraj every 144 years or after 12 Purna Kumbh Mela.
- Kumbh Mela comes under the **UNESCO's Representative List of Intangible Cultural Heritage of Humanity**.
- UNESCO's Representative List of Intangible Cultural Heritage of Humanity in India

13 ICH traditions recognised by UNESCO			
1.	Tradition of Vedic chanting, 2008	8.	Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir, India, 2012
2.	Ramlila, the traditional performance of the Ramayana, 2008	9.	Sankirtana, ritual singing, drumming and dancing of Manipur, 2013
3.	Kutiyattam, Sanskrit theatre, 2008	10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab, India, 2014
4.	Ramman, religious festival and ritual theatre of the Garhwal Himalayas, India, 2009	11.	Yoga, 2016
5.	Mudiyettu, ritual theatre and dance drama of Kerala, 2010	12.	Nowruz, 2016
6.	Kalbelia folk songs and dances of Rajasthan, 2010	13.	Kumbh Mela, 2017
7.	Chhau dance, 2010		

# Miscellaneous

## 1. Echo and Bifrost

### Why in News?

- Facebook and Google are planning two undersea internet cables named “Echo and Bifrost” to connect the US to Singapore and Indonesia.

### About

- Echo will run from Eureka, California to Singapore, with a stop-over in Guam, and thereto in Indonesia.
- Google is only investing in Echo, Facebook is investing in both cables.
- Need → The current COVID-19 pandemic across the globe has increased the need for reliable Internet access.
- And, this will provide vital new connections between the Asia-Pacific region and North America and increase the overall transpacific capacity by 70 per cent.

## 2. Dadasaheb Phalke Award

### Why in News?

- Rajinikanth has been conferred with the Dadasaheb Phalke Award for the year 2019.

### About

- What is it? → Dadasaheb Phalke award is India’s highest award in cinema.
- It is presented annually at the National Film Awards ceremony by the Directorate of Film Festivals (an organisation set up by the Ministry of Information and Broadcasting).
- Prize → The award prize consists of a golden lotus, a cash prize of ₹10 lakh and a shawl.
- Given to → The award is given to people for their “outstanding contribution to the growth and development of Indian cinema”.
- History → It was first presented in 1969. The first recipient of the award was actress Devika Rani, “the first lady of Indian cinema.”

## 3. Harmonized System of Nomenclature Code

### Why in News?

- It has been made mandatory for a GST taxpayer having a turnover of more than Rs 5 crore in the preceding financial year, to furnish 6 digits HSN Codex. This comes into effect from April 1.

### About

- What is it? → It is a six-digit identification code. Of the six digits, the first two denote the HS Chapter, the next two give the HS heading, and the last two give the HS subheading.
- Developed by → the World Customs Organization (WCO).
- Called the “universal economic language” for goods.

- It is a **multipurpose international product nomenclature**.
- The system currently comprises of around **5,000 commodity groups**.

### Significance

- Over 200 countries use the system as a **basis for their customs tariffs, gathering international trade statistics, making trade policies**, and for monitoring goods.
- The system helps in **harmonising of customs and trade procedures**, thus reducing costs in international trade.

## 4. Culex Mosquitoe

### Why in News?

- Recently, with the change in season and rise in temperature, culex or common house mosquitoes have made a reappearance across the capital.

### About

- Culex mosquitoes are known **carriers of Japanese encephalitis**, a potentially life-threatening but rare viral disease that causes “**acute inflammation**” of the brain.
- Unlike Aedes aegypti mosquitoes, which spread dengue and chikungunya and breed in clean water, culex mosquitoes **breed in unclean stagnant water**.
- The **preferred oviposition habitats** such as rainwater barrels, catch basins, storm drains, and septic tanks are rich in organic material.
- Reason for reappearance: The **warmer temperatures** are the main reason for the appearance of these mosquitoes.
  - Their presence is especially felt **more in areas around floodplains** in East and South Delhi as it is an ideal condition of breeding.
- The species of Culex can be **found throughout the globe**, except at the extreme northern latitudes.
- Culex mosquitoes **hunt by detecting body heat** and **the carbon dioxide** that humans exhale.
- Culex mosquitoes are able to **breed in any form of stagnant water**, including ponds, marshes, floodwaters, storm drains, old tires and water in tree holes.

## 5. Madhu Kranti portal

### Why in News?

- Union Minister for Agriculture and Farmers’ Welfare launched Madhu Kranti portal and Honey Corners of NAFED.

### About Madhu Kranti portal

- Madhu Kranti portal is an **initiative of the National Bee Board (NBB)**, Ministry of Agriculture and Farmers’ Welfare **under the National Beekeeping & Honey Mission (NBHM)**.
- This portal is being developed for **online registration to achieve traceability source of honey** and **other beehive products** on a digital platform.

### About Honey Corners:

- For **marketing support** to the FPOs, NAFED has developed **14-15 Honey Corners** in **Delhi** and **Mussoorie**.
- More such Honey Corners will be **developed by NAFED**.

## 6. Lab on Wheels Programme

### Why in News?

- Recently, the Education Minister of Delhi has launched the 'Lab on Wheels' Programme.

### About

- It is an initiative of **Delhi Technological University**.
- The Programme aims to **impart education in the fields of Mathematics and Science**. Especially to the students from marginalised and poor economic backgrounds. The programme aims to **stimulate their interests in these subjects** while pursuing higher education.
- In the end, the programme becomes **mutually beneficial**, if **some of these students decide to take admission in DTU once** they finish schooling.
- Key Features of the programme →
  - Under the Lab on Wheels, Delhi Technological University students will **travel in a bus across Delhi**. Also, they will **teach government school students** and **underprivileged children**.
  - The bus will **comprise 16 computers, two televisions, one 3D printer, one laptop, cameras** and **one printer**. It will also be Wi-Fi enabled with 100% power back up and fully air-conditioned.
  - The Lab on Wheels programme will **cover some important things**. Such as **basic computer training** for students, regular classwork for Class 10 and 12 students, and 3D printing training.

## 7. Advanced Antiquities Management System

### Why in News?

- Recently, the Directorate of Archives and Archaeology (DAA) of the Goa government inaugurated the Advanced Antiquities Management System.

### About

- It is a **software-driven automated storage** used for the **storage of various objects**.
- It is the **first such system** in the country for **storage of antiquities**.
- It has been used for **storage of industrial equipment** but the decision of Goa's DAA to use it for storing valuable antiquities is the first such in the country.
- The AAMS placed at **Goa's DAA in Panaji, looks like a large, closed container**, about 3 metres tall.
- The system that **catalogues 83 antiquities** at present is aimed at **providing quick information** about an **antiquity linked to the software, saving storage space** and ensuring improved preservation of the objects of historical significance.

## 8. MANAS app

### Why in News?

- The Principal Scientific Adviser to the Government of India launched the “MANAS” App to promote wellbeing across age groups.

### About

- It was jointly executed by **NIMHANS Bengaluru, AFMC Pune and C-DAC Bengaluru.**
- MANAS which stands for **Mental Health and Normalcy Augmentation System** was endorsed as a national program by the Prime Minister’s Science, Technology, and Innovation Advisory Council (**PM-STIAC**).
- Features →
  - It is a **comprehensive, scalable, and national digital wellbeing platform.**
  - It is an app developed **to augment mental well-being of Indian citizens.**
  - It **integrates the health and wellness efforts** of various government ministries, scientifically validated indigenous tools with gamified interfaces developed/researched by various national bodies and research institutions.

## 9. Global Food Policy Report 2021

### Why in News?

- The International Food Policy Research Institute(IFPRI) released the Global Food Policy Report, 2021.

### About

- Purpose → The report **provides lessons drawn from the current crisis.** Especially the lessons that can help
- **transform food systems** to reduce the impact of the ongoing pandemic,
- **better prepare** for future shocks, and
- **address long-standing weaknesses** and inequalities.
- Theme → **“Transforming Food Systems After COVID-19”.**

### 👉 Key Findings related to India

- The **outbreak of the Covid-19 pandemic** and the pandemic restrictions resulted in half of India’s poor people deprived of nutritious food.
- The **midday meal program** of India that **covers 80%** of primary-school-age children in the country, was affected due to the COVID-19 lockdown.
- **50% of households in India** reported that **women spent more time fetching firewood** and **water** in comparison with the previous year.

### 👉 IFPRI

- International Food Policy Research Institute(IFPRI) is a **non-profit international research center.**
- Founded in → **1976.**
- Mandate → To **provide research-based policy solutions** that sustainably reduce poverty and end hunger and malnutrition.
- Headquarters → **Washington, USA.**

## 10. Heparin Induced Thrombocytopenia (HIT)

## Why in News?

- Researchers have come closer to identify the reason behind the post-Vaccine blood clotting cases following the Covid-19 vaccination.

## About

- It is an **immune mediated adverse drug reaction** caused by the emergence of antibodies that activate platelets in the presence of heparin.
  - Heparin is **an anticoagulant** or **blood thinner** which prevents the formation of blood clots.
  - It is used to **treat and prevent blood clots** caused by **certain medical conditions** or **medical procedures** and is also used before surgery to reduce the risk of blood clots.
- It is the most important and most frequent drug? **induced type of thrombocytopenia** and is associated with **significant morbidity and mortality if unrecognised**.
  - Thrombocytopenia is a condition in which **one has a low blood platelet count**.

## 11. Whitest paint

### Why in News?

- Engineers from Purdue University in the US have created what they are calling the whitest paint yet. Buildings coated with this paint may be able to cool them off enough to reduce the need for air conditioning.

### About

- The team of researchers at the university created an **ultra-white paint in October pushing the limits of how white paint can be**.
- This **older** formulation was made of **calcium carbonate**, while the **new one** is made up of **barium sulphate**, which **makes it more white**.
- The newer paint is **whiter** and **keeps the surface areas** it is painted on **cooler** than the formulation before this could. If this new paint was used to cover a roof area of **1,000 square feet**, it may be able to **get a cooling power of 10 kilowatts**.
- Typical **commercial white paint gets warmer** rather than cooler and that paints currently available in the market that are **designed to reject heat reflect only 80-90 per cent** of the sunlight and therefore, they can't make surfaces cooler than their surroundings.
- The team has also claimed that this paint may be the closest equivalent to the **blackest black paint** called "**Vantablack**" that is **able to absorb up to 99.9 per cent of visible light**.

## 12. Inclusive Internet Index 2021

### Why in News?

- Inclusive Internet Index 2021 has been released.

### About

- Released by → **The Economist Intelligence Unit** (EIU), in partnership with **Facebook**.

- Purpose → It seeks to **measure the extent of accessibility and affordability of the Internet**. Also, the internet should be able to **enable positive social and economic outcomes** at the individual and group levels.
- Countries Covered → The index assesses the **performance of 120 countries** representing **98% of global GDP** and **96% of the global population**.
- Categories → The Index score is based on the scores of 4 categories;
  - **Availability**
  - **Affordability**
  - **Relevance**
  - **Readiness.**

#### **Key Findings**

- Topped by → **Sweden ranks 1st** in the index, followed by the US and Spain.
- India's Rank → **49th** out of 120 countries in the Index.
- **India** is set to reach **one billion internet users by 2025**. There were over 687.6 million internet users in India in 2020.

## 13. Global Diabetes Compact Initiative

### Why in News?

- The World Health Organization (WHO) launched a Global Diabetes Compact to better fight the disease while marking the centenary of the discovery of insulin.

### About

- The Global Diabetes Compact has the **vision of reducing the risk of diabetes**, and ensuring that all people who are diagnosed with diabetes have **access to equitable, comprehensive, affordable and quality treatment and care**.
- It will also **support** the **prevention of type 2 diabetes** from obesity, unhealthy diet and physical inactivity.
- It will set standards for tackling the diseases in the form of '**global coverage targets**' for **ensuring a wider reach** of diabetes care.
- A key aim of the program is to **unite key stakeholders** from the public and private sectors, and, critically, people who live with diabetes, **around a common agenda**, to **generate new momentum** and **co-create solutions**.
- The programme was **launched** at the **Global Diabetes Summit** co-hosted by the Government of Canada.

#### **About Diabetes**

- Diabetes is a **Non-Communicable Disease** (NCD) that occurs either when the **pancreas does not produce enough insulin** (a hormone that regulates blood sugar, or glucose) or when the **body cannot effectively use the insulin it produces**.
- Types of Diabetes →
  - Type I diabetes → It is also known as **juvenile diabetes** (as it mostly affects children of age 14-16 years). It occurs when the **body fails to produce sufficient insulin**. People with type I diabetes are insulin-dependent which means they must **take artificial insulin daily** to stay alive.

- Type 2 diabetes → It affects the way the **body uses insulin**. While the **body still makes insulin**, unlike in type I, the **cells in the body do not respond to it as effectively** as **they once did**. This is also the most **common type** of diabetes, and it has **strong links with obesity**.
- Gestational diabetes → This type occurs in **women during pregnancy** when the **body sometimes** becomes **less sensitive to insulin**.

## 14. Vande Bharat Mission

### Why in News?

- Vande Bharat Mission (VBM) becomes one of the largest evacuation missions of civilians by a country.

### About

- Vande Bharat Mission started in **May 2020** to bring **back Indians stranded abroad due to COVID-19** and the resultant lockdowns.
- The first phase of the Vande Bharat mission aimed at **destinations with a high concentration of Indians**.
- Currently, into the middle of Phase 10, the **mission surpasses the large-scale airlift of 1.1 lakh people in 1990** at the onset of the Gulf War.
- Cargo Only Flights →
  - Air India has also chartered some flights as “**cargo-only flights**”. These flights **shipped fruits and vegetables to NRIs** and **rural farmers in West Asian countries, Singapore** and **Kuala Lumpur**. So that NRIs living there do not face the food shortage.

### Transport Bubbles

- Transport bubbles or air travel arrangements are **temporary arrangements** between two countries aimed at **restarting commercial passenger services** when regular international flights are suspended as a result of the pandemic.
- The arrangements are **reciprocal in nature**. The airlines from both countries **enjoy similar benefits**.
- India has established such arrangements with countries such as the **US, UK, UAE, Canada, Ethiopia, France among others**.

## 15. Bitcoin Digital Currency

### Why in News?

- Recently, the British finance minister has told the Bank of England to look at the case for a new “Bitcoin”.

### About

- It is a **central bank-backed digital currency** of the **United Kingdom**.
- It is aimed at **tackling some of the challenges posed by cryptocurrencies** such as Bitcoin.
- The **BoE-backed digital version of sterling** would potentially allow businesses and consumers to hold accounts directly with the bank.
- It could **speed up domestic and foreign payments** and **reduce financial stability risks**.
- The digital version of sterling would **not replace either physical cash** or **existing bank accounts**.

## 👉 Cryptocurrency

- It is a **digital** or **virtual currency** that is **secured by cryptography**, which makes it nearly impossible to counterfeit or double-spend. .
- It is supported by a **decentralized peer-to-peer network** called the **blockchain**. Blockchain technology ensures that all transactions in cryptocurrencies are **recorded in a public financial transaction database**.

## 16. World Press Freedom Index

### Why in News?

- India has ranked 142nd yet again out of 180 nations in the recently unveiled World Press Freedom Index.

### About

- Published by → **Reporters Sans Frontieres** (RSF) or **Reporters Without Borders** since 2002.
- Purpose → The Index **ranks 180 countries** and regions according to the **level of freedom available to journalists**.
- However, the index **neither ranks public policies** and **nor is it an indicator** of the quality of journalism in each country or region.
- Parameters → The index ranks 180 countries based on the following parameters, such as a) **pluralism**, b) **media independence** c) **environment and self-censorship** d) **legislative framework** e) **Transparency** f) **Infrastructure**, and g) **Abuses**.

## 👉 Key Findings

- Topped by → **Norway tops** the index, followed by **Finland** and **Denmark**.
- **India ranks 142nd** on the World Press Freedom Index 2021. The rank is the **same as in 2020** after it had consistently slid down from 133 in 2016.
- India's South Asian neighborhood → **Nepal is at 106**, **Sri Lanka at 127**, Myanmar (before the coup) at 140, **Pakistan at 145**, and **Bangladesh at 152**.

## 17. DRDO's Supplemental Oxygen Delivery System

### Why in News?

- Defence Research and Development Organisation (DRDO) launches the SpO2 (Blood Oxygen Saturation) supplemental Oxygen Delivery System. It will be useful for soldiers in extreme high-altitude areas.

### About

- Developed by → **Defence Bio-Engineering & ElectroMedical Laboratory** (DEBEL), **Bengaluru** of DRDO.
- Purpose → The system **delivers supplemental oxygen** based on the SpO2 (Blood Oxygen Saturation) levels. Thus, it **prevents the person** from **going into a state of Hypoxia**.
- Hypoxia → Hypoxia is a state in which the **amount of oxygen reaching the tissues** is **inadequate** to fulfill all the energy requirements of the body.
- Significance → This system will also be **helpful** in the **current Covid-19 pandemic**. It is **useful for household care** for moderate Covid patients for Oxygen flow therapy.
- Key Features of the System →

- The system has been **indigenously developed**. It has **dual qualities** of being **robust** & **cheap**.
- Further, this system **reads the blood oxygen saturation levels** of the subject from a wrist-worn pulse oximeter. After that, the system delivers the required oxygen.
- Moreover, the system can **function at extreme altitudes** featuring low barometric pressures, low temperatures, and humidity.
- The system also has **software safety checks** in the system to ensure the **functional reliability** of the system in field conditions.

## 18. #FOSS4GOV Innovation Challenge

### Why in News?

- Ministry of Electronics and Information Technology (MEITY) has announced #FOSS4GOV Innovation Challenge to accelerate adoption of Free and Open Source Software (FOSS) In Government.

### About

- The #FOSS4GOV Innovation Challenge calls upon **FOSS innovators, technology entrepreneurs** and **Indian Startups** to submit **implementable open source product innovations in CRM and ERP** with possible applications for Govtech in Health, Education, Agriculture, Urban Governance etc.
- India is well positioned to become a **vibrant hub for Free and Open Source Software (FOSS) innovations**, due to the large number of 4G data subscribers in India, 96% of whom access the digital world via open-source based mobile operating systems (primarily Android).
- Some of **India's largest-government projects** (including Aadhaar) and **many technology start-ups** have also been **built using FOSS**.
- Acknowledging the **huge potential of FOSS**, the Government of India had issued a **Policy on Adoption of Open Source Software** in **2015**.

## 19. NASSCOM

### Why in News?

- Recently, the IT industry body National Association of Software and Services Companies (NASSCOM) has elected Accenture India Chairperson and Senior Managing Director Rekha M Menon as its chairperson for 2021-22.

### About NASSCOM

- What is it? → It is a **not-for-profit trade association** of Indian Information Technology and Business Process Outsourcing industry.
- Established in → **1988**.
- It is a global trade body with **over 2000 members**, of which over 250 are companies from the China, EU, Japan, US and UK.
- Purpose → It **facilitates business and trade in software and services** and encourages the advancement of research in software technology.
- It is **dedicated to expanding India's role in the global IT** order by creating a conducive business environment, simplifying policies and procedures, promoting intellectual capital and strengthening the talent pool.
- It focuses on **accelerating the pace of transformation** of the industry to emerge as the preferred enablers for **global digital transformation**.

## 20. World Malaria Day

### Why in News?

- The report, titled 'Zeroing in on malaria elimination', was released by the World Health Organization (WHO) ahead of World Malaria Day 2021.

### About World Malaria Day

- Observed on → **April 25 every year** by the WHO.
- Background → The **60th session** of the World Health Assembly in **2007 identified April 25** as World Malaria Day.
- 2021 Theme → **"Reaching the Zero Malaria target"**.

#### 📌 'Zeroing in on malaria elimination' Report:

- Purpose → The report provides the progress made by **21 malaria eliminating countries** as part of the **"E-2020 Initiative"**.
  - The E-2020 initiative was **launched by WHO in 2017**. The initiative **supported 21 countries** in their efforts to **get to zero malaria cases** within the **2020 timeline**. The countries were identified by WHO in 2016 as having the potential to become malaria-free by 2020.

#### 📌 E-2025 initiative:

- Building on the **successes of the E-2020**, WHO has launched the **E-2025 initiative**.
- As part of this initiative, WHO has **identified 25 countries** that have the **potential to eliminate malaria** within **a 5-year timeline**.
- The countries will **receive technical** and **on-the-ground support by WHO** and its partners, in their work towards the target of zero malaria.
- In return, the countries will **audit their elimination programs annually**, participate in elimination forums, conduct surveillance assessments, and share malaria case data periodically.

#### Remember: Malaria

- It is a disease caused by **Plasmodium parasites**. It transmits to people through the **bites of infected female Anopheles mosquitoes**.
- It is **preventable** as well as **curable**.

## 21. Chandler Good Government Index

### Why in News?

- Recently, India has been ranked 49th in the Chandler Good Government Index (CGGI).

### About

- Released by → **the Chandler Institute of Governance** which is a private nonprofit organization headquartered in Singapore.
- The Index **classifies 104 countries** in terms of government capabilities and outcomes.

- Each country is measured across over **50 open data points**.
- The index focuses on seven pillars → **leadership and foresight**; **robust laws and policies**; **strong institutions**; **financial stewardship**; **attractive marketplace**; **global influence and reputation**; and **helping people rise**.
- Objective →
  - It **supports government leaders and public officers worldwide** in nation building and strengthening public institutional capacity through training, research and advisory work.
  - It also **shares tools and frameworks** for effective policymaking, and empowers nations to provide better public services for citizens.

### 📌 Highlights of the 2021 index

- Seven of the **top ten countries** are **in Europe**, but there are four continents represented in the top ten, **with Singapore first in Asia**, **New Zealand leading Oceania**, and **Canada foremost in the Americas**.
- All of the top ten countries are **high-income**, as defined by the World Bank.
- India's performance → **India** has been **ranked 49th**.

## 22. Armenian Genocide

### Why in News?

- US President Joe Biden is preparing to formally acknowledge the Armenian Genocide. Every year, Armenian Genocide Remembrance Day will be marked on April 24.

### About

- While **Turkey disagrees**, the consensus among historians is that during the Armenian Genocide, **between 1915 to 1922**, in the **First World War**, **thousands of Armenians perished due to killings, starvation and disease**, when they were **deported by Ottoman Turks** from eastern Anatolia.
- The International Association of Genocide Scholars estimates that **more than 1 million Armenians** may have **died**.



### Why is the acknowledgement significant?

- Researchers say that the **acknowledgement by the US government** would have **little legal impact on Turkey**, other than becoming a **cause for embarrassment** for the country and perhaps giving other countries the impetus to also acknowledge the genocide.
- However, this acknowledgement in the international community may be **unwelcome** and **unpalatable for Turkey**.

## 23. Project Pyrasol

### Why in News?

- The foundation stone of the integrated Solar Dryer and Pyrolysis pilot plant was recently laid at Chennai.

### About

- The pilot is **part of the Indo-German project ‘Pyrasol’**, launched to **transform urban organic waste into biochar and energy in smart cities**.
- It was awarded to CSIR-CLRI **by the Indo-German Science & Technology Centre**.
- The project will ultimately **lead to technology development** for the joint processing of **Fibrous Organic Waste (FOW)** and **Sewage Sludge (SS)** of Indian smart cities **into hygienic and highly valuable biochar** associated with energy recovery, carbon sequestration and environmental improvement.

### Project Pyrasol:

- The project focuses on **managing and organising collection, treatment, and disposal systems** of urban wastes in Indian Smart Cities as well as in other urban centres with an integrated and interactive approach.

### About Indo-German Science & Technology Centre (IGSTC):

- Established by **India and Germany** to **facilitate Indo-German R&D networking** with emphasis on industry participation, applied research and technology development.
- IGSTC through its flagship program ‘**2+2 Projects**’, **catalyses innovation centric R&D projects** by synergising the strength of research and academic institutions and public/private industries from India and Germany.

## 24. Deep Time Project

### Why in News?

- The Deep Time project in France’s Lombrives Cave has come to an end.

### About

- The Deep Time Project was **led by the scientists of the Human Adaptation Institute** in partnership with labs in France and Switzerland.
- Aim → The project aimed to **test how people adapt to changes in living conditions and environments**.
- As part of the Project, **15 participants lived** in the **Lombrives cave in France for 40 days** with no phones, clocks or sunlight. They **slept in tents**, made their own electricity, and had **no contact with the outside world**.
- The group also had to **organise tasks without having deadlines** measured with time. Instead, they had to rely on their body clocks and sleep cycles to structure their days.
- Significance of the study →
  - The project will **help scientists** understand **how people can adapt to extreme living conditions**.
  - The **brain activity** and **cognitive function of volunteers** were **analysed** before they entered the cave. This data is used for comparative studies after they leave the cave.

## 25. Morarji Desai National Institute of Yoga

### Why in News?

- The Morarji Desai National Institute of Yoga under Ayush Ministry is offering online Yoga training programmes. These online Yoga training programmes are health-promotive and anxiety-relieving.

## About

- What is it? → Morarji Desai National Institute of Yoga (MDNIY) is an **autonomous Institution fully funded by Ministry of AYUSH**, Govt. of India.
- Aim → MDNIY aims to **promote deeper understanding of Yoga philosophy** and practices based on classical Yoga amongst people.
- MDNIY is a **focal Institute for Planning, Training, Promotion and Coordination of Yoga Education, Training, Therapy and Research** in all its aspects.
- Background →
  - The Institute was **started in 1970**, in the form a hospital, opened by the now defunct Central Council for Research in Indian Systems of Medicine and Homoeopathy, under the Vishwayatan Yogashram.
  - In 1998, the institute was further **renamed** as the **Morarji Desai National Institute of Yoga** with **expanded mandates**.

## 26. Aluminium-air batteries

### Why in News?

- Indian Oil Corporation Ltd. has entered into a joint venture with Israel-based battery technology startup Phinergy to develop aluminium-air technology-based battery systems for electric vehicles and stationary storage, as well as hydrogen storage solutions.

### About

- Aluminium-air batteries **utilise oxygen in the air** which reacts with an aluminium hydroxide solution to **oxidise the aluminium and produce electricity**.
- Metal-air batteries are equipped with a **metal anode** and an **air-breathing cathode** through a suitable electrolyte.
- Apart from aluminium-air, other metal-air batteries that have been extensively studied **are sodium (Na)-air, potassium (K)-air, zinc (Zn)-air, magnesium (Mg)-air** etc.

### Benefits of Aluminium-air batteries over Lithiumion batteries

- **Significantly cheaper, lighter** and **more energy-dense** alternative.
- Expected to offer much **greater range of 400 km** or more per battery compared to lithiumion batteries (150-200 kilometres) per full charge.
- Unlike other batteries, aluminium plate in an aluminium-air battery can be **recycled** and traded directly for industrial uses.
- One of the key **downsides** of aluminium-air batteries is that **they cannot be recharged like lithium-ion batteries**.

# Quick revision (True/False)



1	<b>Exercise Vajra Prahar</b> -> joint military exercise of India and France.	
2	<b>Global Wind Energy Council</b> -> established in 2005. HQ: Brussels, Belgium.	
3	<b>Anandam: The Centre of Happiness</b> -> aim to help reduce the mental pressure of students and faculty.	
4	<b>New Development Bank</b> -> established in 2014. HQ: Beijing, China.	
5	<b>Nacaduba sinhala ramaswamii Sadasivan</b> -> found a new butterfly species from the Eastern Himalayas.	
6	<b>Inflation target</b> -> The inflation target to be set by the Reserve Bank in consultation with Scheduled Commercial Banks, once in every five years.	
7	<b>Global Gender Gap Report</b> -> Released by United Nations Human Rights Council.	
8	<b>Article 244(A) of the Constitution</b> -> allows for creation of an 'autonomous state' within Assam in certain tribal areas.	
9	<b>BIMSTEC</b> -> Member States -- Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar, Pakistan.	
10	<b>Pong Dam Wildlife Sanctuary</b> -> Himachal Pradesh.	
11	<b>Exercise SHANTIR OGROSHENA 2021</b> -> It is a multilateral military exercise conducted by the Kingdom of Saudi Arabia.	
12	<b>Dal Lake</b> -> Andhra Pradesh.	
13	<b>World Cities Culture Forum</b> -> established in London in 2012.	
14	<b>UN Women</b> -> Established in 2006. HQ: London, UK.	
15	<b>Culex Mosquitoe</b> -> spread dengue and chikungunya and breed in clean water.	
16	<b>NASA's InSight Mission</b> -> to send a space probe to study the planet Saturn and its system, including its rings and natural satellites.	
17	<b>Chilika lake</b> -> Andhra Pradesh.	
18	<b>Similipal Biosphere Reserve</b> -> West Bengal.	

19	<b>Godavari River</b> -> largest Peninsular river system. rises from Brahmagiri range in the Western Ghats, Karnataka.	
20	<b>Greyhounds</b> -> raised in 1989 as an elite anti-naxal force.	
21	<b>E9 Initiative</b> -> aim to accelerate recovery and advance the SDG 4 agenda by driving rapid change in education systems.	
22	<b>Exercise La Pérouse</b> -> is a Spanish multinational naval exercise.	
23	<b>Sadabahar</b> -> innovative mango variety. is a dwarf variety of mango.	
24	<b>National Innovation Foundation (NIF)</b> -> an autonomous institution of the Ministry of Commerce and Industry.	
25	<b>Central Vigilance Commission</b> -> has its own investigation wing. report to Ministry of Home Affairs.	
26	<b>AI Portal SUPACE</b> -> an Artificial Intelligence portal which is designed to make research easier for judges, thereby easing their workload.	
27	<b>Accelerator Lab</b> -> initiative by the OECD and Qatar Government. seek to identify grassroots solutions.	
28	<b>North Atlantic Treaty Organization</b> -> HQ: Washington, US.	
29	<b>Babu Jagjivan Ram</b> -> He was the Defence Minister of India during the Indo-Pak war of 1971.	
30	<b>Anamaya Initiative</b> -> is a multi-stakeholder initiative of the Ministry of Social Justice and Empowerment.	
31	<b>Association of World Election Bodies(A-WEB)</b> -> established in 2013. Secretariat: Seoul, South Korea.	
32	<b>Body of water connects the Red Sea to the Indian Ocean</b> -> Gulf of Aqaba.	
33	<b>PS Zoroaster</b> -> is a hydrographic survey ship.	
34	<b>Oxygen Enrichment Device</b> -> It concentrates the Oxygen from the air around us by selectively removing nitrogen to supply an oxygen-enriched air.	
35	<b>Mahendragiri Biosphere Reserve</b> -> West Bengal.	
36	<b>African Swine Fever</b> -> caused by a large DNA virus of the Asfarviridae family.	
37	<b>NanoSniffer</b> -> A software to analyze network traffic.	

38	<b>Pre-Pack insolvency resolution</b> -> Under the rules, Copyright societies will be required to draw up and make public a Transparency Report for every five years.	
39	<b>UN Convention on the Law of the Sea (UNCLOS)</b> -> United States of America (USA) has both signed and ratified the convention.	
40	<b>Lost Golden City</b> -> discovered in Israel - Country in the Middle East.	
41	<b>Shaphari Scheme</b> -> It certifies hatcheries and farms for the production of antibiotic-free shrimp products.	
42	<b>Jyotirao Phule</b> -> founded the Self-Respect Movement.	
43	<b>Umngot river</b> -> Arunachal Pradesh.	
44	<b>Irrawaddy Dolphins</b> -> IUCN Status: Critically Endangered.	
45	<b>Advanced Antiquities Management System</b> -> is a software-driven automated storage used for the storage of various objects.	
46	<b>Aahaar Kranti</b> -> Launched by Food Safety and Standards Authority of India.	
47	<b>Black Sea</b> -> Its connection to the ocean is in the south, through the Bab el Mandeb strait and the Gulf of Aden.	
48	<b>Indian Council of Social Science Research</b> -> under Ministry of Social Justice and Empowerment.	
49	<b>PRAAPTI Portal</b> -> is a web portal, launched in 2018 by the Ministry of New and Renewable Energy.	
50	<b>Currency Chest</b> -> is a place where the Reserve Bank of India (RBI) stocks the money meant for banks and ATMs.	
51	<b>Hunter Commission</b> -> to inquire into the relationship between the Indian Princely States and the British Government of India.	
52	<b>India is the</b> second largest importer of gold after china.	
53	<b>Raisina Dialogue, 2021</b> -> It is India's informal strategic dialogue with the United States, Japan, Australia and India.	
54	<b>MANAS app</b> -> an app developed to augment mental well-being of Indian citizens.	
55	<b>National Commission for Scheduled Castes</b> -> consists of a chairperson, a vice-chairperson, and three other members.	
56	<b>Valley of the Fallen</b> -> France.	

57	<b>Narrow line Seyfert1 (NLS1) galaxies</b> -> It is active galaxy which emits high-energy gamma rays which is 31 billion light years away from earth.	
58	<b>State of World Population Report, 2021</b> -> launched by Food and Agricultural Organization.	
59	<b>National Startup Advisory Council</b> -> chaired by the Minister for Commerce & Industry.	
60	<b>Tanzania</b> -> is a country in East Africa within the African Great Lakes region.	
61	<b>Whitest paint</b> -> older formulation was made of barium sulphate, while the new one is made up of calcium carbonate, which makes it more white.	
62	<b>Black Sea</b> -> bordered by Bulgaria, Georgia, Romania, Russia, Turkey, and Ukraine.	
66	<b>Abhijit Sinha committee</b> -> To promote digital payment.	
67	<b>International Food Policy Research Institute(IFPRI)</b> -> Founded in 2010. Headquarters: Los Baños, Philippines.	
68	<b>Great Indian Bustards</b> -> IUCN Red List: Endangered species.	
69	<b>Aditya-L1 Mission</b> -> first mission to Venus by the India Space Research Organization (ISRO).	
70	<b>Disk-footed Bat</b> -> found near Nongkhyllam Wildlife Sanctuary in Meghalaya.	
71	<b>Inclusive Internet Index 2021</b> -> Released by World Economic Forum.	
72	<b>Lingaraja Temple</b> -> is a classic example of Kalinga style of architecture.	
73	<b>NASA's Ingenuity</b> -> first helicopter to fly on Mars.	
74	<b>Sudarshan Sen committee</b> -> Reforming the Tax Structure.	
75	<b>Startup India Seed Fund Scheme</b> -> to provide financial assistance to startups. Implemented by an Experts Advisory Committee.	
76	<b>Khajuraho Temples</b> -> Rajasthan.	
77	<b>World Press Freedom Index</b> -> Published by World Economic Forum.	
78	<b>Boao Forum</b> -> initiated in 2001 by 25 Asian countries and Australia.	

79	<b>RESPOND (Research Sponsored) programme</b> -> is the flagship programme of Ministry of Education. encouraging academia to participate and contribute in various Space related research activities.	
80	<b>Bitcoin Digital Currency</b> -> Brazil.	
81	<b>Exercise Vajra Prahar</b> -> is a Joint Special Forces Military Exercise between India and Kyrgyzstan.	
82	<b>Dogecoin</b> -> is a Cryptocurrency created in 2013 by software engineers Billy Markus and Jackson Palmer.	
83	<b>Appointment of ad-hoc Judges</b> -> The number of ad-hoc judges in the court should be in the range of 2 to 5 for the time being.	
84	<b>Codex Alimentarius Commission (CAC)</b> -> established by UN Economic and Social Council (ECOSOC).	
85	<b>Blue Nature Alliance</b> -> is a global partnership of five core partners. To safeguard global ocean biodiversity.	
86	<b>Earth Day Network</b> -> India-based international environmental NGO.	
87	<b>KRI Nanggala</b> -> is a diesel-electric attack submarine of the Indonesian Navy.	
88	<b>Blue Flag Certification</b> -> Awarded by United Nations Environment Programme.	
89	<b>Brucellosis</b> -> is a Fungal disease caused by various Brucella species.	
90	<b>Harlequin ichthyosis</b> -> is a severe genetic disorder that mainly affects the skin.	
91	<b>Power Grid Corporation of India</b> -> is a "Maharatna" Central Public Sector Enterprise.	
92	<b>Morarji Desai National Institute of Yoga</b> -> fully funded by Ministry of Health and Family Welfare.	
93	<b>Energy Transition Index 2021</b> -> an annual report by the World Bank.	
94	<b>Organisation for the Prohibition of Chemical Weapons(OPCW)</b> -> is a United Nations(UN) organization. 193 members including India.	
95	<b>Marib</b> -> Syria.	
96	<b>International Maritime Organization</b> -> is not a specialized agency of the United Nations.	
97	<b>Zhurong Rover</b> -> United Arab Emirates's first Mars rover.	

98	<b>Deep Time Project</b> -> led by NASA to navigate in deep space.	
99	<b>Trachoma</b> -> neglected tropical Hydatid disease. that affects the liver, lungs, brain and other organs.	
100	<b>Python-5</b> -> is a fifth-generation surface to surface missile (SSM).	

**FOR LATEST NOTES UPDATES  
AND FREE PDF DOWNLOADS  
JOIN OUR TELEGRAM CHANNEL**

# **IMAGERUNNERS ON TELEGRAM**

**FOR COURIER ENQUIRY  
& HARD COPIES CALL  
IMAGERUNNERS**

**AT** 56 OLD RAJINDER NAGAR 011-45036293  
57 OLD RAJINDER NAGAR 011-40204330  
60 OLD RAJINDER NAGAR 011-47032507

**63/1,SHOP NO.2 & 3 KAROL BAGH METRO STATION GATE NO 7  
011-40393124,011-47082116**

**Mob. 9821697670,9821697672,8800803100,8860450330,  
8595697100,8595696880,9910923124,9540538042,  
9310064520,9310070560**

**VISIT OUR WEBSITE [WWW.IMAGERUNNERS.IN](http://WWW.IMAGERUNNERS.IN)  
ALL INDIA COURIER FACILITY**