FORTUNE
Prelims Precise

MAY 2023

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FORTUNE IAS
Toppers in Top 100

Rank 6
Meera K
2021

Rank 15
Sidharth B
2017

Rank 21
Dilip K Kainikkara
2022

Rank 28
Hamna Mariyam
2017

Rank 29
Sreelakshmi Ram
2019

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Anand
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Arya V M
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Rank 45
Safna Nazarudeen
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Renjina Mary V
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2019

Rank 81
Malini S
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Rank 92
Devi Nandana
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Rank 99
Archana P P
2020

Rank 100
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2022

History & Culture

Juna Khatiya Site

» A recent excavation at **Juna Khatiya** village of **Kutch district, Gujarat** has revealed **pottery shards, shell bangles, stone blades and skeletal remains**.

• The burial site **spread over 16 acres** is **considered to be the largest pre-urban Harappan cemetery**.

• The **fragments of shell bangles** and other findings at this site **dates back to 3200 - 2600 BC**, even predating the **Dholavira** (Around 3000 BC) - **UNESCO Heritage site**.

• Since **2018**, close to **500 graves have been discovered**, but there are **no major habitations in the region** unlike other Harappan necropolises.

Gongadi Shawls

» National Institute of Design, Ahmedabad alumni have transformed **Telangana's gongadi shawls**, originally woven by **Kuruma and Kuruba communities using Deccani sheep's coarse wool**, into all-weather shoes for farmers.

• These **traditional blankets, famous for their durability and made without dyes**, were previously used by the Indian Armed Forces in harsh winter conditions.

• **Known for not fading but growing darker over time**, the repurposed gongadi material now serves a practical purpose in creating resilient footwear for agricultural use.

Channapatna Toys

» Channapatna toy makers of **Karnataka** applauded the government decision to bring tighter curbs in import of Chinese toys.

• **Channapatna toys**, or **Gombegala Ooru**, are **handcrafted wooden toys** and dolls originating fro**m Tipu Sultan's patronage of Persian artists**.

• Traditionally crafted from **ivory wood**, contemporary versions now also use **sandalwood and mango wood**.

• With their **distinctive blunt edges** and **100% organic colours**, these toys are child-friendly.

• Recognized with a **Geographical Indication (GI) tag in 2005**.

Sengol

» The historic **Sengol sceptre**, presented to **First Prime Minister Jawaharlal Nehru** on Independence eve, now stands near the Speaker's seat in the new parliament building.

• Sengol originates from the Tamil word **"Semmai",** meaning **"Righteousness"**.

• In line with **Cholas tradition**, the **transfer of power or succession** is marked by handing over the **gold-plated silver sceptre**, standing at five feet tall and adorned with the **Nandi bull symbolising justice**.

• Crafted by **Vummidi Bangaru Chetty of Madras**, it was presented by the Tamil **Thiruvavaduthurai Adheenam**, a Saivite mutt.

Jantar Mantar

» The **Archaeological Survey of India (ASI)** has constituted a fresh expert committee for the conservation, preservation, restoration, and proper functionality of the Delhi Jantar Mantar.

- **Jantar Mantar** is an **assembly of stone-built astronomical instruments** constructed by **Maharaja Sawai Jai Singh II** between **1724 and 1738**.

- He **constructed 5 astronomical observatories** in **New Delhi, Jaipur, Ujjain, Mathura and Varanasi**, whose primary purpose was to **compile astronomical tables** and to **predict the times and movements of sun, moon and planets**.

- Observatories at large distances from one another were built to **improve accuracy** by comparing readings from different coordinates.

- **Jantar Mantar in Jaipur** houses the **greatest number and variety of instruments** and is a **UNESCO World Heritage Site**.

Foucault pendulum

» A Foucault pendulum has been **installed inside the new Parliament**.

- Foucault pendulum is named after **French physicist Leon Foucault** and it is a simple experiment which demonstrates the **Earth's rotation**.
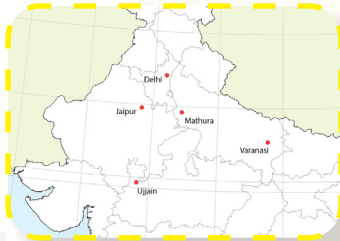
- The pendulum suspended from the ceiling of the **Constitution Hall** represents the **spirit of scientific inquiry and scientific temper** enshrined in the **Article 51A of the Indian Constitution**.

- It also signifies the **"integration of the idea of India with the idea of the cosmos"**.

- It was created by the **National Council of Science Museum (NCSM) in Kolkata**.

Gopal Krishna Gokhale

- The Prime Minister recently paid homage to **Gopal Krishna Gokhale** on his birth anniversary.

- **Gokhale** was an **Indian political leader and a social reformer** born on **9th May 1866** in Ratnagiri, present day **Maharashtra**.

- He was also the **political guru of Mahatma Gandhi**.

- He became a member of **Indian National Congress in 1889** and the **leader of the moderate faction** becoming its **president in 1905 Benaras Session**.

- He **passed away** on **19th February 1915**.

Major Contributions

- In **1899**, Gokhale was elected to the **Bombay Legislative Council** and in **1901** he was elected to the **Imperial Council of the Governor-General of India**.

- **Servants of India Society** was formed by him in **Pune (Maharashtra) in 1905** to further the expansion of education in India.

Major Works

- He launched the **English weekly newspaper named The Hitavada** (The people's paper) in **1911**.

Buddha Purnima

- Prime Minister Narendra Modi will deliver a key-note address at the international event organised to mark **Buddha Purnima Diwas**.

- **Buddha Purnima**, also known as **Vesak, commemorates the birth, enlightenment and Death** (or Parinirvana) of **Lord Buddha**, the founder of Buddhism, all of which is said to have taken place on the same day.

- It falls on the **full moon day (Purnima)** of the month **Vaishakha (May)**, hence the occasion is referred to as **Buddha Purnima in India**.

- This day is **commemorated by Buddhists and Hindus all over the world** and is a **major festival in South and South-East Asian countries**.

Gautama Buddha

- **Siddhartha Gautama** was born in **563 BCE** in **Lumbini Garden** near **Kapilavastu, present-day Nepal**.

- He was born into the **Shakya dynasty**, with his father Suddhodana being a king and his mother Maya Devi.

- At the **age of 29**, **Siddhartha left behind his princely life** to seek answers to the nature of suffering and existence.

- At the **age of 35**, Siddhartha meditated under the **Bodhi Tree in Bodh Gaya**, where he attained enlightenment and became the Buddha, the **"Awakened One"**.

- His major teachings include the idea of **Four Noble Truths (Arya-Satyas)** represent the fundamental principle of Buddha's teachings:

  1. **Dukkha (Suffering):** Suffering is inherent in human existence.

  2. **Samudaya (Origin):** Suffering arises from attachment and desire.

  3. **Nirodha (Cessation):** Suffering can be ended by overcoming attachment.

  4. **Magga (Path):** The Eightfold Path leads to the cessation of suffering.

- In **483 BC**, Buddha **died at the age of 80 in Kushinagar**.

Dancing Girl

- The **mascot of International Museum Expo 2023**, Delhi was inspired by **Dancing Girl Sculpture**.

- It is one of the most famous and iconic artefacts of the **Indus Valley Civilization (IVC)** and it dates back to **2500 BCE**.

- It was **discovered in 1926** by archaeologist **Ernest Mackay at Mohenjodaro**.

- It is the **world's oldest bronze sculpture** and was sculpted using the **lost wax technique**.

- The sculpture depicts a **nude female figure with bangles in the left arm, and amulet and bracelet on the right arm**.

- She stands in a **'tribhanga'** dancing posture with the right hand on her hip.

Polity & Governance

Model Prisons Act, 2023

» Recently, The **Ministry of Home Affairs (MHA)** announced that it has finalised the preparation of the **Model Prisons Act, 202 3**.

• It aims to **replace** the existing **130-year-old colonial law** and to shift the focus of incarceration from **"retributive deterrence"** to **"reform and rehabilitation"**.

• The task of revision of the Prisons Act, 1894 was assigned to the **Bureau of Police Research and Development by the MHA**.

• **Prisons** being a **"state"** subject under **Schedule 7 of the Indian Constitution**, the States have the **sole right in prison management and prisoner's administration**.

Salient Features of Model Prison Act

1. Provision of **separate accommodation** for women prisoners, transgender, etc.

2. Provision of **punishment for prisoners and jail staff** for use of prohibited items like mobile phones etc. in jails.

3. Provision for **use of technology** in prison administration with a view to bring transparency in prison administration.

4. Provision regarding establishment and management of **high security jail, open jail** (open and semi open), etc

5. Provision for **legal aid to prisoners, provision of parole, furlough and premature release etc. to incentivise good conduct**.

6. Focus on **vocational training and skill development** of prisoners and their reintegration into the society.

7. **Grievance redressal**, prison development board, attitudinal change towards prisoners.

8. **Provision for security assessment** and segregation of prisoners, individual sentence planning,

CU-Chayan Portal

» Recently, **UGC** launched the 'CU-Chayan' portal.

• **CU-Chayan portal** is a new platform **to hire faculty members in central universities**.

• The portal will **provide a consolidated list of job openings** across all **46 central universities** under the **Union Ministry of Education**.

• **Central universities** will still be **responsible from advertising to recruitment for a job vacancy**, however the **tasks will be managed using the portal**.

• UGC formed in **1953** became a **statutory body** by an **Act of Parliament in 1956**.

National e-Vidhan Application (NeVA)

» Recently, the **Ministry of Parliamentary Affairs (MoPA)** organised a two-day National Workshop on the National e-Vidhan Application (NeVA).

• **National e-Vidhan Application (NeVA)** is one of the **44 Mission Mode Projects (MMPs)** under the **"Digital India Programme"** of Government of India.

• The **funding for e-Vidhan** is provided by the **MoPA** and **technical support** by the **Ministry of Electronics and Information Technology (MietY)**.

• It is a **Central Sponsored Scheme: 60:40;** and **90:10 for North East & hilly States and 100% for UTs**.

• The aim is to make the **functioning of all the State Legislatures paperless** by transforming them into **'Digital House'**.

• The entire businesses in the House can be done via a **handheld device/tablet**, making the process **efficient and transparent**.

• Through the **cloud technology (Meghraj)**, data deployed can be accessed anywhere at any time.

Poshan Bhi, Padhai Bhi (PBPB) Scheme

» The **Union Ministry of Women and Child Development** launched the **Poshan Bhi, Padhai Bhi Scheme (PBPB)**.

• The scheme will focus on **Early Childhood Care and Education (ECCE)** at **anganwadis** (Childcare centres) across the country.

• The ECCE includes **education, physical, social and emotional care, intellectual stimulation, health care and nutrition** that support development during the early years of life and envisaged under the **National Education Policy**.

• The Ministry has allocated **Rs.600 crore** for the **training of anganwadi workers** to implement the ECCE.

• The **National Institute of Public Cooperation and Child Development (NIPCCD)** is responsible for providing the training.

Justice Balakrishnan Commission

» Former **CJI K.G. Balakrishnan** says the Inquiry Commission he is leading can complete its task in a year

• The Union government constituted a **three member Commission** in **2022** under the former Chief Justice of India K G Balakrishnan.

• It was constituted for **examining the issue of whether Scheduled Caste (SC) status** can be accorded to **Dalits** who have **converted to religions other than Sikhism or Buddhism**.

• It will also **look into the changes an SC person goes through after converting to another religion** and its implications on the question of including them as SCs.

• Currently, the **Constitution (Scheduled Castes) Order, 1950** provides for only those belonging to **Hindu, Sikh, or Buddhist communities to be categorised as SCs**.

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

Mahadayi River Dispute

» Thousands of Goans formed a human prayer chain along the **Mahadayi river** to spread awareness about the **protection of the river**.

Mahadayi River

• **Mahadayi river** (also known as **Mandovi river**) rises in the **Western Ghats** from the **Bhimgad Wildlife Sanctuary in Karnataka**.

• **Flowing westward**, it enters **Goa** and joins the **Arabian Sea at Panaji**.

• The river is **important for Goa** because it is **one fresh water source** at the state's disposal. **Most of Goa's 11 rivers contain salt water**.
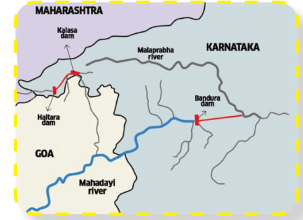
⭐ The important tributaries are **Sarang, Mahainada, Udel, Lohi and Khandepar**.

Dispute over Mahadayi River

• The dispute over Mahadayi river between **Goa and Karnataka** began in the **1980**s and grew stronger in the subsequent decades.

• The trigger was **Karnataka's move to design a number of dams, canals and barrages** to route the river water to the **Malaprabha basin**.

• **Mahadayi Water Disputes Tribunal** was set up in **2010**.

• In December 2022, **Central Water Commission (CWC)** approved the detailed project report of **Kalasa-Banduri Project of Karnataka to divert the river water**.

• The **Goa government approached** the **Supreme Court** and has sought a stay.

Constitutional provisions

Article 262:

☞ **Parliament** may by law provide for the adjudication of any dispute or complaint with respect to waters and any inter-state river or river valley

☞ Parliament may by law provide that **neither the Supreme Court nor any other court shall exercise jurisdiction** in respect of any such dispute or complaint as mentioned above.

Thalassemia Bal Sewa Yojana (TBSY)

» The **Union Ministry of Health and Family Welfare** launched the **3rd phase of Thalassemia Bal Sewa Yojana (TBSY)** along with a portal.

• The **Health Ministry** has been implementing the **TBSY since 2017** under the **National Health Mission (NHM)** to help in the treatment of Thalassemia.

• **Thalassemia** is an **inherited blood disorder** that causes a body to have **less haemoglobin than normal** which requires **lifelong repeated blood transfusions** as well as other expensive medical interventions for survival. The **permanent treatment** for this disease lies in **stem cell transplant**.

e-Appeals Scheme

» The **Central Board of Direct Taxes (CBDT)** has notified an **e-Appeals Scheme, 2023** to **reduce the pendency of appeals at the level of income tax commissioners**.

• Under the **'e-Appeals Scheme, 2023'**, **taxpayers can file and hear cases electronically which helps to speed up the resolution of disputes**.

• The **Finance Act, 2023** introduced the post of **Joint Commissioner (Appeals)**.

• The **Joint Commissioner (Appeals)**, also known as **JCIT (Appeals)**, will dispose of the appeals allocated or transferred to it or filed before it as per the scheme.

• In case of **non-compliance with any notice**, direction or order, the JCIT (Appeals) is **authorised to issue a notice** for initiating the **penalty proceedings**.

• It also **provides for personal hearings** through **video conferencing promoting convenience and efficiency**.

Anuradha Bhasin vs Union of India

» The Supreme Court issued a notice to State governments on application seeking compliance with guidelines laid down in Anuradha Bhasin case (2020).

• The **Supreme Court of India** in **Anuradha Bhasin vs Union of India (2020)** held that the **right to free speech** and t**he freedom to carry one's trade or profession via the medium of internet is a fundamental right**.

• The **case pertained to the internet shutdown in the Jammu and Kashmir** in the wake of **abrogation of Article 370**.

• The court also **issued detailed directions** (commonly referred to as **Anuradha Bhasin Guidelines**) **for issuing internet suspension** orders and to **test the validity of such orders** and their **periodic review**.

Forum Shopping

» CJI Chandrachud recently condemned 'forum shopping'.

• When **litigants or lawyers** attempt to **deliberately move their case to a particular judge or Court** where they **think the judgement could be more favourable**, they are said to be **"forum shopping"**.

• It is **done to gain advantage in litigation** and **gain favourable verdicts**.

• The **Supreme Court in its 1988** ruling in **'Chetak Construction Ltd. vs. Om Prakash'** said, **"A litigant cannot be permitted choice of the forum"**, and that every attempt at forum shopping **"must be crushed with a heavy hand"**.

Central Consumer Protection Authority

» Recently, the **Central Consumer Protection Authority (CCPA)** has asked e-commerce sites to stop selling car seat belt alarm stoppers.

• It is a **regulatory body** established in **2020** based on the provisions of the **Consumer Protection Act, 2019**.

• Nodal Ministry: The **Ministry of Consumer Affairs**.

Composition:

- ☞ **Chief Commissioner**
- ☞ **Two Commissioners** - One commissioner for goods and one for services.
- ☞ The CCPA will have an **Investigation Wing** that will be headed by a **Director General**.

SAKSHAM Learning Management Information System (LMIS)

» **Union Health Ministry** launched SAKSHAM Learning Management Information System.

- The **SAKSHAM** (**Stimulating Advanced Knowledge for Sustainable Health Management**), is a **learning platform** developed by the **National Institute of Health & Family Welfare (NIHFW)**, New Delhi.

- It aims to **provide certified online training and medical education** to **all health professionals in the country**.

- It currently **hosts more than 200 public health and 100 clinical courses** through **online mode**.

Vivad se Vishwas I

» The **Ministry of Finance** has launched the scheme, **Vivad se Vishwas I – Relief to MSMEs**.

- Under the scheme **Ministries will refund performance security, bid security and liquidated damages forfeited/ deducted** during COVID- 19 pandemic.

- It aims to provide relief to **Micro, Small and Medium Enterprises (MSMEs)** for COVID-19 period.

- It also provides immunity from any **future prosecution or penalty** for the settled cases.

Performance Security Deposit- The security amount to be remitted as bank guarantee by the contractor for guaranteed performance of the contract

Bid securing/security declaration- It is an undertaking in writing that a bidder will not withdraw the bid or reject to sign the contract.

Liquidated damages- These damages are to be paid out in the case of a breach of contract.

Harit Sagar Guidelines

» The **Ministry of Ports, Shipping & Waterways** has launched the Harit Sagar Guidelines.

- Harit Sagar Guidelines provides a **framework for the major ports** for drawing out a **comprehensive action** plan for achieving targeted outcomes in terms of **quantified reduction in carbon emission**.

- The objective of guidelines is to **minimise waste through reduce, reuse, repurpose and recycle** to attain **zero waste discharge from port operations**.

- The guidelines cover the aspects of **National Green Hydrogen Mission** pertaining to ports, **development of green hydrogen facilities, LNG bunkering, offshore wind energy** etc.

Unique Economic Offender Code

» The Central government is planning to launch a **Unique Economic Offender Code** for each **individual or company** accused of economic offences.

- It is an **alpha - numeric, system** developed code generated when the investigation agency sends the data about an offender to the **National Economic Offence Records (NEOR)**.

- It will be **specific to each offender** and will be **linked with the Aadhaar number** in the case of an individual or PAN in the case of a company, which will provide a **360-degree profile** of the **economic offender and their record**.

- The **Central Economic Intelligence Bureau** under the **Ministry of Finance** has made a database of about 2.5 lakh economic offenders.

National Economic Offence Records (NEOR)

- It is a **central repository of all economic offences** that will share data related to each economic offender with all central and state intelligence and enforcement agencies.

- The Central Economic Intelligence Bureau has been given the task of **coordinating and completing the project with the NEOR** project with the help of the **National Informatics Centre.**

National Security Adviser (NSA)

» Recently, Indian National Security Advisor **Ajit Doval** had a meeting with his USA counterpart Jake Sullivan in Saudi Arabia.

• NSA is the **primary advisor to the Prime Minister of India** on **national security policy and international affairs**.

• The NSA of India also serves as the **Prime Minister's Special Interlocutor** with **China** as well as the envoy to **Pakistan and Israel on security affairs**.

• The NSA **receives all intelligence** (RAW, IB, DIA, NIA) etc reports and co-ordinates them to present before the **Prime Minister**.

• NSA is assisted by the **Deputy National Security Advisors (Deputy NSAs)**.

• NSA serves at the **discretion of the Prime Minister of India**.

National Security Council (NSC)

• It is an **executive government agency** tasked with advising the Prime Minister's Office on matters of national security and strategic interest.

• It was established by the **former Prime Minister Atal Bihari Vajpayee** in **1998**.

• It is **headed by the Prime Minister** and the **National Security Adviser** acts as its Secretary.

• **Members:** NSA, Deputy National Security Advisors, the Ministers of Defence, External Affairs, Home, Finance, and the Vice Chairman of the NITI Aayog.

It has a three tiered structure:

↓

Strategic Policy Group

↓

National Security Advisory Board

↓

Secretariat represented by the Joint Intelligence Committee

National Medical Commission (NMC)

» Recently, the National Medical Commission (NMC) made **Unique Identification Number (UID)** mandatory for doctors.

• NMC is an **Indian regulatory body** of **33 members** which **regulates medical education and medical professionals**.

• It replaced the **Medical Council of India** (MCI) in **2020.**

• The commission grants recognition of **medical qualifications, gives accreditation to medical schools, grants registration to medical practitioners and monitors medical practice and assesses the medical infrastructure in India**.

The UID for doctors will serve as a platform which provides professional information. Similar to a bank account, this ID will store details such as qualifications, fellowships, and other important data.

Economy
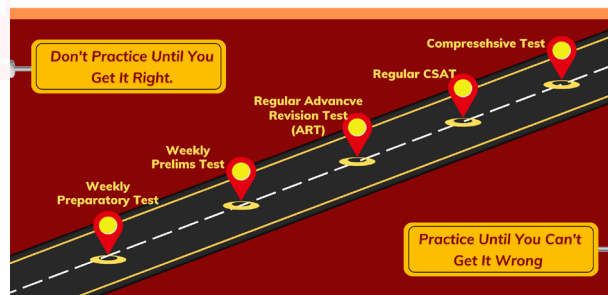
Aadhaar Enabled Payment Services

» Cybercriminals have started using Aadhaar biometrics to withdraw money from users' bank accounts through Aadhaar-enabled Payment Services (AePS).

• **Aadhaar-enabled Payment Services (AePS) is** a **bank-led model developed by the National Payments Corporation of India (NPCI)**.

• It **allows online financial transactions** at **Point-of-Sale (PoS)** and **Micro ATMs** through the **business correspondent** of any bank using **Aadhaar authentication**.

• The **model removes the need for OTPs**, **bank account details, and other financial details**.

• It **allows fund transfers** using only the **bank name, Aadhaar number, and fingerprint captured during Aadhaar enrolment**.

National MSME council

» The **Ministry of Micro, Small and Medium Enterprises (MSME)** organised the first meeting of the National MSME Council.

• The **National MSME Council** was set up in **2023**, to work as an **administrative and functional body of Micro, Small and Medium Enterprises (MSME)**.

• It oversees **inter-Central Ministerial/ Departmental coordination,**facilitates **Centre State synergies** and **monitors progress** on the reforms mandated in the **MSME sector**.

• The council is **headed by the Minister for MSME**, including **representation from various Ministries** and **supported by a secretariat**.

• The event was organised under the aegis of the **Central Sector Scheme "Raising and Accelerating MSME Performance (RAMP)"**.

• The **RAMP programme launched** in **2022** aims at **improving access to market and credit**, **strengthening governance, Centre-State linkages and partnerships**, **addressing issues of delayed payments and greening of MSMEs**.

Competition (Amendment) Act 2023

» Recently, The Centre notified several provisions of the **Competition (Amendment) Act (CAA) 2023**, which amended the Competition Act (CA), 2002.

Recent Amendments

• **Definition of Combination:** The CAA expands the definition of combinations (**mergers, acquisitions, or amalgamation of enterprises**) to **include transactions with a value above Rs 2,000 crore**.

• **Reduction in the time limit for approval of combinations:** From 210 days to 150 days.

• The Act seeks to defines **'turnover'** for the purpose of penalty as global turnover derived from all the products and services by a person or an enterprise

• The Act **decriminalises certain offences** under the Act by changing the nature of punishment from imposition of fine to **civil penalties**.

G20 TechSprint

» Recently, the **RBI** and **Bank for International Settlements (BIS)** launched the G20 TechSprint.

• This was the **4th edition of techsprint**, first edition was launched in **2020** with **Saudi Arabia**.

• The global competition **aimed at improving cross-border payments through innovative technology solutions**.

• **TechSprint 2023** will focus on **three problem statements** formulated by the **BIS Innovation Hub (BISIH)** and RBI.

  ☞ **Technology solutions:** to reduce illicit finance risk around anti-money laundering, countering the financing of terrorism and sanctions.

  ☞ **Foreign exchange and liquidity technology solutions:** to enable settlement in emerging markets and developing economy currencies.

  ☞ Technology solutions for **multilateral cross-border central bank digital currency platforms**.

NYMEX WTI Crude Oil and Natural Gas futures contracts

» Recently, the **National Stock Exchange (NSE)** launched the **rupee denominated NYMEX WTI** Crude Oil and Natural Gas futures contracts in its commodity derivatives segment.

• A futures contract is an **agreement to acquire or sell an item at a predetermined price at a future date** and they are often traded on an exchange.

• Commodity derivatives are financial tools that allow an investor to **invest in a commodity** and **make a profit without actually owning it**.

> **West Texas Intermediate (WTI)-** It is a light, sweet crude oil extracted from wells in USA and it is used as one of the **major global oil benchmarks**.
>
> **Brent Crude, Dubai/Oman Crude** are some of the major benchmarks

One Station One Product (OSOP) Scheme

» The **Ministry of Railways** has launched One Station **One Product Scheme over Indian Railways** with the objective to **promote Vocal for Local vision**.

• The **OSOP scheme** aims to provide **a market for local/indigenous products** and create **additional income opportunities for the marginalised sections of the society**.

• Under the scheme, **OSOP outlets at railway stations** designed through **National Design Institute** are alloted for showcasing, selling and giving high visibility to the local products.

Product categories under this scheme includes;

- Handicrafts/ Artefacts
- Textiles and Handlooms
- Traditional Garments
- Local agricultural produce (including Millets)/ processed/ semi processed foods.

Voluntary Insolvency

» Indian low-cost carrier 'Go First' has filed for voluntary insolvency resolution proceedings on Tuesday before the **National Company Law Tribunal (NCLT)**.

• The **Voluntary Insolvency process** in which the **company says it cannot pay debts and needs help from someone to sort it out**. When the **company goes insolvent**, it can proceed to **voluntary liquidation**.

• **Voluntary liquidation** refers to the **dissolution of a company with approval from shareholders and creditors of the company**.

• The **Section 59 of Insolvency & Bankruptcy Code(IBC) 2016** together with the **Insolvency and Bankruptcy Board of India** (**Voluntary Liquidation Process) Regulations, 2017** provide the mechanism for voluntary liquidation.

• It is a **time-bound process** which **needs to be completed in 270 days** from the **date of commencement of Voluntary Liquidation**.

• The Voluntary liquidation can be **initiated by a company** that fulfils the following criteria:

1. A company that has **not committed any default or if having debt**, has the assets to pay debts through liquidation can apply.

2. The company must have **resolved to wind up voluntarily** through a **special resolution passed** by its **shareholders**.

Nutrient Based Subsidy (NBS) Scheme

» The Union Cabinet has approved the proposal of the **Department of Fertilisers** for revision in **Nutrient Based Subsidy rates** for various **nutrients for Rabi and Kharif seasons**.

• Under the Nutrient Based Subsidy Scheme, **fertilisers are provided at subsidised rates** based on the nutrients contained, namely **Nitrogen (N), Phosphate (P), Potash (K) and Sulphur (S)**.

• **Fertilisers fortified with secondary nutrients and micronutrients** such as **Boron (Bn)** and **Zinc (Zn)** are **given additional subsidies**.

• The scheme is being implemented from April 2010 by the **Department of Fertilisers, Ministry of Chemicals & Fertilisers**.

CITIIS 2.0

» The Union Cabinet has approved the **City Investments to Innovate, Integrate and Sustain 2.0** (CITIIS 2.0).

• CITIIS 2.0 seeks to support **projects promoting a circular economy** with focus on **integrated waste management at the city level, climate oriented reform actions at the state level and institutional strengthening** and **knowledge dissemination at the national level**.

• It is conceived by the **Ministry of Housing and Urban Affairs** in partnership with the **French Development Agency, Kreditanstalt für Wiederaufbau ("Credit Institute for Reconstruction") Germany, EU** and the **National Institute of Urban Affairs**.

• The program will run for a period of 4 years from **2023 to 2027** and aims to scale up the learnings and success of CITIIS 1.0 launched in 2018.

Legal Entity Identifier (LEI)

» Recently, the **Securities and Exchange Board of India (SEBI)** has introduced the Legal Entity Identifier (LEI) system for issuers that have listed or are planning to list non-convertible securities, securitized debt instruments, and security receipts.

• The LEI is a **20-digit number** used to uniquely identify parties to financial transactions.

• Its primary objective is to **improve the quality and accuracy of financial data systems** for better risk management.

• In India, LEI can be obtained from **Legal Entity Identifier India Ltd. (LEIL)**, which is also recognised as an issuer of LEI by the **Reserve Bank** under the **Payment and Settlement Systems Act, 2007**.

• The **Global Legal Entity Identifier Foundation (GLEIF)** accredits the local operating unit in India for issuance and management of LEI code.

Windfall Tax

» India recently **slashed the windfall tax** on domestically produced crude oil.

• It is a **type of tax levied by the government** on specific entities when **they gain unexpected and above-average profits**.

• Such taxes are **common in oil markets** due to its **high fluctuation** which leads to volatile or erratic profits for the industry.

Gold Rush

» Recently, the **Reserve Bank of India (RBI)** has been increasing its gold reserve as part of the diversification process and a precaution to growing global financial uncertainty.

• The **addition of gold to its reserves** at an **unusual pace** is called the **gold rush**.

• Its primary objective is to **safeguard its returns amid global uncertainty and rising inflation**.

• RBI's gold reserves showed an **increase of nearly 5% compared to 2022**.

Advantages of gold reserve:-

⎆ Its performance during times of crisis

⎆ Its long-term store of value

Pradhan Mantri Matsya Sampada Yojana (PMMSY)

» Recently, **7 new field studies** were conducted by the **National Productivity Council (NPC)** to support **PMMSY**.

• These studies **aim to enhance the fisheries sector** and its **contribution to the country's GDP**.

• PMMSY was launched in **2020** for the **sustainable development** of the **fisheries sector** and to bring about the **'Blue Revolution'**.

• Introduced as a part of the **Atma Nirbhar Bharat** package under the **Ministry of Fisheries, Animal Husbandry and Dairying** and being **implemented in all states and UTs** for a **period of 5 years** from **FY 2020-21 to FY 2024-25**.

• Under the scheme fishermen are provided with **insurance coverage, financial assistance** and a facility of **Kisan Credit Card** as well.

Angel Tax

» The **Central Board of Direct Taxes (CBDT)** recently proposed to **exempt certain categories of investors** from the levy of angel tax.

- **Angel tax** is the **tax that must be paid on the funds raised by unlisted companies** (not listed in any stock market) if the **value of the shares sold is higher than the fair market value of the company**.

- The **excess funds raised at prices above fair value is treated as income**, on which tax is levied and it comes under the ambit of **Income Tax Act of 1961**.

- It is levied at a rate of **30.6%** on **net investments** in excess of the fair market value.

- Earlier, angel tax provisions were applicable **only for investments received from resident investors**, but as per the Finance Bill 2023 it has been **extended to non-resident investors as well**.

International Relations

Arab League
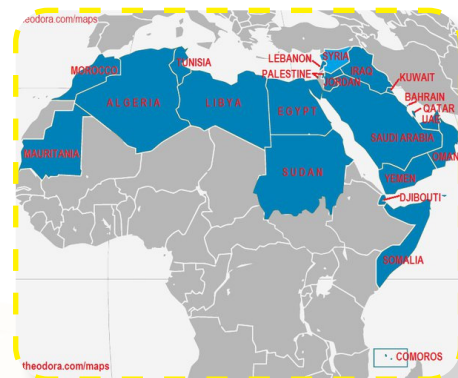
» Recently, the Arab League voted to **reinstate Syria's membership** after its suspension more than 10 years ago.

- The Arab League, formally known as the **League of Arab States**, was established in **1945**.

- It is a **regional organisation** of **Arab states** in the **Middle East and parts of Africa**.

- The **founding member states** were **Egypt, Syria, Lebanon, Iraq, Transjordan (now Jordan), Saudi Arabia, and Yemen**.

- **Currently,** it has **22 member states**, who have pledged to cooperate on economic and military affairs, among other issues.

South Asia Gas Enterprise (SAGE)

» Recently, **South Asia Gas Enterprise (SAGE)**, an **international consortium** proposed an **undersea gas pipeline project** connecting the **Middle East and India**.

- The project, estimated to cost **$5 billion**, aims to establish a **2,000-km-long energy corridor (UAE- Gujarat)** through the **Arabian Sea**, bypassing geo-politically sensitive regions.

- The **undersea transnational gas pipeline project Middle East-India Deepwater Pipeline (MEIDP)** was initially conceived between **Iran and India (Porbandar)** about a decade ago but failed to take off due to western sanctions.

Laundromat Countries

- A report titled **"Laundromat: How the price cap coalition whitewashes Russian oil in third countries"** published by the Helsinki-based **Center for Research on Energy and Clean Air (CREA)** has found that oil from Russia is getting backdoor entry into Europe via Laundromat countries.

- **Laundromat countries** are a **group of countries** that **purchase Russian oil and 'launder'** the **products to countries that have sanctioned Russian oil**.

- The **'laundromat countries'** are **China, India, Turkey, the UAE, and Singapore**.

- The five countries are responsible for **70 percent of Russia's crude oil exports**.

- European countries are **substituting oil products they previously bought directly from Russia**, with the same products now **"whitewashed"** in third countries and bought from them at a premium.

- **Price Cap Coalition** is composed of **Australia, Canada, the EU, Japan, the UK, and the US**. The price caps of the coalition prohibit operators from members of the PCC to trade, broker or transport petroleum products that originate in or that have been exported from Russia to third countries, unless they are sold at or below the price caps.

NATO Plus

- » The U.S. House Select Committee recommended strengthening the **NATO Plus** framework by including India in the grouping.

- The Indian External Affairs Minister had rejected this idea by saying that the **NATO template does not apply to India**.

- NATO Plus is a **security arrangement** that brings together **NATO and 5 aligned nations- Australia, New Zealand, Japan, Israel and South Korea**- to **enhance global defence cooperation**.

- It is **not an officially recognised or established concept within NATO itself**, but has been used in discussions and debates regarding the potential expansion of the alliance.

European Bank for Reconstruction and Development (EBRD)

- » The European Bank for Reconstruction and Development pledged further support for war-torn Ukraine as shareholders consider a proposal to boost EBRD capital by 3 billion-5 billion euros.

- **European Bank for Reconstruction and Development (EBRD)** is a **multilateral financial institution** established in **1991**.

- EBRD is **headquartered in London**, **United Kingdom** with shareholders in **69 countries**. **India** has become the **69th shareholder** of the European Bank for Reconstruction and Development (EBRD).

- It was developed to help **Eastern European** and **ex-Soviet countries** transition into democracies by **developing free-market economies after the fall of communism**.

- The bank finances in a variety of sectors including **public works, agribusiness, natural resources, and municipal infrastructure**.

- It **does not finance projects** related to the **tobacco industry, defense**, certain a**lcoholic products** and **stand-alone gambling facilities**.

Forum for India–Pacific Islands Cooperation (FIPIC) Summit 2023

- » Recently, PM Modi paid his maiden visit to Papua New Guinea where he **co-hosted the 3rd FIPIC summit**.

- **Forum for India–Pacific Islands Cooperation (FIPIC)** was launched during PM Modi's visit to **Fiji** in November **2014**.

- It was established as a **platform for dialogue and cooperation** between **India & 14 Pacific Island countries**.

- FIPIC includes **14 of the island countries** – Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

- So far, **two meetings of FIPIC** were held in **2014** in **Fiji** and **2015 in Jaipur**.

Global Alliance of National Human Rights Institutions

» The Global Alliance of Human Rights organisations has deferred the accreditation of India's **National Human Rights Commission (NHRC)** for the second time.

• At the **International Conference of Human Rights** held in **Tunis** in **1993**, the **International Coordinating Committee of NHRIs (ICC)** with the aim to **coordinate the activities of the NHRI network**.

• In 2016, the ICC changed its name to **Global Alliance of National Human Rights Institutions (GANHRI)**.

• It **facilitates and supports** the engagement of **National Human Rights Institutions** with the **United Nations Rights Councils and other bodies**.

• It undertakes accreditation of **National Human Rights Institutions in accordance with Paris Principles**.

• The **Secretariat support** is provided by the **Office of the United Nations High Commissioner for Human Rights (OHCHR)**.

It has four working groups:

1. **Network of African National Human Rights Institutions (NANHRI)**

2. **Asia Pacific Forum of National Human Rights Institutions (APF)**

3. **European Network of National Human Rights Institutions (ENNHRI)**

4. **Network of National Institutions in the Americas**

Business Ready Project

» Recently, the **World Bank** announced its Business Ready report project.

• It will replace the **Doing Business rankings** which had been the World Bank Group's flagship program for assessing the **ease of doing business**.

• The objective of the project is to make each country's economic environment ready for a **dynamic private sector**.

• This will be done by **assessing and ranking the ease of doing business** in each economy, identifying areas of improvement, and providing recommendations to policymakers and stakeholders.

• It will be developed by a **team of professionals** from the **World Bank Group**, **members from governments, private entities, and civil society organisations**.

• The project focuses on **ten factors:** Business Entry, Business Location, Utility Services, Labor, Financial Services, International Trade, Taxation, Dispute Resolution, Market Competition, and Business Insolvency.

• The first report is to be published in **2024**, which will cover **54 economies** in the first year, expected to scale up to **180 economies by 2025-26**.

International Organization for Migration (IOM)

» Recently, the former White House advisor Amy Pope became the **first woman to head** the **United Nations' International Organization for Migration (IOM)**.

• **IOM** is an United Nations agency that provides **services and advice** concerning migration to **governments and migrants**, including internally displaced persons, refugees, and migrant workers.

• It was established in **1951** as the **Intergovernmental Committee for European Migration (ICEM)** to help resettle people **displaced by World War II**.

• In **2016**, IOM entered into an agreement with the United Nations, becoming a related organisation.

• It consists of **175 member states** and **8 states** with observer status

• **India** became an **IOM member state** in **2008**.

• It also publishes the **World Migration Report** annually.

• IOM works in **four broad areas of migration management**—Migration and development, facilitating migration, regulating migration, and Forced migration.

Country Partnership Strategy & IF-CAP

» The **Asian Development Bank (ADB)** has launched its **2023-27 Country Partnership Strategy for India** and the **Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP)**.

Country Partnership Strategy (CPS)

- The CPS, 2023-27 for India aims to **help India return to its development trajectory** by supporting **better health, education, social protection, improved urban viability and rural development** while ensuring gender empowerment.

- It is well aligned with **India's national development priorities** to be achieved by **2047**.

3 Pillars of CPS:

→ Accelerate structural transformation and job creation.

→ Promote climate-resilient green growth.

→ Deepen social and economic inclusiveness

IF-CAP

- IF-CAP is a **multi-donor financing partnership** facility with the goal of **scaling up finance** for **accelerated action against climate change in Asia and the Pacific**.

- The initial partners of IF-CAP are **Denmark, Japan, the Republic of Korea, Sweden, the United Kingdom and the United States**. They are in discussion with ADB about climate investments.

Indian Ocean Conference (IOC)

» The 6th **Indian Ocean Conference** has been jointly organised by the **Bangladesh's foreign ministry** and the **India Foundation**, a New Delhi-based think tank.

- The IOC is a **flagship consultative platform** for governments in the area to meet and discuss **regional matters and the overall politico-economic stability of the region**.

- It was initiated by a New Delhi based think tank **India Foundation** and started in **2016 at Singapore**.

- With the key theme of **'Peace, Prosperity and Partnership for a Resilient Future'**, the 6th IOC shed light on **preserving peace and order to guarantee the economic growth** of nations bordering the Indian Ocean.

India- Australia Migration and Mobility Partnership Agreement (MMPA)

» India and Australia signed the **Migration and Mobility Partnership Agreement (MMPA)**.

- The MMPA is aimed at promoting **two-way exchange of students, graduates, researchers and businesspeople and exchanging people-to-people ties**.

Key provisions

- Granting Indian students who have completed their studies at an Australian institution the **opportunity to work in their field of study in Australia for up to 8 years**.

- Issuance of **3 month visitor visas to Indians** for family or business purposes.

- **5 year student visas** will be established **for students from both countries**, promoting educational collaboration and cultural exchange.

Hours of Work (Industry) Convention 1919

» The **May Day 2023** marks a hundred years since the May Day was first commemorated in India on **May 1, 1923, in the city of Madras**.

• The **Hours of Work (Industry) Convention, 1919** is an **International Labour Organisation (ILO)** convention, which **limited the hours of work** and **provided adequate rest periods for workers**.

• The convention limited the number of working hours to **8 a day and 48 hours a week**.

• **British India ratified the Convention** on July 14, 1921.

ISO Committee on Consumer Policy (COPOLCO)

» The **Bureau of Indian Standards** recently hosted the **44th edition** of the **ISO COPOLCO Plenary in New Delhi**.

• **ISO COPOLCO** is a committee of the **International Organization for Standardization (ISO)**.

• Its primary objective is to ensure that **standards are developed with consumer needs** in mind and **promotes consumer engagement** in the standardisation process.

• It advises ISO Council on the need for **new or revised policies or actions within ISO**.

• **COPOLCO consists of 128 ISO members**.

Silkworm Eating Strategy

» The recent **incursions of China into Taiwan** is considered as the **Silkworm Eating Strategy**.

• Silkworm eating is a **colloquial term** used for **gradual encroachments by a country by successfully making inroads in another territory**.

Salami slicing: It is a strategy that involves the divide and conquer process of threats and alliances to overcome opposition and acquire new territories.

Environment & Ecology

Global Greenhouse Gas Watch (GGGW)

» The **World Meteorological Congress** has approved a new **greenhouse gas (GHG)** monitoring initiative called **Global Greenhouse Gas Watch (GGGW)**.

• The World Meteorological Organisation (WMO) is the UN system's **authoritative voice** on the **state and behaviour of the Earth's atmosphere**, its interaction with the oceans, the climate it produces, and the resulting distribution of water resources.

• The Global Greenhouse Gas Watch (GGGW) provides an **integrated, operational framework** along with modelling and data assimilation capabilities.

The GGGW will consist of four main components:

✦ Comprehensive, sustained, global surface- and **satellite-based observations of greenhouse gases**.

✦ **Prior estimates of the GHG emissions** based on the activity data.

✦ **Global high-resolution Earth system models** representing GHG cycles.

✦ **Data assimilation systems** combine the observations with model calculations to generate products of higher accuracy.

CORSIA & LTAG

» The **Ministry of Civil Aviation (MoCA)** has announced that India will start participating in the **International Civil Aviation Organisation's (ICAO) Carbon Offsetting and Reduction Scheme** for **International Aviation (CORSIA)** and **Long-Term Aspirational Goals (LTAG)** from **2027**.

• CORSIA is a **carbon offset and carbon reduction scheme** to **lower CO_2 emissions for international flights**, to curb the aviation impact on climate change.

- It was developed by the **International Civil Aviation Organisation (ICAO)** and adopted in October 2016.

- The **41st ICAO Assembly** adopted a **long-term global aspirational goal (LTAG)** for international aviation of **net-zero carbon emissions by 2050**.

> ICAO is a **specialised agency of the United Nations** that was created in **1944** to promote **safe, secure, and efficient air transportation** around the world.

Energy Transition Advisory Committee

» The report titled **'The Green Shift'** was released by the **Energy Transition Advisory Committee (ETAC)**.

- The Energy Transition Advisory Committee was formed by the **Ministry of Petroleum and Natural Gas** in 2021 under Tarun Kapoor, former Secretary of the Petroleum Ministry.

- It was set up to draw up an **energy transition roadmap for the oil and gas sector**.

Key Recommendations of the Committee

- Recommends **banning the use of diesel-powered four-wheeler vehicles by 2027** in cities with a population of more than 1 million

- Transitioning to **electric and gas-fueled vehicles**.

- **City transport** should be a **mix of Metro trains and electric buses by 2030**.

'The Green Shift' Report

- The report **"The Green Shift: The Low Carbon Transition of India's Oil and Gas Sector"** emphasised the need for **India's energy transition** and highlighted various **pathways to achieve a low-carbon future**.

- One promising solution highlighted in the report is the **use of Compressed Biogas (CBG) as an alternative to imported fossil natural gas**.

Meri LiFE app

» Recently, the **Ministry of Environment, Forest and Climate Change (MoEF&CC)** launched the "Meri LiFE" (*My Life*) mobile application.

- The aim of the app is to **empower young people** and **encourage their participation in tackling climate change** through **simple actions in daily life**.

- Upon successful sign up, users are guided through a **gamified experience to take five LiFE actions** towards **World Environment Day on June 5th, 2023**.

To track the progress made in LiFE initiative, the ministry has developed two dedicated portals:

- ✎ **Mission LiFE Portal** (mission life-moefcc. nic.in) is **open access** and can be used to download the **100+ creatives, videos, and knowledge materials** that have been **developed by the ministry for LiFE**.

- ✎ **Meri LiFE Portal** (merilife.org) has been **developed for ministries and institutions** to upload event reports and capture the progress of the **mass mobilisation drive**.

People's Biodiversity Register

» The **National Campaign for Updation and Verification of People's Biodiversity Register (PBR)** was launched in **Goa**, by the **Ministry of Environment, Forest and Climate Change**.

- This marks a significant step towards the **documentation and preservation of India's rich biological diversity**.

- The program of People's Biodiversity Register (PBR) is designed as a **tool for the formal maintenance of the local knowledge of biodiversity**.

- The People's Biodiversity Register serves as a **comprehensive record of locally available Bio-resources** including the landscape and demography of a **particular area or village**.

- It is prepared by **Biodiversity Management Committees** (under Biodiversity Act 2002) in consultation with local communities.

Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India) Scheme

» Government has **reduced subsidies on Electric vehicles** under Faster Adoption of Manufacturing of Electric Vehicles (**FAME II**) Scheme.

• A part of the **National Electric Mobility Mission Plan (NEMMP)**, the **FAME India scheme** aimed at **promoting electric vehicles (EVs)** in the country by **providing subsidies**.

• The **NEMMP** aims to achieve **national fuel security** by **promoting hybrid and electric vehicles** in the country.

<u>The FAME India scheme is being implemented by the Ministry of Heavy Industries in two phases:</u>

  👉 **Phase I:** Started in **2015** and was completed on **31st March 2019**.

  👉 **Phase II:** Started on **1st April 2019** and extended up to **31st March 2024**.

• With a total budgetary support of Rs.10000 crore, the **Phase II** mainly focuses on **supporting electrification of public and shared transportation and creation of charging infrastructure**.

UN Forum on Forests

» The eighteenth session of the **United Nations Forum on Forests (UNFF18)**, held in **New York** from May 8-12, 2023.

• The United Nations Forum on Forests was **established in 2000** by the **UN Economic and Social Council of the United Nations (ECOSOC)**.

• The Forum **meets annually at the UN Headquarters in New York**, bringing together representatives of all member states and forest-related agencies for high-level dialogue in **even years**.

• It has **universal membership**, composed of **all Member States of the United Nations** and **specialised agencies**.

• **India** is a **founding member of UNFF**.

Central Asian Flyway (CAF)
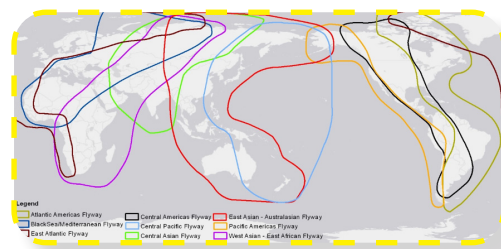
» Recently, the **Ministry of Environment, Forest and Climate Change along with the United Nations Environment Programme/ Convention on Migratory Species (UNEP/ CMS)** conducted a meeting of 11 Countries to strengthen conservation efforts for **migratory birds and their habitats** in the Central Asian Flyway (CAF).

• A **flyway** is a **geographical region within which a single or a group of migratory species** completes its annual cycle i.e. breeding, moulting, staging and non-breeding.

• CAF extends from the **northernmost breeding grounds in Siberia** to the southernmost non-breeding (wintering) grounds in **West and South Asia, the Maldives and British Indian Ocean Territory**.

• The CAF passes through **30 countries**.

Bonn Convention: It is the **only global convention specialising in the conservation of migratory species**, their habitats, and migration routes.

Rejuvenating Watersheds for Agricultural Resilience through Innovative Development (REWARD) program

» **Union government** conducted the review of the implementation of **REWARD Project**.

• REWARD is a **World Bank assisted Watershed development program** which is being implemented from **2021** to **2026**.

• Its primary objective is to "**Strengthen capacities of National and State institutions** to adopt improved watershed management for increasing farmers' resilience and support value chains in selected watersheds of participating States".

• The program is being implemented in **Karnataka and Odisha** with the assistance from the union **Ministry of Rural Development**.

Green Hydrogen

» Recently, the Indian Minister of Petroleum and Natural Gas advocated at the **World Economic Forum (WEF)** in Davos, Switzerland that **India will emerge as the leader of green hydrogen**.

• **Green hydrogen** is the name given to **hydrogen gas** that has been **produced using renewable energy**, such as wind or solar power, which create **no GHG emissions**.

• It is a **colourless, odourless, tasteless, non-toxic and highly combustible gaseous substance**.

• This form of hydrogen plays a key factor in transitioning towards a **carbon-neutral economy** while aiding in climate change mitigation.

The Colors of Hydrogen

Blue Hydrogen
Produced in a process known as steam methane reforming (SMR), in which natural gas is mixed with hot steam and a catalyst.

Brown Hydrogen
The most environmentally damaging. It is produced from coal gasification, which generates carbon emissions.

Green Hydrogen
Produced using electricity from renewable sources, such as hydro, solar, or wind power.

Pink Hydrogen
Produced through electrolysis via nuclear energy.

Gray Hydrogen
Extracted from natural gas without recapturing the greenhouse gases released during the process.

Turquoise Hydrogen
Produced using methane pyrolysis and solid carbon rather than gaseous emissions.

Yellow Hydrogen
Produced through electrolysis using solar power.

White Hydrogen
Geological hydrogen found in naturally-occurring underground deposits created by fracking.

Reduce, Recycle and Reuse Centres

» The Central Government recently announced the **"Reduce, Recycle and Reuse"** Centres Project.

• These centres will serve as a **one-stop solution** for citizens, institutions, commercial enterprises, etc to **deposit unused or used** plastic items, clothes, shoes, footwear, books, and toys.

• The items will then be given to different stakeholders to be **refurbished for reuse or would be made into new products** contributing to a circular economy.

• The **Ministry of Housing and Urban Affairs** is the nodal ministry.

• The centres would be set up as part of a nationwide campaign **'Meri LiFE, Mera Swachh Shehar'** (**'My Life, My Clean City'**) under the aegis of the **Swachh Bharat Mission – Urban 2.0**.

Debt for Climate Swaps

» In the past decade, **debt-for-climate swaps** have grown relatively **popular among low- and middle-income countries**.

• It is a **debt restructuring device between the creditor and a debtor** by which the **former forgoes a portion of the latter's foreign debt/provides its debt relief**, in return for a commitment to invest in specific environmental mitigation and adaptation projects.

• Multilateral development banks and multilateral organisations such as the **United Nations Development Programme (UNDP)** have also been advocating this instrument as a debt-relief measure.

Advantage

• **Dual objectives:** To promote specific investment and policy action (that aims to combat climate change) on the one hand and some debt relief on the other.

• **Seeks to free up fiscal resources:** Governments can improve resilience without triggering a fiscal crisis or sacrificing spending on other development priorities.

• **Developed countries** can fulfil their commitments (to support developing countries) through this a**ttractive and transparent instrument**.

Geography

Blue Hole

» Scientists have discovered a **massive sinkhole** off the coast of the **Yucatan Peninsula in Mexico** and dubbed it as the **2nd deepest blue hole found on the planet**.

• **Blue hole** is a **large marine cave or sinkhole**, which is open to the surface and develops as a bank or island made of carbonate bedrock.

• These **geological formations** are characterised by their **deep blue colour**, which is caused by the way the light is absorbed as it travels through the water.

• The **world's deepest blue hole** is the **Dragon Hole** in the **South China Sea**.

• It extends below sea level for most of its depth, containing a **high diversity of plants and marine life** including corals, sea turtles and sharks.

Deep Ocean Mission (DOM)

» The Union Minister of State (Independent Charge) Earth Sciences recently chaired the **first-ever high-level Steering Committee meeting of Deep Ocean Mission**.

• **Deep Ocean Mission** is India's ambitious programme for **underwater exploration**, chiefly implemented by the **Ministry of Earth Sciences**.

• It was approved by the **Union Cabinet in 2021** and will be **implemented in 5 years** in a **phased manner.**

• DOM is one of **nine missions** under the **Prime Minister's Science, Technology and Innovation Advisory Council (PMSTIAC)** and it supports the **blue economy priority area, blue trade and blue manufacturing in India.**

• The estimated cost of the Mission will be **4077 crores** for a **period of 5 years (2021-26).**

Sun Halo

» The phenomenon of the **Sun halo** was **witnessed in North India**.

• **Sun halo** is an **optical phenomenon** that occurs when the **light is reflected and refracted by ice crystals** suspended in the atmosphere and may **split into colours because of dispersion**.

• It takes the **form of a ring** with a **radius of approximately 22 degrees** and hence called **22 degree halo**.

• Halos are specifically produced by **cirrus clouds** and it was used as part of **ancient means of weather forecasting before meteorology was developed**.

Penumbral Lunar Eclipse

» Recently, a penumbral lunar eclipse was seen in India.

• An **eclipse** happens when a **planet or a moon gets in the way of the sun's light**.

• The **lunar eclipse** is a **celestial phenomenon** where the **sun, moon, and earth come in a straight line**.

There are three types of lunar eclipses:

✏ Total lunar eclipses,

✏ partial lunar eclipses

✏ penumbral lunar eclipses.
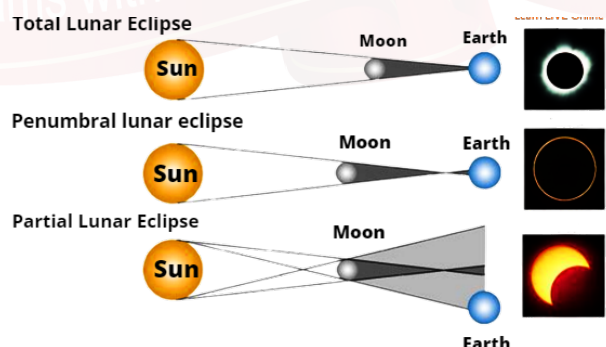
- A **total lunar eclipse** occurs when the **Moon and the Sun are on exact opposite sides of Earth**.

- A **partial lunar eclipse** happens **when part of the Moon enters Earth's shadow**.

- A **penumbral lunar eclipse** occurs when the **Sun, Earth, and the Moon are imperfectly aligned**.

  - When this happens, the Earth blocks some of the Sun's light from directly reaching the Moon's surface and covers the Moon (entirely or partially) with the outer part of its shadow, also known as the **penumbra**.

Arctic Amplification

» A **World Meteorological Organisation (WMO)** study highlighted that **Arctic warming is disproportionately high**.

- Arctic amplification is the phenomenon whereby the **Arctic region warms at a faster pace than the global average**.

What causes Arctic amplification?

- **Sea ice** and snow have **high albedo** (measure of reflectivity of the surface) as compared to water and land. As the **sea ice melts**, the **Arctic ocean** will be more capable of **absorbing solar radiation**, thereby driving amplification. This is known as **ice-albedo feedback**.

- The **lapse rate** or the **rate at which the temperature drops with elevation decreases** with warming (**Lapse rate feedback**).

- The Arctic amplification will result in consequences such as **thinning of Greenland ice sheet, rice in sea level, impacting the biodiversity including marine species and thawing of permafrost**.

- According to the **WMO's State of Global Climate in 2021 report**, **sea level along the Indian coast** is rising faster than the global average rate. One of the primary reasons for the rise is the **melting of sea ice in the polar regions**.

Aurora

» Recently, the **Indian Astronomical Observatory (IAO)** in **Ladakh** successfully documented the occurrence of a rare Aurora phenomenon for the very first time.

- **Auroras** are **geomagnetic storms** which are seen due to an **intense interaction of the sun's plasma waves** and the **earth's magnetic field**.

- The auroras are **normally seen at higher altitudes** in parts of Alaska, Norway, and other countries.

- There are two kinds; **Northern Pole (Aurora Borealis)** and **South Pole (Aurora Australis)**.

- **Aurora Borealis** was the one observed in **Hanle, Ladakh**. Scientists attribute this to the **severity of coronal mass ejection**, which penetrates the magnetosphere and leads to formation of auroras in regions like Ladakh. (The altitude and dark sky reserve are also complementary factors).

- A **clear sky with no clouds** and **total darkness** are the prerequisite in observing an aurora.

Science & Technology

Monkeypox (Mpox)

» The **World Health Organization (WHO)** has ended the global health emergency for Mpox.

• It is a **viral zoonotic disease** caused by **monkeypox virus**, a member of the **Orthopoxvirus genus** in the family **Poxviridae**.

• The disease is transmitted through **animal-to-human transmission** as well as **human-to-transmission** (contact with lesions, body fluids, respiratory droplets and contaminated materials such as bedding).

• It is characterised by **flu-like symptoms** and **swelling of the lymph nodes**, which gradually progresses to a widespread rash all over the face and body.

• **Monkeypox belongs** to the **same family of viruses as smallpox**(which was eradicated worldwide by 1980). But **Smallpox** had a **higher fatality rate than Mpox**.

• There is currently **no specific Mpox vaccine** in the Indian market yet.

• The **JYNNEOS vaccine** is approved in **Canada, Europe, and the United States for the prevention of smallpox and Mpox**.
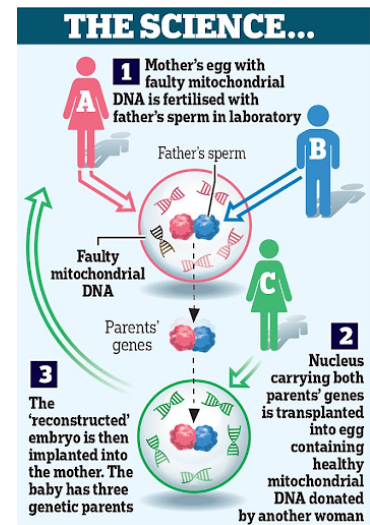
Donanemab

» Recently, a US pharmaceutical company, Eli Lilly, released the **drug donanemab** for **Alzheimer's treatment**.

• **Alzheimer's disease** is a **neurological disorder** which causes **brain cells to degenerate** and **die leading to loss of memory**.

• **Donanemab** has **antibodies** that **target different forms of amyloid-beta (Aβ) proteins** that clump together to form amyloid plaques in people's brains, resulting in their cognitive decline.

• The drug aims to **remove the plaques from the brain** and slow the progression of the disease. It **slows cognitive decline by 35%**.

Three Parent Baby

» Recently, **a three-parent baby was born** in the **UK using IVF**.

• It's a **technique to create a child without passing on mitochondrial diseases caused by faulty mitochondria of the mother**.

THE SCIENCE...

1 Mother's egg with faulty mitochondrial DNA is fertilised with father's sperm in laboratory

2 Nucleus carrying both parents' genes is transplanted into egg containing healthy mitochondrial DNA donated by another woman

3 The 'reconstructed' embryo is then implanted into the mother. The baby has three genetic parents

• The procedure **replaces a small amount of faulty DNA in a mother's egg** with healthy DNA from a second woman, so that the **baby would inherit genes from two mothers and one father**.

• The technique used is called **'Maternal Spindle transfer'** in which maternal DNA is put into the egg of a donor woman, which is then fertilised using the father's sperm.

Yellow Fever

» Recently, Quarantine facilities were set up for those arriving from Sudan to prevent the spread of Yellow Fever.

• **Yellow Fever** is an **acute viral haemorrhagic disease transmitted by infected mosquitoes** (Aedes aegypti).

• The yellow in the name refers to the **jaundice** that affects some patients.

• The virus is **endemic in tropical areas of Africa** and **Central and South America**.

• The disease **cannot be spread by contact from one person to another**.

• There is **no effective cure for the disease**, but **efficient and cost effective vaccines are available for prevention**.

75/25 Initiative

- The **Ministry of Health and Family Welfare** recently launched the 75/25 initiative.

- The initiative aims to screen and provide **standard care to 75 million individuals suffering from hypertension and diabetes by 2025**.

- It is the **largest cover of non-communicable diseases** in the world for primary healthcare.

Bedaquiline

- » Recently, the **Indian Patent Office** rejected Johnson & Johnson's claim for a secondary patent on its **tuberculosis drug Bedaquiline**.

- **Bedaquiline** is an **oral medication** used to **treat tuberculosis**.

- It is particularly used to treat **Multidrug-Resistant tuberculosis (MDR-TB)**.

- It targets the **adenosine triphosphate (ATP) synthase enzyme of the TB mycobacteria**.

- Bedaquiline is central to **WHO - recommended TB treatment regimens**.

Listeria Contamination

- » Recently, Cadbury chocolates were recalled in the UK over fears of listeria contamination.

- **Listeria infection** is a **foodborne bacterial illness**, typically caused by foods infected with the **Listeria monocytogenes bacteria**.

- The **bacteria exist in the environment**, **commonly found in water, soil and some animal's intestines** and can **survive refrigeration and even freezing**.

- **Pregnant women, new born babies** and those with **compromised immune systems** are at greater risk.

- **Contaminated meat, raw vegetables, ready-to-eat foods** and **unpasteurized milk** are common sources of the infection.

Antimicrobial Resistance (AMR)

- » WHO in partnership with the **Global AMR R&D Hub**, has released **'Incentivizing the development of New Antibacterial Treatments 2023'** Report.

- **Antimicrobial resistance (AMR)** is a **natural phenomenon** that occurs when microorganisms such as **bacteria, viruses, fungi and parasites evolve to become resistant to antimicrobial drugs** that were previously effective in treating infections caused by those microorganisms.

- The **World Health Organization (WHO)** has identified AMR as one of the top ten threats to global health.

- Microorganisms that develop antimicrobial resistance are sometimes referred to as **"superbugs"**.

Reasons

- ☞ Misuse and overuse of **antimicrobials**.

- ☞ Lack of access to **clean water**, **sanitation** and **hygiene** for both humans and animals.

- ☞ Poor infection and **disease prevention** and control.

- ☞ **Poor access** to quality, affordable medicines, vaccines and diagnostics.

iDRONE Initiative

- » The **Indian Council of Medical Research (ICMR)** has successfully conducted a trial run of blood bag delivery under its iDrone initiative.

- The iDRONE (**ICMR's Drone Response and Outreach for North East**) initiative is a collaborative effort between **ICMR, the Ministry of Civil Aviation, and the Directorate General of Civil Aviation**.

- The initiative aims to address the challenges of **blood transfusion services** and **medical services to remote and inaccessible areas** of the country.

Narco Analysis Test

» In a narco analysis test, a drug called **sodium pentothal** is injected into the body of the accused, which transports them to a **hypnotic or sedated state** in which their **imagination is neutralised**.

• **Sodium pentothal/sodium thiopental** (**Truth Serum**) is a **fast-acting, short-duration** anaesthetic used in larger doses to sedate patients during surgery.

• **Involuntary administration of narco analysis tests** is **illegal in India**.

Polygraph Test or Lie Detector Test

• It is a procedure that **measures and records several physiological indicators**.

• A polygraph test is carried out on the assumption that **physiological responses** triggered when one is lying are different from what they otherwise would be.

• Polygraph tests attach instruments like **cardio-cuffs or sensitive electrodes** to the suspect and measure variables such as blood pressure, pulse rate, respiration, change in sweat gland activity, blood flow, etc., while the suspect is being questioned.

AIRAWAT

» Recently, the **AI supercomputer AIRAWAT** was **ranked 75th** in the world on the **Top 500 Global Supercomputing List**.

• AIRAWAT is **India's largest and fastest AI supercomputing system**, with a remarkable **speed of 13,170 teraflops**.

• It is currently installed at **C-DAC, Pune** and It is part of the **National Program on AI** initiated by the Government of India, aligning with Prime Minister Narendra Modi's vision of **"AI for All"**.

• It is also part of the **National Supercomputing Mission**, which is jointly steered by the **Department of Science and Technology (DST)** and the **Ministry of Electronics and Information Technology (MeitY)**.

• It will empower the Academia, Research Labs, Scientific Community, Industry and Start-Ups to develop **indigenous AI-enabled products and solutions**.

Blue Bugging

» Andhra Pradesh police recently raised concerns regarding the **rise in bluebugging among smartphone users**.

• Bluebugging **hacking technique** that allows **individuals to access a device** with a **discoverable Bluetooth connection**.

• Once the **target device accesses a rigged link**, the attacker can take full control of it.

• The **hacker can read and send messages, access the victim's phonebook**, and initiate or eavesdrop on phone calls.

Spear Phishing

» **50% of Indian firms** have been victims of spear phishing in the last 12 months.

• **Phishing** is a **cybercrime** in which a target or **targets are contacted by email, telephone or text message** by someone posing as a legitimate institution to lure individuals into providing sensitive data.

• **Spear Phishing** is an **email or electronic communications scam** targeted towards a specific individual, organisation or business **to steal sensitive information** such as account credentials or financial information from a specific victim, often for malicious reasons.

• It is an email or electronic communications scam **targeted towards** a **specific individual, organisation or business**.

Sanchar Saathi

» The **Department of Telecom** has launched a citizen centric Sanchar Saathi portal.

It allows citizens to:

☞ **Check the connections** registered on their names.

☞ **Report fraudulent** or **unrequired connections**.

☞ **Block the mobile phones which are stolen or lost**.

☞ **Check IMEI guidelines** before buying a mobile phone.

The portal has the following modules:

- **Centralised Equipment Identity Register (CEIR):** The system, integrated with the Telecom Service Providers and Law enforcement agencies, **blocks the stolen mobile phones from being used in Indian networks**.

- **Know Your Mobile:** Facilitates the citizens to **check the guidelines of IMEI** of their mobile device.

- **Telecom Analytics for Fraud Management and Consumer Protection (TAFCOP):** Facilitates a user to **check the number of mobile connections** taken in their name using paper-based documents.

- **Artificial Intelligence and Facial Recognition powered Solution for Telecom SIM Subscriber Verification (ASTR):** AI powered tool to **identify SIMs issued** using fraudulent or forged documents.

Rice Fortification

- » According to a United Nations report, India's pilot project - **Fortification of Rice & its Distribution** under **Public Distribution System**- had led to a significant drop in prevalence of anaemia among school- children.

- **Food fortification** is **deliberately increasing the content of essential micronutrients** in a food so as to improve the nutritional quality of food and to provide public health benefit with minimal risk to health.

- **Rice fortification** involves adding micronutrients like **iron, folic acid and vitamin B12** to regular rice using extruded rice kernels.

- By fortifying rice with iron helps in **reducing diseases related to iron deficiency** and helps in brain development and function.

- In India, the **Ministry of Consumer Affairs, Food and Public Distribution** is the nodal agency for rice fortification.

Scary Barbie

- » Scientists named the recently discovered **black hole "Scary Barbie"**, after a beloved children's character.

- Scary Barbie is a **supermassive black hole** that is devouring a star with a **thousand times the brightness of a supernova**, first observed in **2020**.

- It is one of the **most luminous, energetic, long-lasting transient objects in the sky**.

- The researchers discovered it using an **AI engine** called **REFITT** (Recommender Engine For Intelligent Transient Tracking).

- REFITT, located at the **physics lab of Purdue University, USA**, is **not open to the public**.

- REFITT is an **autonomous machine learning system** that yields optimal observing strategies in real time to participating facilities, instruments, and astronomers. The AI engine looks through observations from many **different telescopes** around the world.

Space Science and Technology Awareness Trainings (START) Programme

- » The **Indian Space Research Organisation (ISRO)** recently launched an **online training programme** named Space Science and Technology Awareness Training (**START**).

- The program is aimed at **post-graduate** and **final-year undergraduate students of physical sciences and technology**.

- It will enable Indian students to become **professionals in space science and technology**.

- Students will also get a chance to experience the **cross-disciplinary nature of the subject**, and **accordingly choose their career path**.

NVS-01 Navigation Satellite

» Recently, the **Indian Space Research Organisation (ISRO)** successfully launched the navigation satellite **'NVS-01'** using the **GSLV-F12**.

• It is the **first among the series of second-generation navigation satellites** built by ISRO's UR Rao Satellite Centre in Bengaluru.

• This series incorporates **L1, L5 and S band signals** to widen the services.

• It will also have a **longer mission life** of **more than 12 years**.

• For the first time, an Indian made **Rubidium atomic clock** was flown in with NVS-01.

• Currently, India uses its **Navigation with Indian Constellation (NavIC)** series of satellites for **civilian and defence navigation** in the Indian mainland.

NVS-01:
Modern Indian Navigation Satellite

■ **GSLV** deploys **NVS-01**, the navigation satellite, precisely into a **Geosynchronous Transfer Orbit** on 29th May, 2023

■ NVS-01 marks the beginning of the second-generation satellites in the **NavIC** series

■ NVS-01 carries navigation payloads **L1, L5 and S bands**

■ NVS-01 carries **indigenous Rubidium atomic clock**

WEIGHT: **2,232 kg**

RUBIDIUM ATOMIC CLOCK

A rubidium atomic clock is a highly accurate timekeeping device that uses the vibrations of rubidium atoms to measure time. It provides precise timing for various applications, such as satellite navigation and telecommunications

X-ray Polarimeter Satellite (XPoSat)

» Recently, the chairman of the **Indian Space Research Organisation (ISRO)**, S Somanath, addressed students and scientists during the **'User Meet of XPoSat'** at the **ISRO headquarters in Bengaluru**.

• X-ray Polarimeter Satellite (XPoSat) is developed in collaboration between the **Indian Space Research Organisation (ISRO)** and the **Raman Research Institute (RRI)**, Bengaluru.

• It is the **world's second polarimetry mission**, following **NASA's Imaging X-ray Polarimetry Explorer (IXPE)** launched in **2021**.

• The **Polarimetry mission** is designed to **study** various **dynamics of bright astronomical X-ray** sources under **extreme conditions**.

• The mission aims to understand **emission mechanisms** from **complex physical processes** and provide valuable insights into the emission **processes of X-ray sources**.

Features

✦ The XPoSat's payload consists of:

☞ **POLIX** (**Polarimeter Instrument in X-rays**), the primary payload will be able to observe approximately **40 bright astronomical sources** of various types throughout the five-year XPoSat mission.

☞ **XSPECT** (**X-ray Spectroscopy and Timing**) will observe a range of sources, such as **X-ray pulsars, low-magnetic field neutron stars** and provide information.

☞ The satellite will be placed in a **circular low Earth orbit** of **500–700 km**.

Miscellaneous

Project Sanjay

» The **Indian army** has initiated the Project Sanjay that shall develop an **automated and dedicated intra- communication system**.

• The project has **BEL-Bharat Electronics Limited**, the **PSU** under the **Ministry of Defense** as the **system integrator**.

• The project shall aim to build the **India army's Battlefield Surveillance System (BSS)** and integrate surveillance sensors on a customised **GIS- Global Information System** with multi sensor data fusion at the Surveillance centre.

• The project aims to deliver **BSS** at the service centres by **December 2025**.

• The BSS will **integrate data from various sources** across borders from satellites, sensors, UAVs and patrols.

Strengthening Teaching–Learning and Results for States (STARS) Project

» The **Ministry of Education** and the **World Bank** recently organized a **workshop on School-to-Work Transition** under the STARS Program.

• STARS Project is a **centrally sponsored scheme** under the **Ministry of Education** with the financial support of the **World Bank**.

• It was started for a **period of five years** from **2021 up to FY: 2024-25**.

• Its objective is to **improve the quality and governance of school education** in **six Indian states** of **Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha and Rajasthan** through the **Samagra Shiksha**.

• The objectives of STARS project are **aligned with the objectives of National Education Policy (NEP) 2020** of Quality Based Learning Outcomes.

Project Dantak

» The Prime Minister praised the initiative by **Border Roads Organisation (BRO)** Project Dantak to commemorate the **64th Raising Day of BRO**.

• **Project Dantak** is an **overseas project of the BRO** under the **Ministry of Defence**.

• Established on **24th April 1961**, it is primarily focused on **developing infrastructure** and providing **connectivity in remote areas of Bhutan**.

• The project **recruits local workers from Bhutan** as well as **Indian workers from adjoining districts** along the India-Bhutan border.

• **Paro airport, Yonphula airfield, Thimphu-Trashigang highway** etc are some of the notable projects executed by the project.

iDEX Initiative

» Innovations for Defence Excellence (iDEX) recently reached a milestone with the signing of the 250th contract, the first one under the **Mission DefSpace**.

• **iDEX** launched in **2018** is a flagship initiative of the **Ministry of Defence**.

• **Aim:** To achieve self-reliance and foster innovation and technology development in Defence and Aerospace by engaging industries including MSMEs, start-ups, individual innovators, R&D institutes and academia.

• iDEX will be **funded and managed by Defence Innovation Organization (DIO)**, who will also provide **high-level policy guidance to iDEX**.

• Under iDEX, **financial support is provided to Start-ups/MSMEs/individual innovators and partner incubators through DIO**.

Food Street Project

» The Union Minister of Health and Family Welfare, recently reviewed the 'Food Street Project'.

• The project is aimed at developing **100 healthy and hygienic food-streets across 100 districts of the country**.

• The initiative will be **implemented through National Health Mission** in convergence with the **Ministry of Housing and Urban Affairs** and technical support from the **Food Safety and Standards Authority of India (FSSAI)**.

• The **National Health Mission** will provide **assistance of one crore rupees per food street**.

C-PACE (Centre for Processing Accelerated Corporate Exit)

» The **Ministry of Corporate Affairs (MCA)** recently established C-PACE, or Centre for Processing Accelerated Corporate Exit.

• C-PACE aims to **centralise the process of striking off companies** from the **MCA Register** (removing defunct, non-operational, or dissolved companies from the official database).

• It will work under the **supervision of the Director General of Corporate Affairs (DGCoA)**.

• C-PACE operates through the **Registrar of Companies (RoC)** and is part of MCA's efforts to improve the **Ease of Doing Business** and facilitate company exits.

Startup India Seed Fund Scheme

» The **Department for Promotion of Industry and Internal Trade (DPIIT)** is undertaking an assessment of Startup India Seed Fund Scheme to see its impact.

• Startup India Seed Fund Scheme is a **flagship scheme** under the **Startup India initiative aimed to provide financial assistance to startups** for proof of concept, prototype development, product trials, market entry and commercialisation.

• The DPIIT, under the **Ministry of Commerce & Industry** is the **nodal department of the scheme**.

• It is implemented with effect from **1st April 2021** for the **period of 4 years** with a corpus of Rs.945 crores.