

FORTUNE Prelims Precise

October 2024



Preface

Fortune IAS Academy presents '**Prelims Precise**', a monthly current affairs magazine through which we make prelims current affairs revision precise and effective.

This magazine is a comprehensive resource that condenses the significant news of each month into distinct sections such as polity and governance, economic development, science & technology, among others.

Each content is organised with the why in news context followed by its explanation.

Fortune Prelims Precise is available to all Prelims cum Mains batch students (2024) as part of the course study material. **It can be purchased from Fortune IAS Academy for Rs. 50 per issue.**

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History & Culture

Classical Language

- The Union Cabinet granted classical language status to **Marathi, Pali, Prakrit, Assamese, and Bengali**, adding to the six existing classical languages: **Tamil (2004), Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014)**.
- All classical languages are listed under the 8th Schedule of the Constitution.
- The **classification as a Classical Language** began in 2004, with criteria revised in 2005 and 2024 based on Linguistic Experts Committees (under Sahitya Akademi) recommendation.

The Criteria for selection:

- ◆ **High antiquity of its early texts/recorded history over a period of 1500- 2000 years.**
- ◆ A body of ancient literature/texts, which is **considered a heritage by generations of speakers.**
- ◆ Knowledge texts, especially **prose texts in addition to poetry, epigraphical and inscriptional evidence. (Revised in 2024)**
 - ◆ The old criteria said that **“Literary tradition must be original and not borrowed from another speech community”.**
- ◆ The Classical Languages and literature **could be distinct from its current form or could be discontinuous with later forms** of its offshoots.

Abhidhamma Divas

- October 17th was celebrated as Abhidhamma Divas, the day when Lord Buddha returned to earth after teaching Abhidhamma in **Tāvatiṃsa-devaloka (a kind of heaven)**.
- Lord Buddha is believed to have returned to Sankassiya (now Sankisa Basantapur) in Uttar Pradesh where a **3rd century BCE Asokan Elephant Pillar** marks this significant event.

- According to **Theravāda Buddhist** texts, Lord Buddha spent three months teaching the Abhidhamma to the deities in Tāvatiṃsa, **including his mother.**

- The Abhidhamma represents complex teachings on the nature of mind, matter, and reality and contains deep insights into **Buddhist psychology and philosophy.**

- It is one of the three main divisions (Tripitakas) of the Pali Canon which also includes **Sutta pitaka (teachings)** and, the oldest and smallest, **Vinaya pitaka (code of conduct for sangha).**



A Pillar Built by Ashoka

Doddalathur Megalithic Site



- A University of Mysore team is **excavating the Doddalathur megalithic burial site** in Chamarajanagar, Karnataka.
- Discovered in 1961 by the Archaeological Survey of India, the site **once held over 1,000 burials, many of which have disappeared** due to agriculture, settlement, and land development.
- There are hundreds of burials from the **‘Megalithic period’, which is also known as the ‘Iron Age’.**
 - ➡ The burials consist of **circles made of large boulders (megaliths)**
 - ➡ In south India, megalithic period has been broadly placed in the bracket of 1200 BCE to 300 CE.

National Mission for Manuscripts

- The **Union Ministry of Culture** is set to “revive and relaunch” the **National Mission for Manuscripts (NMM)** to preserve ancient texts in India.
- NMM was initially launched in 2003 by the **Ministry of Tourism and Culture** to unearth and preserve the vast manuscript wealth of India.
- It has a motto ‘**conserving the past for the future**’ and has undertaken preventive and curative conservation of about 9 crore folios of historical manuscripts in 21 years.
- The Mission through the **network of Manuscript Conservation Centres (MCCs) and Manuscript Resource Centres (MRCs)** has preserved, documented and disseminated India’s rich manuscript heritage.
- Currently, NMM works as an independent division of the **Indira Gandhi National Centre for Arts (IGNA) and the ministry** now seeks to create a new autonomous body, likely to be named the **National Manuscripts Authority**.



Polity & Governance

Co-District

- **Assam has introduced Co-Districts** as smaller administrative units below districts, led by an Assistant District Commissioners (ADC) who will now be called **Co-district Commissioner (CDC)**.
- This structure **replaces civil sub-divisions** in the state and gives CDCs administrative control and magisterial powers within each co-district, covering land revenue, development, welfare, excise, and disaster management.
- It aims to **decentralise administration**, bringing government services closer to residents.
- Residents will no longer need to visit district headquarters to see the District Commissioners (DCs) for services like land matters or scheme implementations which can be handled by ADCs.
- **ADCs will report to respective DCs**, who will now have ‘overall power’ for supervising and monitoring government programmes and schemes within the new sub-districts but will not interfere in the day to day affairs of CDCs.

India’s First Writers’ Village

- The country’s **first ‘Writer’s village’** was inaugurated in **Uttarakhand**.
- The **Writer’s village (Lekhakh Gaon)** is located in Thano village, about 24 km from Dehradun.
- The concept is the brainchild of **former chief minister Ramesh Pokhriyal Nishank**, a distinguished writer himself.
- Writers can stay in **dedicated writing cottages** that inspire creativity and focus, enjoy **Sanjeevani Bhojanalaya**, that provides nourishing meals, and **Nakshatra Vatika and Graha Vatika**, which are spaces for reflection and inspiration.

Digital Arrest



- The **Union Ministry of Home Affairs** has set up a high-level committee to investigate digital arrest scams and cyber fraud.
- Digital arrest refers to a **deceptive tactic used by cybercriminals**, who falsely claim to have the authority to **arrest an individual through digital means**, often over the phone or via online communication.

- Importantly, while people falling prey to these scams lost crores of rupees, there is **no legal provision for such “digital arrests” in India.**
- The Union Home Ministry runs a **social media channel, “Cyber Dost,”** to alert the public about fraud tactics.
- Indian Cyber Crime Coordination Centre (I4C)** advises reporting cyber crimes via the **1930 helpline or www.cybercrime.gov.in.**
- PM Modi has urged citizens to follow the **“Stop, Think, and Take Action”** mantra.

Right To Die with Dignity

- The **Ministry of Health and Family Welfare** released draft guidelines for withdrawing life support for terminally ill patients
- It is largely based on the **Supreme Court’s 2018 Common Cause vs Union of India ruling and its 2023 guidelines.**
- The draft Ministry guidelines include the **right to refuse medical treatments** for the patient.
- It states that life-sustaining treatment, like ventilators or feeding tubes, **can be withheld if it no longer benefits the patient.**
- This is called Foregoing of Life Sustaining Treatments (FLST)
- The draft also recognises **Advance Medical Directives** which is a written declaration made by a person with decision-making capacity documenting how they would like to be medically treated or not treated should they lose capacity.
- It states **active euthanasia is illegal.**

IN THE SUPREME COURT

2011: Aruna Shanbaug v. Union of India recognised that life-sustaining treatment could legally be withheld/ withdrawn even from persons without decision-making capacity.

2018: Common Cause v. Union of India recognised the right to die with dignity as a fundamental right under Article 21 of the Constitution



of India, and legalised the use of advance medical directives or ‘living wills’.

2023: Common Cause v. Union of India simplified the process for making living wills and withholding/ withdrawing life-sustaining treatment by removing bureaucratic hurdles.

Rule of Law Index Ranking 2024

- India ranks **79 out of 142 countries** in the 2024 Rule of Law Index.
- The Index is released by the **World Justice Project (WJP)**, a US think tank.
- Globally, Denmark, Norway, Finland, Sweden and Germany stood in the top five places.
- The Rule of Law Index **rank the countries on eight indicators:**
 - Constraints on government powers, absence of corruption, open government, fundamental rights, order and security, regulatory enforcement, civil justice and criminal justice.
- Within South Asia, India ranked third after Nepal (69) and Sri Lanka (75),** followed by Bangladesh (127) Pakistan (129) and Afghanistan (140).
- Venezuela got the lowest rank and is placed at 142.

Bhu-Aadhaar

- Around **30% of the rural land parcels** in the country have been given a **Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar.**
- Bhu-Aadhaar** is an initiative to give a **14-digit alpha-numeric identity** to each land parcel.
- The project, being implemented by the **Department of Land Resources, Ministry of Rural Development**, will be the **world’s largest database on land ownership.**
- ULPIN was **launched in 2021 as part of the Centre’s Digital India Land Records Modernisation Programme (DILRMP)**
- It aims to streamline and bring uniformity to the process adopted by states in assigning unique identification numbers to land parcels.
- ULPIN includes **ownership details of the plot besides its size and longitudinal and latitudinal details.**

The country’s first comprehensive land records digital system - **‘Ente Bhoomi’ integrated land information management system (ILIMS)** was launched in **Kerala.**

Hizb-ut-Tahrir (HuT)

- The Union Ministry of Home Affairs (MHA) recently declared **Hizb-ut-Tahrir (HuT)**, a terrorist organisation, under the Unlawful Activities (Prevention) Act (UAPA).
- It is the **45th outfit to be banned** in India.
- The MHA notification said that HuT aims to establish **Islamic state and Caliphate globally, including in India**, by overthrowing democratically elected governments.
- Hizb-Ut-Tahrir is an international Islamic organisation **formed in Jerusalem in 1953**.
 - 📍 The group's **headquarters is in Lebanon**.
- Once banned, the organisation's **assets can be frozen**, and its members and supporters may face **arrest and prosecution**.
- A **tribunal, usually led by a High Court judge, reviews the ban** within six months of notification to ensure due process and validate the designation.
- The ban **lasts for five years**, after which it can be renewed if the organisation is still considered a threat.

UMANG – Digi Locker



- The **UMANG (Unified Mobile Application for New-age Governance)** developed by MeitY provides a single platform for all Indian Citizens **to access pan India e-Gov services ranging from Central to Local Government bodies**.
 - **DigiLocker** on the other hand is a flagship initiative of MeitY under Digital India programme.
 - DigiLocker aims at **‘Digital Empowerment’ of citizens** by providing access to authentic digital documents under the **Digital India program**.
 - ▶ It is aimed at providing **secure cloud-based storage of essential documents**.
 - The issued documents in DigiLocker system are **deemed to be at par with original physical documents** as per Rule 9A of the Information Technology (Preservation and Retention of Information by Intermediaries providing Digital Locker facilities) Rules, 2016.
- ## Secularism – “core feature”
- The Supreme Court recently reaffirmed that **secularism is a “core feature”** of the Constitution which has been held to be a part of the basic structure.
 - The remarks came in the backdrop of a **bunch of petitions challenging the inclusion of the words secularism and socialism** in the Preamble by way of the 42nd Amendment in 1976.
 - Petitioners allege that amending the constitution which was **originally adopted in 1949 is arbitrary**.
 - Even the 42nd amendment **did not amend the date (twenty-sixth day of November, 1949)** which makes a wrong implication that these words were part of the original constitution.
 - The court opined, however, that the **right to equality and the word ‘fraternity’ used in the preamble to the Constitution** indicated secularism as the core feature of the Constitution.
 - Originally, the text of the Preamble declared India as a ‘sovereign, democratic republic’. The words ‘socialist’, ‘secular’ were inserted between ‘sovereign’ and ‘democratic’.

The New Chief Justice of India



- President Droupadi Murmu appointed Justice Sanjiv Khanna as the **51st Chief Justice of India (CJI)**.
- By convention, **the senior most judge of the SC** (based on years of experience as a judge in the apex court) becomes the CJI.
 - This process was put down in the **'Memorandum of Procedure (MoP)** for the appointment of Supreme Court Judges' in 1999.

The Process set by the MoP:

- The appointment process begins with the **Union Law Minister seeking the recommendation of the outgoing CJI** for the appointment of the next Chief Justice.
- By convention, the **"appropriate time"** for this process to begin **is a month before the date of retirement of the incumbent CJI**.
- After receipt of the recommendation of the CJI, the Minister will put up the recommendation to the **Prime Minister who will advise the President** in the matter of appointment.
- Though the final word on appointing the next CJI technically lies with the Centre, by **convention the Centre tends to appoint whoever the presiding CJI recommends** as her successor.
- Since all SC judges have to **retire at the age of 65**, the length of a CJI's tenure depends on how old they are at the time of their predecessor's retirement.

Section 6A of the Citizenship Act, 1955

- A five-judge Constitution Bench of the Supreme Court, **in a 4:1 majority upheld the constitutional validity of Section 6A** of the Citizenship Act, 1955.
- Section 6A is a special provision inserted into the 1955 Act based on the "Assam Accord" of 1985.
- The provision **grants citizenship to two categories of migrants** who entered Assam from Bangladesh:
 1. Those who came before 1 January 1966 and
 2. Those who came after 1 January 1966 and before 25 March 1971.
 - While those in the first category will be identified and given citizenship rights, those in the second category **must register as foreign nationals and live in India for ten years from the date of detection by a tribunal before getting full citizenship rights.**
- Those who **entered after 25 March 1971** (the day Bangladesh declared independence) are not eligible for citizenship under this provision.
- Petitioners alleged that **Section 6A was arbitrary** for singling out Assam from other states (against **Article 14** - equality before law) bordering Bangladesh as well as other articles of Indian Constitution.
- SC in its verdict said that **Section 6A had successfully balanced humanitarian concerns with local population interests.**
- Parliament had the power under **Article 11** to make laws on citizenship.
- SC said that singling out Assam was based on a **rational condition** as it had much larger migrants, thus is not against equality.
- The Court directed **strengthening of Foreigners Tribunals** and related statutory machinery to ensure time-bound implementation of the law's objectives.

National Agriculture Code (NAC)

- The **Bureau of Indian Standards (BIS)** has begun the process of formulating a National Agriculture Code (NAC) for India.
- NAC is a system introduced to standardise and categorise agricultural activities, crops, and practices across India.
- The code will provide **detailed guidance on irrigation, soil health, crop storage, and newer fields like organic and smart farming.**
- The NAC intends to support both policymakers and farmers, enhancing agricultural productivity and sustainability across India's diverse regions.

Insolvency and Bankruptcy Board of India (IBBI)

- IBBI celebrates the 8th Anniversary of its formation.
- It was established **under the Insolvency and Bankruptcy Code, 2016 (IBC)** to oversee the implementation of the IBC, licensing of insolvency professionals, and code compliance.
- **Insolvency** is the financial state where a person or organisation cannot pay off their debts.
- **Bankruptcy** is a legal process triggered when an insolvent entity formally declares its inability to pay outstanding debts.

The Insolvency and Bankruptcy Code 2016 (IBC)

- ➔ **Consolidated Framework:** Integrates various insolvency laws into a unified code for individuals, companies, and partnerships.
- ➔ **Time-Bound Resolution:** Mandates a 180-day resolution period for corporate insolvencies, extendable by 90 days.
- ➔ **Corporate Insolvency Resolution Process (CIRP):** Establishes a structured process to assess and resolve financial distress in companies, led by insolvency professionals.

- ➔ **Insolvency Professionals:** Empowers licensed professionals to oversee the insolvency process, manage debtor assets, and ensure fair resolution.
- ➔ **Creditors' Committee (CoC):** A committee of financial creditors to decide on the resolution plan, giving creditors control over the distressed entity's future.
- ➔ **Adjudicating Authorities:** Designates the National Company Law Tribunal (NCLT) for corporate cases and the Debt Recovery Tribunal (DRT) for individuals and partnerships.

Annual Survey of Industries (ASI)

- Recently, the NITI Aayog CEO **B.V.R. Subrahmanyam released the Annual Survey of Industries** which shows growth in the manufacturing sector.
- It is prepared by the **Ministry of Statistics and Programme Implementation (MoSPI)** for the financial year 2022-23.

The Findings:

- 📊 The report said the **Gross Value Added (GVA) grew by 7.3% in current prices** in the year 2022-23 over 2021-22.
- 📊 According to the survey, the main drivers of this growth in 2022-23 were industries like **manufacture of basic metal**, coke & refined petroleum products, food products, chemical and **chemical products and motor vehicles.**
- 📊 Among the major States, in terms of GVA, **Maharashtra ranked first** followed by Gujarat, Tamil Nadu, Karnataka and Uttar Pradesh.
- 📊 Taken together, these States contributed about 55% of total manufacturing employment in the year 2022-23.

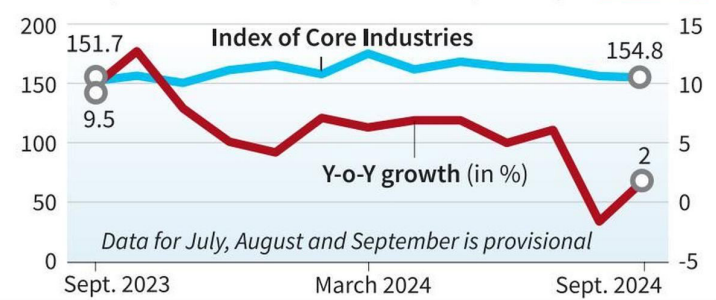
Core sector growth

- The combined **Index of Eight Core Industries (ICI)** registered a year-on-year growth of 2.0% in September 2024.
- The eight core industries include—coal, crude oil, steel, cement, electricity, fertilisers, refinery products, and natural gas.

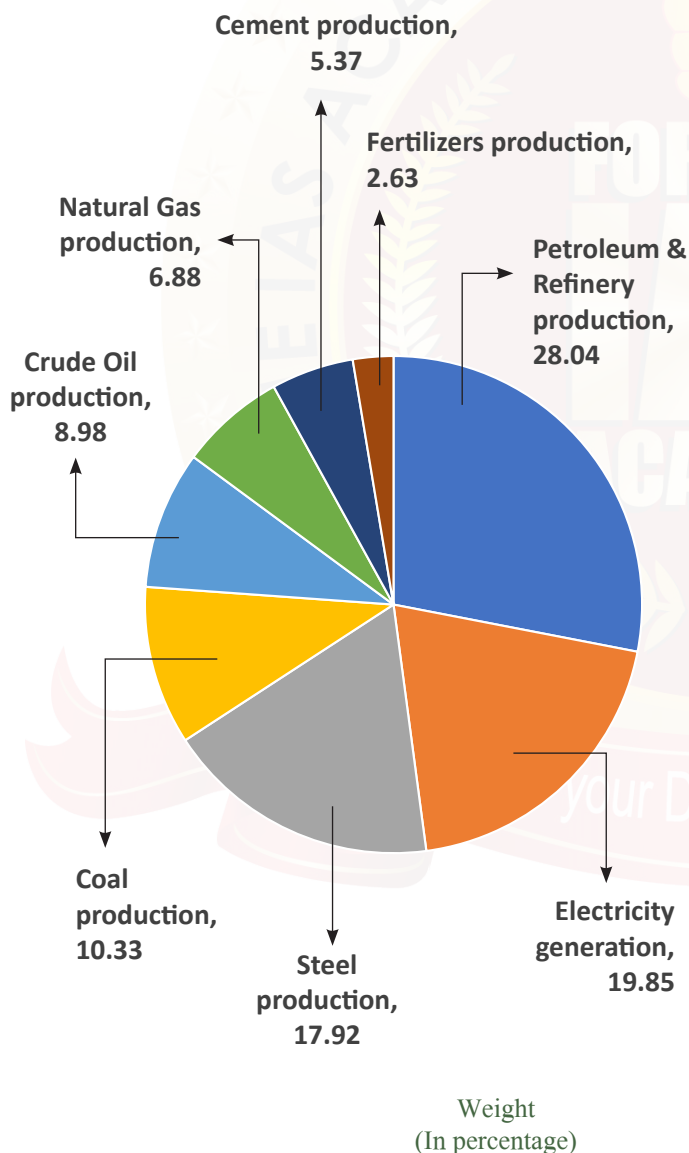
- These industries are considered the backbone of the Indian economy as they contribute over 40% to India's industrial production
- The monthly ICI data is **released by the Office of Economic Adviser**, Department for Promotion of Industry and Internal Trade (DPIIT) under the **Ministry of Commerce & Industry**.

Worrying trend

The Core sectors' index fell further in Sept. even as the Y-o-Y growth rebounded from a shrinkage in Aug.



Source: Ministry of Commerce and Industry



Minimum Support Prices

Better support



The Cabinet increased the minimum support prices for rabi crops

Crop	MSP for rabi 2025-26*	MSP for rabi 2024-25*	Increase in MSP
Wheat	₹2,425	₹2,275	₹150
Barley	₹1,980	₹1,850	₹130
Gram	₹5,650	₹5,440	₹210
Lentil (masoor)	₹6,700	₹6,425	₹275
Rapeseed & mustard	₹5,950	₹5,650	₹300
Safflower	₹5,940	₹5,800	₹140

(*per quintal)

- **The Cabinet Committee on Economic Affairs**, chaired by the Hon'ble Prime Minister, has approved the **increase in the Minimum Support Prices (MSP)** for all mandated Rabi Crops for Marketing Season 2024-25.
- Annually, the Government of India **announces MSPs for 22 major agricultural commodities**.
- This includes **14 Kharif crops, 6 Rabi crops, and 2 commercial crops**.
- **Jute and copra** are two commercial crops that are covered
- In addition, MSP for **Toria and de-husked coconut** is also fixed based on MSPs of rapeseed & mustard, and copra, respectively.
- The MSP is fixed based on the recommendations of the **Commission for Agricultural Costs & Prices (CACP)**, an advisory body under the Ministry of Agriculture.
- **The Cabinet Committee on Economic Affairs (CCEA)** makes the final decision on MSPs after considering the recommendations of CACP.

The Factors Considered to Fix MSP:

- ★ **Cost of production A2 + FL** (ie, it covers all **Cost of production A2 + FL** (ie, it covers all actual expenses (A2) incurred by the farmer plus the imputed cost of family labour (FL)).
- ★ **Overall demand-supply situations** of various crops in domestic and world markets.
- ★ **Domestic and international prices,**
- ★ **Inter-crop price parity,**

- ★ **Terms of trade** between agriculture and non-agriculture sector (comparison of prices indexes of both),
- ★ Likely **effect of price policy on rest of economy** and
- ★ A **minimum of 50% as the margin** over the cost of production.

- A **Line of Credit (LoC)** is a loan where a borrower can access a set amount of money, borrowing and repaying as needed. Interest is paid only on the amount used.
- **EXIM bank** is statutory bank that provides loans and credit to exporters and importers, finances global projects, and helps manage trade risk

India's Direct Tax Collections

- The contribution of **direct taxes to total tax revenue climbed to 56.72%** in 2023-24, the highest in 14 years.
- **The direct tax-to-GDP ratio** or the share of direct taxes in the overall economic output also jumped to over a two-decade high of 6.64%.
- Barring FY22, **personal income tax collections have been higher than corporate tax collections** for the last four years.
- The **personal income** tax collection for FY24 is at Rs 10.45 lakh crore which is **higher than corporate tax collection** of Rs 9.11 lakh crore.
- **The state-wise breakup - Maharashtra (39%), Karnataka (12%) and Delhi (10.4%).**
- **The administrative efficiency of tax collection has improved significantly**, with the cost of collecting direct taxes declining to 0.44%, the lowest since FY01.

Indian Development and Economic Assistance Scheme (IDEAS)

- India has extended its **first-ever rupee-denominated Line of Credit (LoC)** of ₹487.60 crores to **Mauritius** for a water pipeline replacement **project under IDEAS**.
- India launched the **India Development Initiative (later renamed as India Development and Economic Assistance Scheme)** in 2003 to support development projects like roads and railways in other developing countries.
- The scheme promotes India's strategic economic interests by **offering LoCs to developing countries for developmental projects**, which are recommended by the **Ministry of External Affairs (MEA)** and supported by the **Export-Import Bank of India (Exim Bank)**.

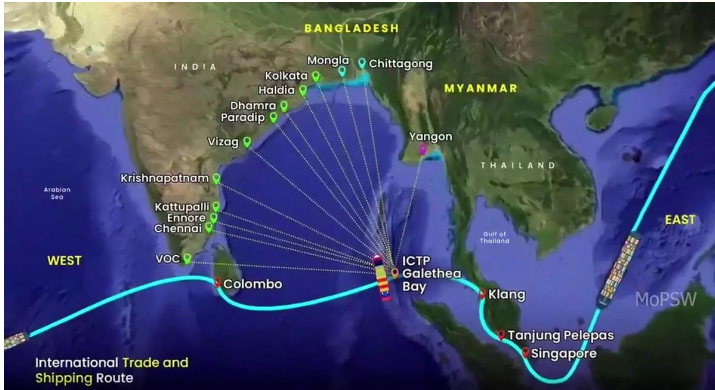
Animal Pandemic Fund

- The Union Government of India has launched a \$25 million **Animal Health Security Strengthening for Pandemic Preparedness and Response Project**.
- The project is in partnership with the Asian Development Bank (ADB), Food and Agriculture Organization (FAO), and the World Bank.
- The **Department of Animal Husbandry and Dairy (DAHD)** will oversee the project, which complements India's **One Health Mission** aimed at strengthening human health security.
- The project will focus on establishing a passive surveillance system, upgrading laboratory infrastructure, and improving information systems.
- A **passive surveillance system** collects disease data through routine reports from healthcare providers and veterinary clinics, without actively seeking out cases.
- **One Health Mission** is a collaborative approach addressing human, animal, and environmental health, recognizing their interconnectedness to improve health outcomes.

The Galathea Bay Port – Major Port

- The **Galathea Bay port in Great Nicobar Island** was designated as India's 13th major port.
- Transshipment port at Galathea Bay is strategically located on the **East-West international trade and shipping route**.
- It is named **the mega international container transshipment port (ICTP)**.
- As a gateway to the **Indo-Pacific region**, it will capture transshipment cargo from Indian east coast ports, as also **Bangladesh and Myanmar**.

- Currently nearly **75% of India's transshipped cargo is handled at overseas ports.**
- **Colombo, Singapore and Klang (Malaysia)** cumulatively handle more than 85% of this cargo, with 45% going to Colombo port.
- The ICTP at Galathea Bay can save Indian ports \$200-220 million each year in transshipment charges.



Gold Reserves

- The RBI reportedly moved **102 tonnes of its gold reserves from the UK to India**, amid geopolitical uncertainties.
- Back in the early 1990s, **India was forced to pledge its gold to secure a \$405 million loan** from the **Bank of England** to navigate a balance of payments crisis.
 - ✍ Although this loan was quickly repaid, much of the pledged gold remained in the UK afterward due to logistical convenience.
- With this transfer out of the central bank's reserve of **855 tonnes of gold, 510.5 tonnes**, are now stored domestically.
- This development aims to protect the nation's gold reserves from potential risks abroad.
- Since September 2022, RBI **has quietly brought back 214 tonnes of gold**, while it **still has 324 tonnes** of its gold stored in the **vaults of the Bank of England and the Bank for International Settlements (BIS)**, both based in the UK.
- One significant **advantage of keeping gold in the Bank of England** is access to the London bullion market, which offers unmatched liquidity.

International Relations

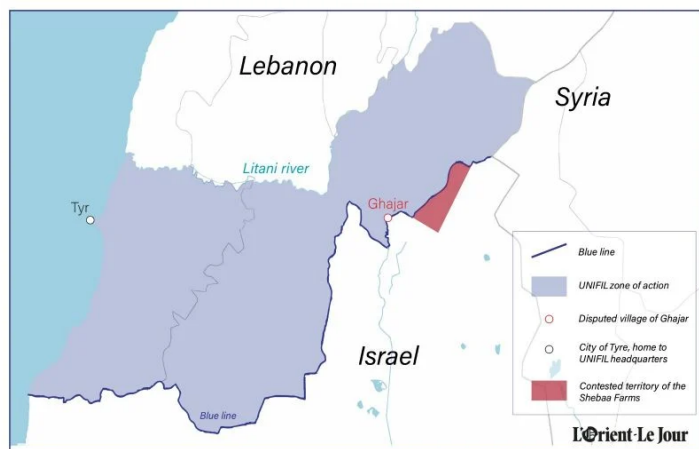
United States Commission on International Religious Freedom (USCIRF)

- The Washington DC-based USCIRF recently released a country update on India, flagging **"collapsing religious freedom conditions"**.
- The report highlighted **how throughout 2024, individuals from minority communities have been killed and lynched** by vigilante groups, religious leaders have been arbitrarily arrested, and places of worship have been demolished.
 - ✍ The Indian government has rejected the report as coming from a **"biased organisation"**.
- The USCIRF **is an independent, bipartisan U.S. federal government agency** created under the 1998 International Religious Freedom Act (IRFA).
- It monitors **the universal right to freedom of religion or belief (FoRB) in countries other than the U.S.**
- Its assessments of countries are based on international human rights standards.

United Nations Interim Force in Lebanon (UNIFIL)

- UNIFIL reported coming under direct fire from Israeli Defence forces in Lebanon.
- Created by a **UNSC resolution in 1978** during the Israeli invasion of Lebanon, they now help maintain peace along a 120km Blue Line between the two nations.
- UNIFIL has created a buffer between the **Litani River and Blue Line**, with a mission to maintain peace and install Lebanese sovereignty in the region and exclude any form of militancy.
- **Blue Line was established in 2000**, post Israeli withdrawal from Lebanese territories.
- It separates Lebanon from Israel and the Golan Heights, but it is **not an official international border but a demarcation line** till both nations settle borders through agreement.

- The UNIFIL force has more than **10,000 peacekeepers from dozens of countries**, and Indian troops **account for the second largest number** with about 900 personnel serving there



Italy-Albania Migration Pact

- A Roman Court has ordered the return of illegal migrants who were seeking to enter Italy but were deported to Albania's detention camp.
- In February 2024, **Italy ratified a deal with Albania** to transfer up to 36,000 asylum seekers to detention centres in Albania each year while their asylum claims are decided in Italy
- The boat-laden asylum seekers will be **intercepted in international waters itself**.
- People who are granted asylum will be allowed to enter Italy, **while others are likely to be returned** to their country of origin.
 - ★ Children, pregnant women and other **vulnerable individuals** will **not be deported to Albania**.
- Asylum seekers who **have already arrived in Italy**, those **who arrive by land**, or who are **rescued at sea by NGO ships** are not subject to the Italy-Albania deal.
- The two centres in Albania at **Shëngjin and Gjadër** have cost Italy €670m (£564m).
- They are being run by Italy and are **under Italian jurisdiction** with Albanian guards providing external security.
- The deal sought to **ease the migrant influx into Italy**, while Albania hoped to use this deal to hasten its accession to the EU.

Shadow Fleet

- India faces accusations of **hosting "shadow fleets,"** linked to Russian oil shipments through Indian firms reportedly operating out of Dubai.
- A **shadow fleet** refers to vessels that transport goods covertly, often for sanctioned countries like Russia, Iran, or Venezuela.
- These ships **evade tracking** by changing flags, names, and ownership and disabling their **Automatic Identification Systems (AIS)**.
- Shadow fleets exploit the **Flag of Convenience (FOC)** provision which allows ships to be registered in a country different from its owner's.
- This is often to benefit from that country's more lenient regulations, lower fees, or reduced taxes.
- Indian-flagged ships are registered with the **Directorate General of Shipping (DGS)** under the **Ministry of Ports, Shipping, and Waterways** in India.

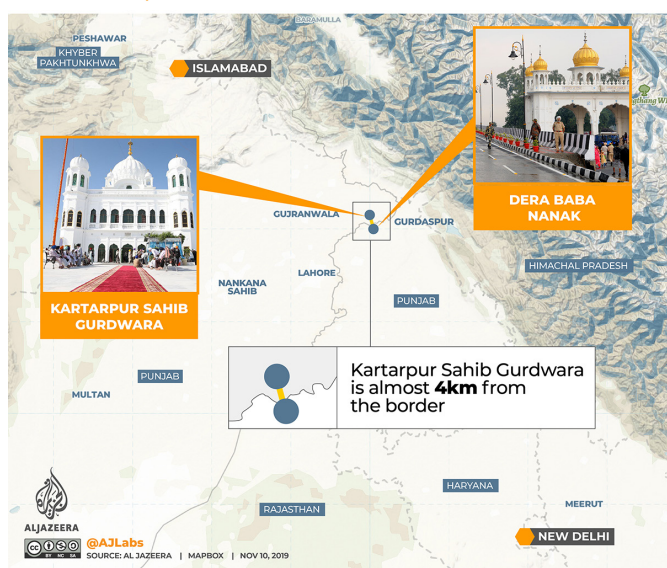
Kartarpur Corridor

- India and Pakistan have agreed to extend the **validity of the agreement on the Kartarpur corridor by five years**.

- The agreement, signed in 2019, allows Indian pilgrims to travel without visas between the Indian town of **Dera Baba Nanak and the Sri Kartarpur Sahib Gurdwara**, Guru Nanak's final resting place, about 6km (4 miles) away in Pakistan.
- The village Kartarpur is located at the **west bank of river Ravi** where **Sri Guru Nanak Dev Ji** spent the last 18 years of his life.
- Gurdwara Dera Baba Nanak is about **1 km from the Indo- Pakistan border** and on the east bank of River Ravi.

INDIA-PAKISTAN

Kartarpur Corridor



- The East Asia Summit has identified six priority areas of cooperation, namely environment and energy, education, finance, global health issues and pandemic diseases, natural disaster management, and ASEAN Connectivity.

EAST ASIA SUMMIT (EAS) MEMBER NATIONS



Anaconda Strategy

- Tensions between China and Taiwan are growing, with China using a military strategy called the “Anaconda Strategy.”
- The “anaconda strategy,” is one in which **Beijing uses cyberwarfare and disinformation campaigns** followed by a blockade or other measures to strangle Taiwan, **rather than attempt an invasion**.

Just like an anaconda slowly constricts its prey, cuts off circulation, and snuffs out life, China is putting a multi-pronged strategy in place to terrorise it, to choke it, until Taiwan surrenders.

- A **large-scale cyber attack would be far costlier to defend**, thereby giving China the advantage.
- This can affect the critical infrastructures of Taiwan
- This asymmetry allows **China to exert considerable pressure on Taiwan** without triggering a direct US military response.

East Asia Summit (EAS)

- The Prime Minister of India attended the **19th East Asia Summit (EAS)** in **Vientiane, the capital of Laos**.
- The East Asia Summit (EAS) process was initiated in **2005 with the convening of the 1st East Asia Summit in Kuala Lumpur, Malaysia**.
- At its inception, the EAS comprised **16 participating countries**, namely ASEAN Member States, Australia, China, India, Japan, New Zealand, and the Republic of Korea.
- The United States and Russian Federation joined at the **6th East Asia Summit in Bali, Indonesia** in 2011.
- The EAS participating countries which are **convened annually**.

Financial Intermediary Fund (FIF)

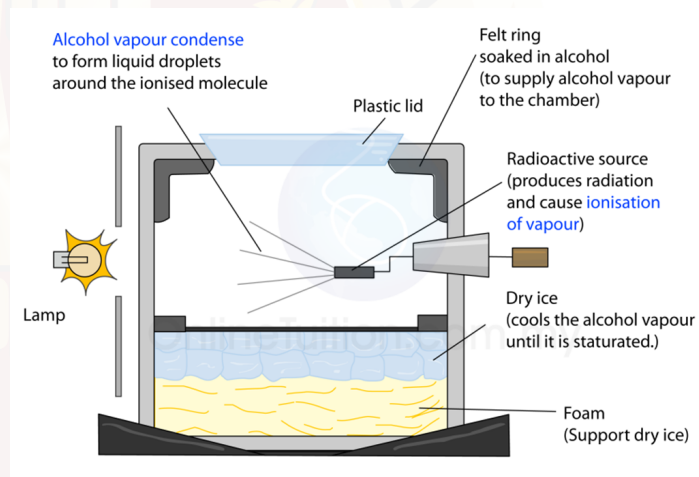
- The **World Bank's Financial Intermediary Fund (FIF) for Ukraine** has been established to channel up to **\$50 billion** in aid for Ukraine's recovery, reconstruction, and reform.
- The fund will be **supported by contributions from the United States, Canada, and Japan** along with interest from frozen Russian sovereign assets.
- More than 210 Billion Euros worth of Russian assets** have been frozen in EU nations since sanctions on Russia post Ukraine invasion in 2022.
- The World Bank conducted **Rapid Damage and Needs Assessments (RDNA)** along with Ukraine, the EU, and the UN, to identify its financial needs.
- Using RDNA's World Bank had earlier provided Ukraine 3 Funds**
 - ☀️ Relief, Recovery, Reconstruction and Reform Trust Fund (**URTF**)
 - ☀️ Public Expenditures for Administrative Capacity Endurance (**PEACE**)
 - ☀️ Advancing Needed Credit Enhancement for Ukraine Trust Fund (**ADVANCE Ukraine TF**).



Geography

Cloud Chambers

- India is setting up the first-ever **cloud chamber** at the **Indian Institute of Tropical Meteorology (IITM)**, Pune, under **Mission Mausam**.
- A **cloud chamber** is a sealed, transparent container used to observe the formation of clouds and the behaviour of particles in the air.
- The chamber **simulates cloud formation** by controlling humidity and temperature, allowing scientists to study cloud physics and seed particles that form droplets or ice particles.
- The aim is to enhance understanding of cloud formation in Indian weather systems for potential weather modification, including managing rainfall, hail, fog, and later lightning.
- The **Ministry of Earth Sciences** will implement the Mission Mausam to improve weather forecasting and management.

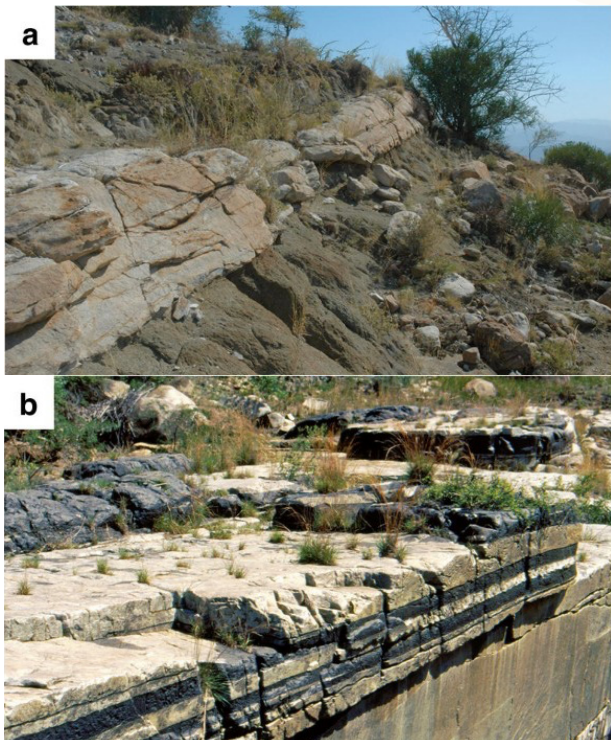


Bushveld Igneous Complex (BIC)

- Pockets of microbes** have been found living within a sealed fracture in 2-billion-year-old rock.
- ☞ This is the **oldest example of living microbes being found within ancient rock** so far discovered.
- The rock was excavated from the **Bushveld Igneous Complex in South Africa**.

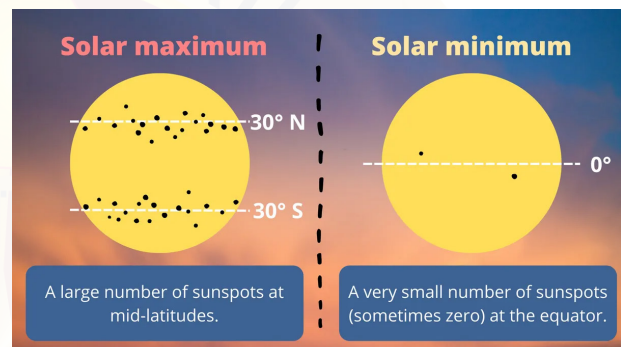
🗺️ It is known for the richest ore deposits on Earth including **about 70% of the world's mined platinum**.

- An **Igneous Complex** is a large body of **igneous rock** formed by the cooling and solidification of magma beneath the Earth's surface.
- It consists of various rock types, such as **granite** or **basalt**, and can include features like **batholiths** or **dikes**.
- These complexes form in tectonically active areas like the **Deccan Traps** and provide valuable insights into the Earth's geological processes



- **Mount Everest**, currently 8,849 metres tall, has over the past 89,000 years, **grown about 15 to 50 m higher than expected**.
- The **Arun river is eroding rock and soil at its base** and causing the world's tallest peak to **rise by up to 2 mm a year due to isostatic rebound**.
- Isostatic rebound is the process in which **Earth's crust adjusts or rises when a heavy load, such as ice or eroded material, is removed**.
- This happens because the crust, which is floating on the semi-fluid mantle beneath it, "bounces back" when the weight on it decreases.
- Arun River originates in the **Tibetan Plateau as Phung Chu or Bum-chu**, and flows southward through Nepal where it merges with the Kosi River.

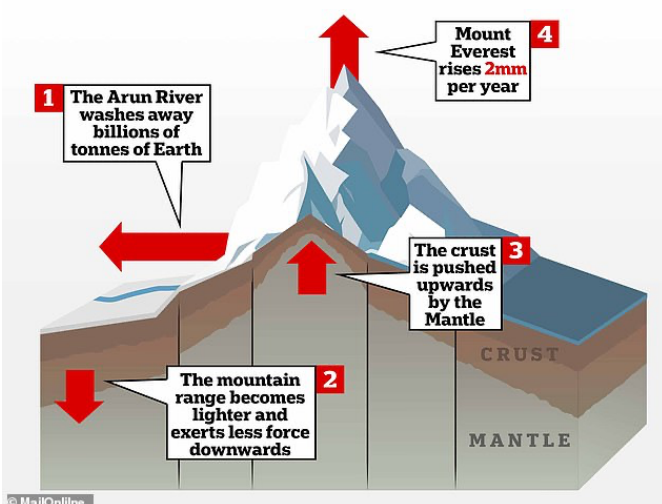
Solar Maximum



- The Sun has entered its **solar maximum** phase, marking the peak of the 11-year solar cycle, with the last maximum in 2014.
- This period sees the highest number of **sunspots** and increased solar activity, including more **solar flares** and **coronal mass ejections (CMEs)**, which can disrupt satellite communications, power grids, and GPS.
- As the cycle progresses, the Sun's magnetic poles will flip, leading to a quieter phase, the **solar minimum**.
- **Sunspots** are cooler, darker areas on the Sun's surface caused by strong magnetic fields preventing heat from rising.

Isostatic Rebound

MOUNT EVEREST IS GETTING TALLER BY THE DAY



Aurora Borealis



- The **Aurora Borealis** was seen over **Leh** when a severe **geomagnetic storm** hit Earth, likely triggered by a **Coronal Mass Ejection (CME)**, a more intense form of solar wind.
- They were seen at **India's highest observatory in Hanle**.
- The 'aurora borealis' or **northern lights** happens when charged particles like electrons and protons from the Solar wind interact with Earth's magnetic field and atmosphere.
- These particles collide with gases like **oxygen** and **nitrogen**, releasing energy as light, creating colourful displays in the sky, mainly near the poles.
- The colour - **blue and purple from nitrogen, green and red from oxygen gases**.
- Auroras are **typically seen at even higher latitudes** but the intense storm must have pushed them to lower latitudes.
- Leh's high altitude also provided a clear view of the phenomenon.
- **Solar activity being at maximum** signifies that the earth is in for several more intense solar storms and rare sightings of the auroras.

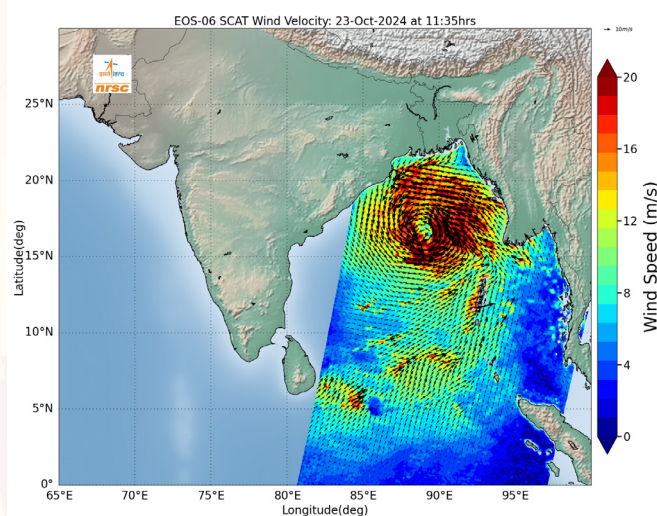
Cyclone Dana

- Cyclone Dana hit Odisha's coast, with its landfall timing and location difficult to predict due to factors like the cyclone's disorganised structure.
- ◆ If a cyclone **forms from the lower troposphere (0-8 km from sea level) to the upper troposphere** then it is well organised and easier to forecast.

- Cyclones in the North Indian Ocean region have been quite uncertain in recent years because of various factors such as **rapid intensification (RI)**.

◆ RI is said to occur when a **tropical cyclone gains wind speeds of more than 55 km/hr in a 24 hour period**.

- Divergent predictions stem from **limited observational data**, especially from the sea surface and subsurface in the Bay of Bengal.
- Satellites like ISRO's EOS-06 and INSAT-3DR provided crucial data.
- Dana, **named by Qatar, means 'generosity' in Arabic**.





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Environment & Ecology

Modified Eco-mark Scheme

- The **Ministry of Environment** has notified new Ecomark Rules to differentiate products having lesser adverse effects on the environment.
- Eco-marking of products will **enable consumers to make informed purchase decisions** as well as encourage manufacturers to transition to the production of environment-friendly products.
- The Scheme is **voluntary and non-binding** and **criteria has been now released for 17 categories of products** ranging from paints, cosmetics, batteries, edible oils, tea, coffee, toilet soaps to coir and paper.
- Companies having **Bureau of Indian Standards (BIS)** certification can apply to the **Central Pollution Control Board (CPCB)** to get Ecomark on their products.



Living Planet Report 2024

- The recently released Living Planet Report shows **a decline in every indicator used to track nature globally**.
- The Report is a **biennial assessment** by conservation organisation **the World Wildlife Fund (WWF)**.
- The report uses the **Living Planet Index** to highlight that nature is disappearing at a frightening rate.

Findings:

- ✓ The average size of **monitored wildlife populations decreased by 73%** in the last 50 years.
- ✓ The worst trends were noticed in **freshwater populations**, which reduced

by 85%.

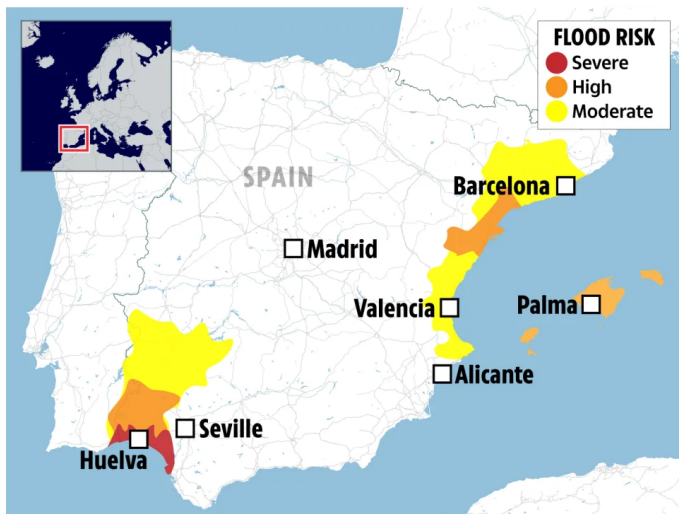
- ✓ **Latin America and the Caribbean (-95%) were among the worst affected areas**, and climate change is the leading cause for the loss of biodiversity in these areas.
- ✓ Habitat loss and degradation, **driven primarily by our food system**, is the most reported threat to wildlife populations around the world.
 - ☞ It is followed by **overexploitation, invasive species and disease**.
- ✓ The report warns that, as the **Earth approaches dangerous tipping points** posing grave threats to humanity.
 - ☞ **A tipping point** is when an ecosystem is pushed beyond a critical threshold resulting in substantial and potentially irreversible change.

“The Unjust Climate” Report

- A national-level dialogue on **FAO’s report “The unjust climate”** organised in New Delhi, focused on the **multidimensional poverty and climate vulnerabilities** in rural parts of the country.
- **“The unjust climate: Measuring the impacts of climate change on rural poor, women, and youth”** shows **how climate change differently affects people**, especially in rural areas.
- The report has suggested that India **has made remarkable strides in reducing rural poverty** over the past two decades.
- The Headcount poverty rates have dropped dramatically from **42.5% in 2005/06 to just 8.6% in 2022/24**.
- The report **highlights a stark reality**: each year, in low- and middle-income countries (LMICs), **households headed by women** in rural areas suffer significantly greater financial losses than those headed by men.
 - ☞ On average, **female-headed households lose 8% more of their income** due to **heat stress** and **3% more due to floods** compared to male-headed households
- If the average temperatures were to **increase by just 1°C, women would face a staggering 34% greater loss** in their total incomes compared to men.

DEADLY FLOODS

The southwest of Spain and Balearic islands are set to be battered by more torrential rain

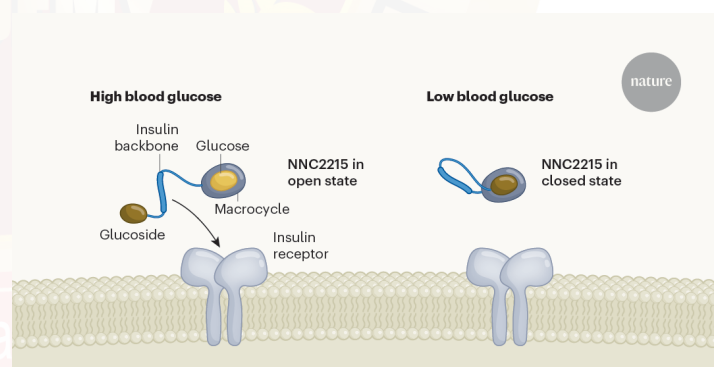


- Catastrophic flash floods have killed many in Spain caused by **DANA, an annual weather event** in the Mediterranean.
- DANA, or “Depresión Aislada en Niveles Altos” involves an isolated high-altitude low-pressure system that brings intense rainfall.
- This occurs when a **cold air pocket from the polar jet stream separates** and moves over the warmer Mediterranean Sea.
- The clash of cold upper air with warm, humid surface air **creates atmospheric instability**, causing rapid uplift of warm air and the formation of cumulonimbus clouds.
- This process triggers sudden, heavy downpours, often accompanied by thunderstorms and flooding.
- DANA is most common in **autumn and spring** when sea temperatures are relatively high, making conditions ideal for such weather disturbances.
- In Spain, it's known **colloquially as gota fría or “cold drop”** due to the sudden burst of heavy rain.
- The episode that hit the **area of Valencia, Spain** was the deadliest in modern Spanish history and the most catastrophic flood-related event in Europe since 1967.

Science & Technology

Smart Insulin

- Scientists have developed a “**smart**” insulin called **NNC2215** that responds to blood sugar fluctuations in real time.
- NNC2215 has a ring structure and a **glucose-like molecule, glucoside, that binds to the ring to keep insulin inactive** when blood sugar is low.
- As blood glucose rises, glucose displaces glucoside, activating the insulin to lower blood sugar.
- There are two kinds of diabetes. Both are related to the body's ability to synthesise and react to insulin, the hormone that breaks down sugar in the blood to produce energy.
 - **Type 1 diabetes**, which often starts in childhood, occurs when the pancreas does not produce insulin (or enough insulin).
 - **Type 2 diabetes** sees the cells of the body develop resistance to insulin, meaning greater amounts are required than what is produced by the pancreas.
- This breakthrough could revolutionise diabetes treatment, especially as Type 1 and Type 2 diabetes both require synthetic insulin to manage varying blood glucose levels.



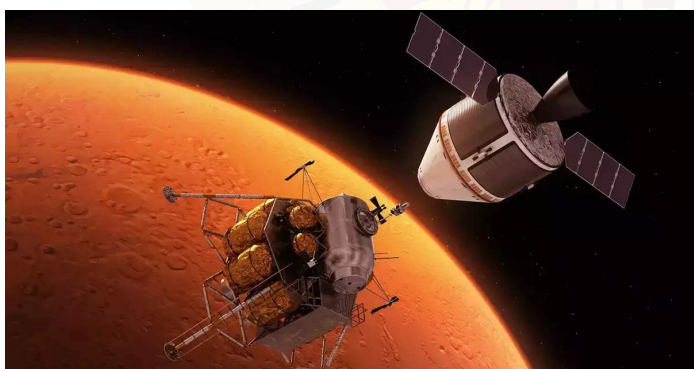
Venus Orbiter Mission (VOM)

- ISRO targets to launch a Venus mission in March 2028 for a 112-day journey to the planet.

- The ₹1,236-crore Venus Orbiter Mission (VOM) will be launched by the **Launch Vehicle Mark-3 (LVM-3)**.
- VOM is also called the **Shukrayaan-1**.
- The goals include investigating the planet's atmospheric composition, surface characteristics, and potential volcanic or seismic activity.
- The VOM is a collaborative effort, with international participation from countries like **Russia, Sweden, France, and Germany**.
- **The Venusian Neutrals Analyzer (VNA)** instrument will be contributed by the Swedish Institute of Space Physics (IRF) to study the interactions between charged particles from the Sun and Venus's atmosphere.
- The Project is spearheaded by IIT Bombay under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**, of the Department of Science and Technology (DST).
- The initiative will create generative AI systems that can **generate high-quality text and multimodal content** in various Indian languages.
- At its core is **Bharat Data Sagar**, a vast repository of India-centric data that ensures the AI models are deeply rooted in the country's unique context.
- By integrating text, speech, and images, BharatGen builds **accessible AI technologies that foster innovation across key sectors** like agriculture, education, and healthcare, ensuring inclusivity for India's diverse population.

Some scientific payloads include:

- ✦ **Lightning Instrument for VEnus (LIVE):** It will be used for measurement of the field emissions due to plasma and lightning in Venus atmosphere.
- ✦ **Venus Atmospheric SpectroPolarimeter (VASP):** It aims to investigate the **correlation of cloud Top Altitude with clouds microphysical Properties** and to study the process of global circulation on Venus.
- ✦ **VEnus THERmosphere Ionosphere composition Analyser (VETHICA):** It aims to study the altitude-latitude distribution of neutral and ion composition in the Thermosphere-ionosphere-exosphere region of Venus



Bharat-Gen

- India has launched “Bharat-Gen,” a **generative AI initiative designed to enhance public service delivery**.

Fluorescent Nanodiamonds (FND)

- A recent study **tested at extreme limits the Fluorescent Nanodiamonds (FNDs)** showcasing their potential in both theoretical and practical fields.
- FNDs are stable, non-toxic, **nanometer-sized diamonds made from carbon nanoparticles**, produced under high temperature and pressure.
- FNDs are primarily valued for their ability to emit light consistently without fading, thanks to their fluorescence stability.
- By **emitting stable visible light under illumination of UV or blue light**, FNDs allow scientists to observe and track cellular processes, sense tiny temperature changes, and generate detailed imaging for research, particularly in **biology and medicine**.
- This makes them **superior to even quantum dots** that are also used for bio-tracking and bioimaging..

Charon Moon

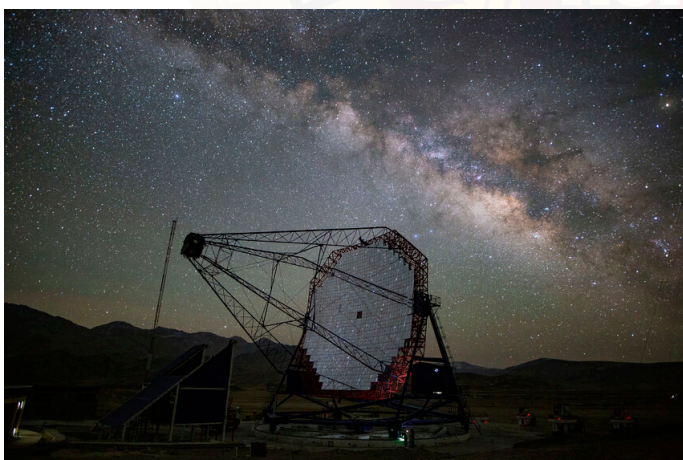
- **The James Webb Space Telescope (JWST)** has detected solid carbon dioxide (CO₂) and hydrogen peroxide (H₂O₂) on the frozen surface of **Charon, Pluto's largest moon**.
- Charon, discovered in 1978, has the distinction of **being the solar system's largest moon relative in size** to the planet it orbits.

👁 It is about half the diameter and an eighth the mass of Pluto.

- **NASA's New Horizon** spacecraft flew past Charon in 2015 and discovered the surface was **mainly covered in water ice and ammonia**, which are thought to give the moon its red and grey appearance.
- The presence of H₂O₂ suggests that the water-ice-rich surface of Charon is being actively altered by **ultraviolet light from the sun**, energetic particles from the solar wind, and streams of charged particles from beyond the solar system called **"galactic cosmic rays."**



MACE Project



- The Department of Atomic Energy has inaugurated the **Major Atmospheric Cherenkov Experiment (MACE)** observatory at Hanle, Ladakh.

- MACE is **Asia's largest** and **world's highest imaging** Cherenkov telescope, located at an altitude of over 4,300 metres.
- It was built **indigenously by the Bhabha Atomic Research Centre (BARC)** with support from the Electronics Corporation of India Limited and other Indian industry partners.
- The MACE telescope is designed to **detect and observe Cherenkov radiation** produced by high-energy cosmic particles, such as **gamma rays or cosmic rays**, when they interact with Earth's atmosphere.
- Cherenkov radiation is a **type of light that appears as a blue glow** when **charged particles move faster than light** in a transparent medium like air or water.

Mechazilla

- SpaceX has successfully **landed its Starship rocket** using the innovative "Mechazilla" structure at its Starbase in South Texas, USA.
- **Mechazilla, a 400-ft tall structure**, features two large **mechanical arms, or "chopsticks,"** designed to catch the Super Heavy booster as it returns to Earth.
- After **separating from the upper stage**, the **booster uses thrusters to control its descent**.
- As it nears the landing site, Mechazilla's arms catch the booster, ensuring a safe landing.
- This method **reduces wear and tear on the booster** and **speeds up turnaround times** for future launches.



+ Precision Landing

After launch, the Super Heavy booster separates from the Starship (the second stage) and performs a series of manoeuvres to return to the launch site. This involves:

Boostback Burn

Where the booster reverses its direction.

Entry and Descent

The booster re-enters the atmosphere, using grid fins to steer its descent.

Landing Burn

Just before landing, engines reignite to slow down the booster.

Network18
creative

Haber-Bosch Process

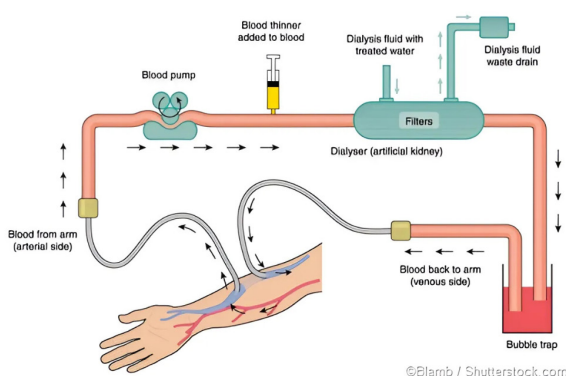
- The **Haber-Bosch process** has been instrumental in providing food security but has important environmental impacts too.
- Nitrogen** makes up 78% of air and is an important component in amino acids, proteins and enzymes in both plants and animals.
- However, it **exists naturally in its inert N₂ form** which the plants cannot utilise.
- Plants can only use the **reactive nitrogen they get** through nitrogen fixing bacteria and lightning which splits nitrogen to form nitrates with oxygen which is not enough for global food production.
- The **Haber-Bosch process combines nitrogen (N₂) and oxygen (O₂) under high pressure** (around 200 atmospheres) and temperatures of about 400-500°C, in the presence of a catalyst, to produce **ammonia**.
- This ammonia is then used in **fertilisers** which when mixed in soil changes to ammonium (NH₄⁺) that plants can use.
- However, adding million tonnes of reactive nitrogen to the soil has led to **land degradation and eutrophication**.
- The Haber-Bosch process also releases **greenhouse gases like CO₂**.

- The Machine helps your body **remove extra fluid and waste products** from your blood when the kidneys are not able to.
- The machine removes blood from your body, **filters it through a dialyzer (artificial kidney)** and returns the cleaned blood to your body.

Moonlight Programme

- The **European Space Agency (ESA)** launched its **Moonlight Lunar Communications and Navigation Services (LCNS)** programme.
- The Programme aims to establish **Europe's first-ever dedicated satellite constellation** for telecommunication and navigation services for the Moon.
- The programme will have **a constellation of about five lunar satellites** that will allow accurate autonomous landings, high-speed communication, and surface mobility.
- These satellites will reportedly **enable data transfer** between the Earth and the Moon.
- With this, the ESA aims to **offer critical support for over 400 moon missions** planned by space agencies and private companies in the next 20 years.
- As part of the programme, the ESA is working with **NASA and the Japanese space Agency JAXA** on LunaNet.
- ✓ It is essentially **a framework to standardise communication and navigation** for the Moon.

Haemodialysis (HD) Machines



Green Hydrogen Fuel Cell Bus

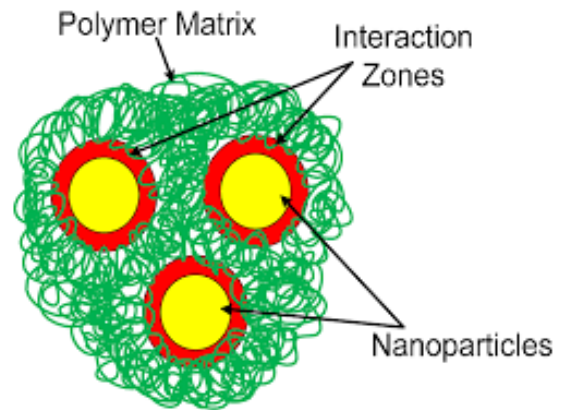
- The **Minister of Petroleum & Natural Gas** recently showcased India's advancements in green hydrogen mobility by demonstrating a **hydrogen-fuelled bus powered by IndianOil** to the Prime Minister of Bhutan.
- A hydrogen fuel cell bus has **three main components**: the fuel cell stack, the electric motor, and the hydrogen storage tanks.
- The fuel cell stack is made up of **individual fuel cells that combine hydrogen and oxygen to produce electricity, heat, and water** as byproducts.
- The **electric motor** is connected to the fuel cell stack and uses the electricity produced to power the bus.

- The hydrogen storage tanks store **compressed hydrogen gas**, which is supplied to the fuel cell stack.
- When the driver starts the bus, the hydrogen stored in the tanks is supplied to the fuel cell stack where a chemical process produces steam and energy.



- Used in products like jet engines, medical devices, and construction materials, PFAS can **persist for hundreds to thousands of years after disposal**, posing long-term environmental and health risks.

Polymer Nanocomposite Prototype



Eliminating Trachoma

- The **World Health Organization (WHO)** has now recognised that **India has successfully eliminated trachoma as a public health problem**.
- India is the **third country in the South-East Asia Region** to reach this important public health milestone.
- Trachoma is an infectious eye disease caused by the **bacterium Chlamydia trachomatis**, which spreads through **direct contact** with infected individuals or contaminated items.
- **Repeated infections cause the inner eyelid to scar**, which eventually leads to the eyelids turning inward (a condition called trichiasis)

Treatment follows the **WHO's SAFE strategy**: **Surgery** for severe cases, **Antibiotics** (like azithromycin) to clear infections, **Facial cleanliness** to reduce transmission, and **Environmental improvement** to provide clean water and sanitation

- **Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru** has created a **polymer nanocomposite** sensor prototype designed to improve safety at high-risk curves.
- A polymer nanocomposite is a material made by incorporating **inorganic nanoparticle fillers into a polymer matrix**, which enhances the material's properties.
- Here, CeNS made the prototype sensors by **integrating Vanadium diSulfide (VS2) nanoparticles** into a **piezoelectric polymer, poly (vinylidene difluoride) (PVDF)**
- The VS2 nanoparticles enhance the sensor's ability to generate energy.
- The prototype road sensor **works using the piezoelectric effect**, which allows it to generate and store energy when pressure is applied.
- The sensor can be **placed on road ramps near sharp, accident-prone turns** and gets charged as vehicles pass over it.
- It **lights up to warn approaching drivers**, making them aware of dangerous curves ahead.

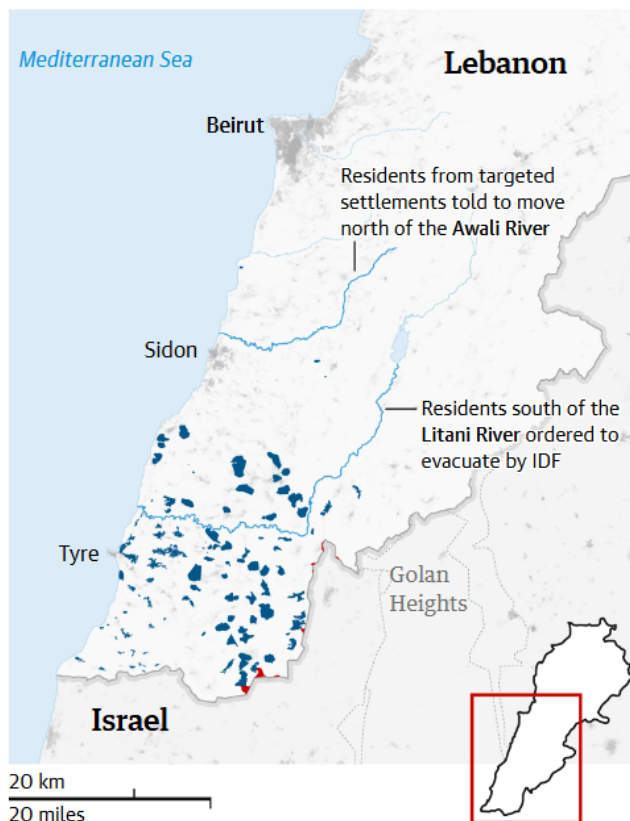
Forever Chemicals

- A new study has revealed that toxic 'Forever Chemicals', known as perfluoroalkyl substances (PFAS), have been **found in drinking water samples worldwide**.
- They are a group of **synthetic chemicals called per- and polyfluoroalkyl substances (PFAS)** that are resistant to heat, grease, and water, and **don't break down in the environment or in the human body**.

Defence

Operation Northern Arrows

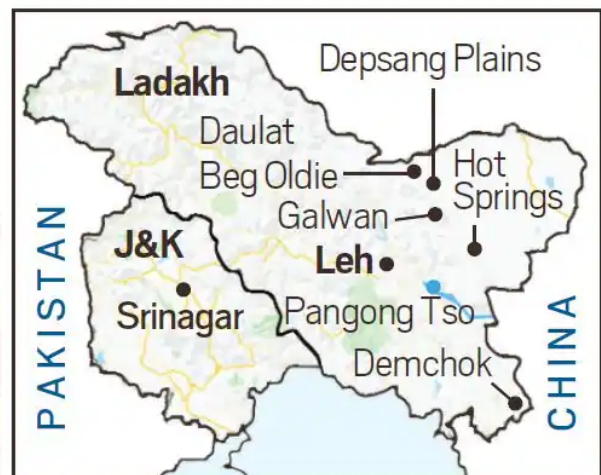
■ Israeli advances ■ Settlements under Israeli evacuation orders
Population per 100 sq metres 0 400+



Guardian graphic. Source: IDF, Copernicus, Institute for the Study of

- The Israel Defense Forces (IDF) initiated a **ground invasion into southern Lebanon**.
- The ground offensive would involve “**limited, localised and targeted raids**” to remove **Hezbollah infrastructure** along the disputed de facto border between the two countries, known as the **blue line**.
- The operation aims to neutralise Hezbollah targets near the Israel-Lebanon border that pose an immediate threat to northern Israel’s communities.
- The last time Israel and Hezbollah engaged in ground combat was a month-long war in 2006.

India and China: Agreement on Border Disengagement



- Prime Minister Narendra Modi and China President Xi Jinping **endorsed the agreement on patrolling and disengagement along the LAC in eastern Ladakh**.
- This was ahead of their recent bilateral meeting on the sidelines of the **BRICS Summit in Kazan in Russia**.
- The border standoff between India and China **began in eastern Ladakh along the LAC in 2020 (Galwan clash)**, sparked by Chinese military actions.
- The agreement has been arrived at on **patrolling arrangements** along the line of actual control at Dapsang and Demchok and this is leading to the **dis-engagement**.
- The patrolling will be **done by armed personnel and structures to be dismantled** include temporary sheds and tents.

T-90 Bhisma Tank

- In a significant move towards self-reliance, the Indian Army has rolled out its first overhauled T-90 Bhisma tank, further enhancing its operational readiness.
- The T-90 Bhisma, the **Army’s main battle tank since 2003**, is known for its firepower, speed, and protection.
- ★ The T-90 tanks have been built under **licence from Russia** at the Heavy Vehicles Factory (HVF) at Avadi near Chennai.
- ★ Its compact size enables it to **manoeuvre quickly through forests, mountains, and marshy terrain** at a speed of up to 60 kilometres per hour.

- An **anti-aircraft gun mounted on top can bring down targets within a two kilometre range**, and the tank can fire up to 800 shells per minute.

Dragon Drones



- A deadly new weapon has taken to the skies in the Russia-Ukraine war.
- Dragon drones carry a substance called **thermite**.
 - ▶ The mixture is made from **metal powder – most often aluminium** – and powdered iron oxide or rust.
- Thermite is **not explosive**, but generates heat at such extreme temperatures – more than 2,200 degrees Celsius (4,000 degrees Fahrenheit).
- With this Temperature it burns through and damages nearly any material – clothing, trees and foliage, even military-grade vehicles.
 - ▶ It can also burn underwater.
- Ukrainian forces used them to **ignite the vegetation that Russian troops** use for cover and burn it out, exposing them and their equipment to direct attack.
- Soon, the Russians too began to produce and deploy their dragon drones.

S4* SSBN

- India's **fourth nuclear-powered ballistic missile submarine (SSBN)**, referred to as **S4***, was launched into water at the Ship Building Centre in Visakhapatnam recently.
- India currently has **two SSBNs operational**.
- INS Arihant was the 1st of the series and was commissioned into service in 2016.
 - ➔ It has a displacement of **6,000 tonnes** and **is powered by an 83 MW** pressurised light-water reactor with enriched uranium.
- The second SSBN, **INS Arighaat (S3)**, retains the same reactor as Arihant and dimensions with several technological upgrades.
- The **3rd SSBN Aridhman (S4)** is **currently undergoing sea trials** and is expected to be commissioned into service next year.
- The S4* is bigger and carries the advanced 3,500 km range submarine launched ballistic missiles (SLBM) K-4.
 - ➔ **K-4 or Kalam-4** is a **nuclear capable intermediate-range submarine-launched** ballistic missile developed by the DRDO to arm Arihant-class submarines.

Armenia leading defence export partner

- Armenia has **become India's third-largest defence export partner** in 2023-24, following the United States and France.
- Indian defence exports had **reached a record \$2.63 billion**—a 32.5% increase from the previous year.
- **Armenia imported systems** like the Pinaka multi-launch rocket system, Akash-1S air defence missiles, and Dornier-228 surveillance aircraft.
- It marks a **shift away from Russian arms** (which supplied 94% of Armenia's arms from 2011 to 2020) due to diminished confidence in Russia's support after the 2020 Nagorno-Karabakh conflict with Azerbaijan.
- Russia has showing increasing closeness with Azerbaijan in the conflict
- **Nagorno Karabakh**, a mostly mountainous region that spans around 4,400 square kilometres, lies within Azerbaijan.

- It has been under the **control of ethnic Armenian forces backed by Armenia** since 1994.



The Nobel Prize 2024

Nobel Prize in Chemistry



David Baker



Demis Hassabis



John Jumper

- The Nobel Prize in Chemistry is awarded by the **Royal Swedish Academy of Sciences, Stockholm, Sweden**.
- The Nobel was awarded to David Baker (USA) **“for computational protein design”** along with Demis Hassabis (UK) and John M. Jumper (USA) **“for protein structure prediction”**
- Proteins generally consist of 20 different amino acids**, which can be described as life's building blocks.
- In 2003, David Baker succeeded in using these blocks to design a new protein that was unlike any other protein.
 - Since then, his research group has produced many **designer proteins** that can be used as pharmaceuticals, vaccines, nanomaterials and tiny sensors.
- Hassabis and Jumper developed an **artificial intelligence model called AlphaFold 2**.
 - This could predict the structures of millions of proteins.
 - Human scientists had done that for only around 1.7 lakh proteins until then, although the structures and patterns therein were used to train AlphaFold.

Nobel Prize for Physics

- The 2024 Nobel Prize in physics has been awarded to **John Hopfield from the US and Geoffrey Hinton from the UK**.



John Hopfield



Geoffrey Hinton

- They received it **“for foundational discoveries and inventions that enable machine learning (ML) with artificial neural networks (ANNs).”**


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- In a biological system, a **neuron** transmits electrical signals through synapses to communicate with other neurons, processing stimuli based on complex biochemical mechanisms.
- On the other hand, an **artificial neuron** is a simple mathematical function that receives input, processes it (often using weights and activation functions), and produces an output.
- In a **recurrent neural network**, information can flow both ways.
 - ◆ Hopfield is credited with developing the **Hopfield network**, a type of recurrent neural network.
- **Geoffrey Hinton used the Hopfield network** as the foundation for a new network that uses a different method: **the Boltzmann machine**.
 - ◆ The Boltzmann machine can be **used to classify images or create new examples** of the type of pattern on which it was trained.

Nobel Prize for Medicine


- The Nobel Prize in Physiology or Medicine was awarded to scientists **Victor Ambros and Gary Ruvkun** for **discovering microRNAs**.

Victor Ambros
Gary Ruvkun
- These are tiny molecules in cells that can **control genes by turning them on or off**, controlling whether a protein is made or not.
- **Genes are considered as instructions** for making proteins, which carry out various functions in the body.
- **MicroRNAs can block these instructions** from being used by **attaching to messenger RNAs (mRNAs)**, which are the blueprints that instruct cells on how to build proteins.
- This helps fine-tune how cells work in all complex organisms.
- The duo made their finding by studying the **1-mm-long roundworm Caenorhabditis elegans**.
- Understanding microRNAs better helps scientists **explore new ways to treat diseases** where gene regulation goes wrong.

Nobel Prize for Literature

- After two years of Europe-centric Nobel Prizes in Literature, the 2024 Prize has been awarded to **South Korean author Han Kang**.



Han Kang
- The Nobel was provided “for her intense poetic prose that **confronts historical traumas** and **exposes the fragility of human life**”.
 - ◆ Her works include The Vegetarian, The White Book, Human Acts and Greek Lessons.
- With a radical and poetic imagination, she wrote about **women battling patriarchy**, violence, grief and also about historical wrongs and injustices.
- Han is the first South Korean author and 18th woman to win the prize.

Nobel Peace Prize

- Japanese organisation **Nihon Hidankyo** has won the 2024 Nobel Peace Prize.
- It was established in 1956 to advocate for the rights and welfare of **hibakusha**—survivors of the atomic bombings of Hiroshima and Nagasaki during World War II
- Nihon Hidankyo **raises awareness of nuclear weapon effects**, advocates for disarmament, and supports hibakusha through legal, medical, and social aid, playing a key role in the **global anti-nuclear movement for peace**.
- The Nobel Peace Prize is awarded by the **Norwegian Nobel Committee**, a five-member group appointed by the Norwegian Parliament (Storting), while other prizes are awarded by Swedish institutions.



Nihon Hidankyo

Miscellaneous

International Day of Non-Violence

- The International Day of Non-Violence, celebrated annually on October 2, marks the birth anniversary of Mahatma Gandhi, a global beacon of peace and non-violence.
- According to the UN General Assembly resolution of 2007, the International Day is an occasion to “**disseminate the message of non-violence, including through education and public awareness**”.
- Mahatma Gandhi’s philosophy of **Satyagraha and non-violent resistance**, remains one of the most potent forces for change in modern history, due to which the day is celebrated.

PUSA-2090

- Reports of **higher yield and shorter maturity time of a rice hybrid called PUSA-2090** has increased hopes of bringing to an end the stubble burning issue affecting northern India.
 - Punjab’s farmers **had been cultivating Pusa-44 variety** for decades due to its high yield.
 - But the Punjab government banned it since it has a **longer maturity of 155-160 days** which doesn’t give farmers the time to clear their fields post harvest for winter sowing and they resort to stubble burning.
 - **Punjab Agricultural University then had developed the PR-126 variety** with a shorter 123-125 days maturity, however, it has a lower yield (4-5 quintals less per acre than Pusa-44) making it less attractive to farmers.
 - Since last year a new crop variety, **the Pusa-2090**, developed by **ICAR-Indian Agricultural Research Institute, New Delhi** has been introduced.
- ▶ This new variety matches Pusa-44 in terms of yield and PR-126 in terms of duration (123-125 days) to get mature and ready for harvest.

“Free to Think 2024” report

- Over the past 10 years, **India has plummeted on the academic freedom index ranks**, according to the recently released “Free to Think 2024” report.
- It is an **annual report** published by the **Scholars at Risk (SAR) Academic Freedom Monitoring Project**.
 - SAR is a network of **665 universities across the globe**, including Columbia University, Duke University, and New York University.
- The report has looked extensively at **India, Afghanistan, China**, Colombia, Germany, Hong Kong, Iran, **Israel, USA**, UK among others.
- The report notes that **India’s academic freedom slipped from 0.6 points to 0.2 points** from 2013 to 2023.
- India now ranks as “**completely restricted**”, its lowest score since the mid-1940s.

PMECRG & MAHA-EV Mission

- The **Anusandhan National Research Foundation (ANRF)**, established by the 2023 ANRF Act aimed at **boosting research and innovation** across the country as recommended by the National Education Policy (NEP) has launched two new initiatives.
 1. **Prime Minister Early Career Research Grant (PMECRG)** – This grant supports young researchers to foster a strong research culture and drive innovation across India.
 2. **Mission for Advancement in High-Impact Areas - Electric Vehicle (MAHA-EV) Mission** – This mission aims to strengthen EV research and development in critical areas like battery cells, power electronics, and charging infrastructure, reducing import reliance and promoting domestic EV advancements.
- ANRF with a funding target of ₹50,000 crore over five years (2023-2028) has a Governing Board with **Prime Minister as the President** and Ministers of Science and Technology and Education as Vice-Presidents.

- It replaced the **Science and Engineering Research Board (SERB)** established in 2008.
- ANRF will receive **grants and loans** from the central government as well as **donations** from the public and private sector from within and outside India.

Global Hunger Index (GHI), 2024

- The recently released Global Hunger Index (GHI), states that a **'serious' level of hunger** is prevalent in India.
- The GHI is a **peer-reviewed annual report**, jointly published by Concern Worldwide, and the Institute for International Law of Peace and Armed Conflict (IFHV).
- It ranks India **105th among 127 countries, giving it a score of 27.3.**
 - ◆ A score below 9.9 indicates low levels of hunger, 10-19.9 moderate, 35-49.9 alarming and above 50 extremely alarming.

The four broad parameters:

- **Child stunting** (share of children under five with lower height proportional to their age, reflecting chronic undernutrition) - **35.5% of Indian children;**
- **Undernourishment** (share of population with insufficient caloric intake) 13.7% of the population - **13.7% of the Indian population;**
- **Child wasting** (share of children under five with lower weight proportional to their height) - **18.7% of children & India has the highest child wasting rate globally;**
- **Child mortality** (share of children who die before their fifth birthday) - **2.9%.**
- The analysis states that India has demonstrated **"significant political will" to transform the food and nutrition landscape.**
 - ◆ This is due to the National Food Security Act, Poshan Abhiyan (National Nutrition Mission), PM Garib Kalyan Yojna (PMGKAY) and National Mission for Natural Farming.

World Energy Outlook 2024

- **The International Energy Agency's (IEA) annual** World Energy Outlook was recently released.
- The report includes several sensitivity cases on key factors affecting oil, gas and electricity demand in the **current policies**, which is also known as **Stated Policies Scenario (STEPS) in IEA parlance.**
- There are three **overarching and inter-related themes** for this year's Outlook.
- Energy security, the prospects for clean energy transitions & Uncertainty.

Key Findings:

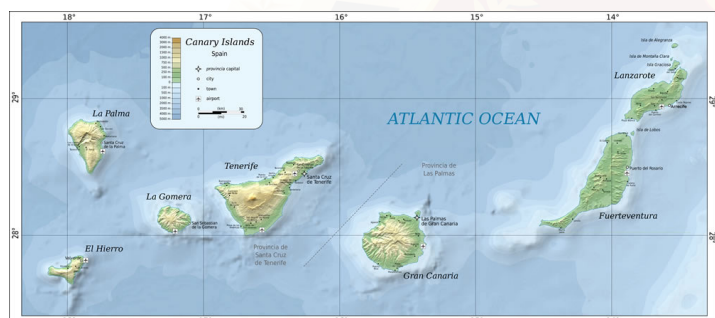
- ✓ The potential for **near-term disruption to oil and gas supply is high** due to conflict in the Middle East.
 - Around **20% of today's global oil and liquefied natural gas (LNG)** supplies flow through the **Strait of Hormuz**, a maritime choke point in the region.
- ✓ The growth in global energy demand slowed due to efficiency gains, electrification and a rapid buildout of renewables.
- ✓ More than **560 GW of renewables capacity added in 2023.**
 - Even under current policies, **renewables will reach 10 000 GW by 2030.**
- ✓ Global investment in clean energy has **increased by 60%** since 2015, when the world signed the Paris Agreement.
- ✓ The report suggests that there are still **750 million people without access to electricity** (mainly in Sub-Saharan Africa) and two billion without clean cooking.

- IEA was established in 1974 as part of the **Organisation for Economic Co-operation and Development (OECD).**
- Its primary goal is to promote energy security, economic growth, and environmental sustainability globally.
- India including Russia and China are not members.

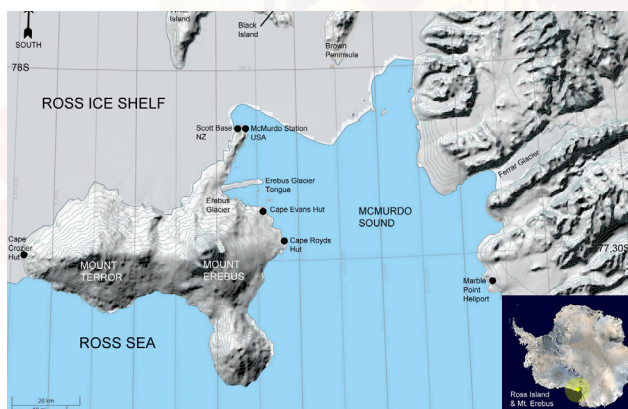
Places in News

Canary Islands

- Over 230 migrants were rescued from a boat in seas **off Spain's Canary Islands**.
- The Canary Islands are **a group of ocean island volcanoes** located in the Atlantic Ocean off the coast of western Africa which is only 95 km.
- The eight Canary Islands and their islets form **an autonomous community of Spain and are one of the outermost regions of the European Union**.
- El Hierro** is the **westernmost and southernmost island of the Canary Islands**, and the smallest.
- The Canary Islands have a subtropical climate with warm temperatures and little seasonal variation.



Mount Erebus



- The southernmost active volcano, Mount Erebus, stands out by not only **being active in the extreme cold but also emitting micro-crystals of gold**.

- Mount Erebus is **located in Antarctica**, towering 12,448 feet above the icy landscape.
- It is known for emitting steam, gas, and volcanic bombs.
- The emitted gold particles, as small as 20 micrometres, are carried by volcanic gas and have been detected over 600 miles away.
- Daily emissions amount to around **80 grams, valued at \$6,000 (roughly ₹5 lakh)**.
- This phenomenon makes Erebus the only known volcano to release metallic gold in solid form.
- The volcano also features **an active lava lake in its summit crater, which has persisted since at least 1972**.

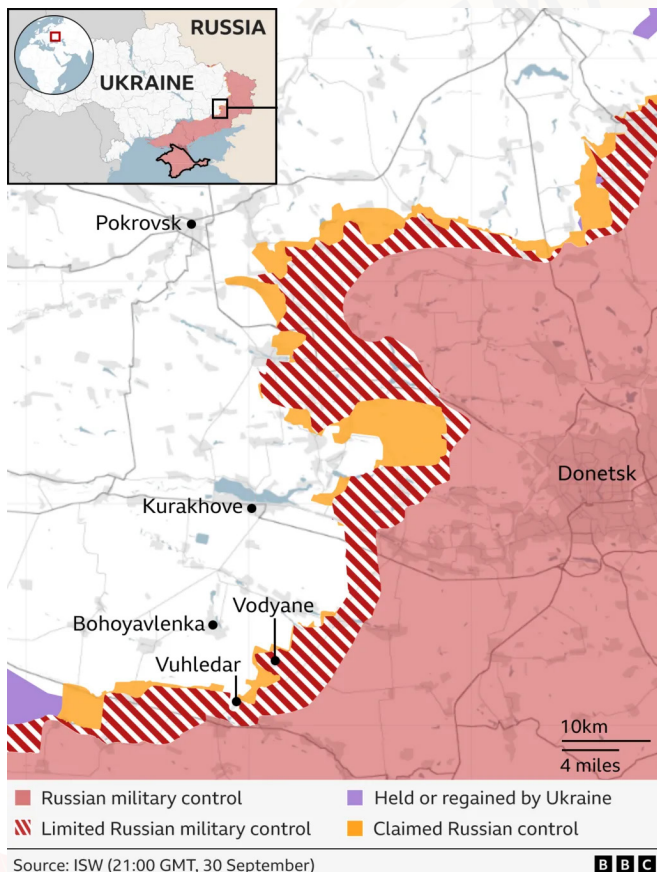
Mount Herzl

- The official ceremony of **Israel's National day of mourning (October 7th)**, marking the Hamas massacre was held at Mount Herzl, Jerusalem.
- The place is named after **Theodor Herzl, the founder of modern Zionism**.
- It serves as the final resting place for many of Israel's leaders and soldiers



Vuhledar

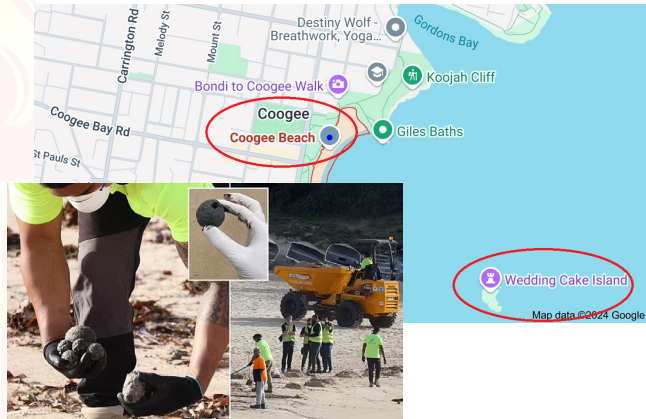
- Russia's army has taken full control of the **strategic hilltop town of Vuhledar in eastern Ukraine**.
- Vuhledar - which means "gift of coal" - is a coal mining town in **eastern Ukraine's Donetsk region** with a pre-war population of around 14,000 people, nearly all of whom have fled.
- Located on strategic high ground, the town has **resisted capture since Russia launched its full-scale invasion in 2022**.
- Vuhledar's strategic importance is its proximity to a rail line connecting Crimea – the Black Sea peninsula annexed by Russia in 2014 – to the industrial Donbas region, which comprises Donetsk and Luhansk regions, most of which Moscow controls.



Coogee Beach

- Beaches in Sydney, Australia were left contaminated and closed after **large clumps of dark waste called "fatbergs"**, washed up onshore.

- Fatbergs are large, solid masses that form in sewer systems **when fats, oils, and grease (FOG) combine with non-biodegradable waste**, such as wet wipes, diapers, and other products not designed to break down in water.
- The beach is sheltered by a **rocky island called Wedding Cake Island** that provides some natural protection from strong ocean currents.



NEOM project

- Saudi Arabia's futuristic **mega-city project, NEOM**, has taken a significant step towards reality with the unveiling of **Sindalah**, a luxury island in the Red Sea.
- The name NEOM is derived from two words: **neo – meaning 'new' & 'M' for 'Mustaqbal', an Arabic word meaning 'future'**.
- NEOM is best known as **"The Line,"** a pair of **170-kilometre-long**, mirror-encased skyscrapers set to extend from the Red Sea coast inland.
- The development of NEOM and Sindalah is part of **Saudi Arabia's Vision 2030**, a strategic initiative led by **Crown Prince Mohammed bin Salman** to reduce the country's reliance on oil.



Species in News

Candy Leaf



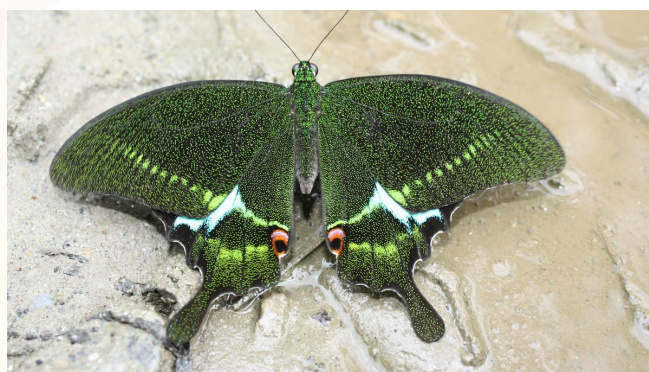
- A team from the Institute of **Advanced Study in Science and Technology (IASST)** in Guwahati highlighted the therapeutic properties of Candy Leaf, or **Stevia rebaudiana**.
- Candy Leaf, also called **sweetleaf** or **sugarleaf**, is a perennial shrub renowned for its natural non-caloric sweetening characteristics **as a sugar-substitute**.
- It has therapeutic properties for diseases like **endocrine, metabolic, immune, and cardiovascular diseases**, because of its effect on cellular signalling systems.
- It suppresses the **phosphorylation of Protein Kinase C (PKC)**, a process linked to inflammation in various diseases, thus helping to reduce inflammation, a key factor in many chronic health conditions.
- **Originally native to Brazil and Paraguay**, Candy Leaf is widely grown in many parts of India and is also exported.

Swallowtail butterflies

- A new study has revealed that the **overexploitation of 25 medicinally valuable host plant** species is endangering the swallowtail butterflies (family: **Papilionidae**) in the forest habitats of Assam.
- **The Bodoland Territorial Region**, an area renowned for its rich biodiversity is often referred to as the **"citrus belt of the world"**

is seeing the alarming decline of the butterfly.

- India hosts **77 of the 573 swallowtail butterfly species** recorded across the world so far.
- **The International Union for Conservation of Nature (IUCN)** designated the northeastern part of the country, where 69 species have been recorded, a **'swallowtail-rich zone'** under the Swallowtail Conservation Action Plan.
- The study observed the absence of rare species of the butterfly such as the **Bhutan glory (Bhutanitis lidderdalii)** and the **Kaiser-i-Hind (Teinopalpus imperialis)**, which may be linked to the diminished availability of host plants.



Halari donkeys



- The Halari donkeys, native to the Halar region of Gujarat, are considered to be intelligent animals which work closely with human beings.
- The average Halari donkey is **white in colour**, and is larger and **more resilient than other donkey breeds**.
- It is an important domestic animal in the **semi-arid landscape of Jamnagar and Dwarka districts** in Gujarat's Saurashtra region.
- Halari donkey milk is known for its sweetness.
- Milk powder made from it can fetch upwards of ₹7,000 a kg in the international market, and is used for cosmetic purposes.

Indian Wild Ass



- The population of the **Indian Wild Ass (Equus hemionus khor)**, found only in Gujarat, has risen by about 26.14% since 2020, according to the latest census.
- These animals, **primarily located in the Little Rann of Kutch's Wild Ass Sanctuary**, are one of five subspecies of the Asiatic wild ass (*Equus hemionus*), also called the onager.
- Locally known as "**Ghudkhur**," they are classified as **Near Threatened** on the IUCN Red List.
- Gujarat conducts the **Wild Ass Population Estimation (WAPE)** every four years.

Water chestnut (Goer)



- Water chestnuts, known as "**goer**" in Kashmir, provide essential income for families around **Wular Lake** and are in high demand during autumn.
- **Harvesting begins in late September**, with villagers undertaking the labour-intensive task of gathering water chestnuts.
- The edible kernels are **peeled, dried, and ground into flour**, while the hard outer shells are **used as fuel in traditional kangri fire pots** for winter warmth.
- However, **production has declined due to dry weather** and expanding marshland around the lake, impacting local livelihoods.

Tenkana



- A team of arachnologists has identified a **new genus of jumping spiders** called **Tenkana**, named after the Kannada word for "south," as the species are found in southern India and northern Sri Lanka.
- Two previously identified species, **Tenkana manu** (from south India and Sri Lanka) and **Tenkana arkavathi** (from Karnataka), were reclassified under this new genus.
- Additionally, a **new species, Tenkana jayamangali**, was discovered in Karnataka, bringing the genus to three species.
- Unlike forest-dwelling relatives, **Tenkana spiders prefer drier, ground habitats** and have been located in Tamil Nadu, Puducherry, Karnataka, Telangana, and Andhra Pradesh.

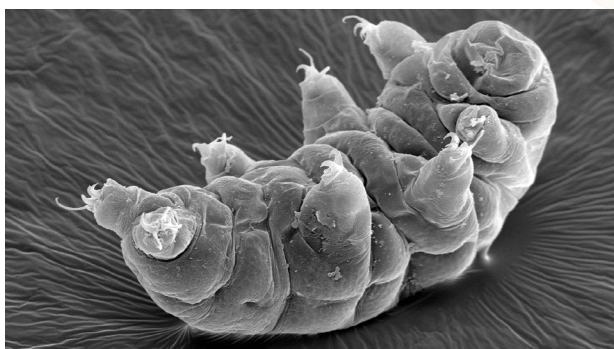
Indian Flapshell Turtles



- A woman and her daughter were arrested recently for allegedly smuggling to Noida, **the Indian flapshell turtles**, which they had caught from a river in Mathura, UP.
- The turtle is protected under the **Indian Wildlife Protection Act of 1972**.
- Smuggling turtles is a **non-bailable offence** under the Act.
- The Indian flapshell turtle (**Lissemys punctata**) is a **freshwater species of turtle**.

- The Indian flapshell turtle is found in **Pakistan, India**, Sri Lanka, Nepal, Bangladesh (Indus and Ganges drainages), and Myanmar (Irrawaddy and Salween Rivers).
- It is morphologically **an evolutionary link** between the softshell and hardshell aquatic turtles.
- It is under the **Vulnerable category** of IUCN Red List.

Tardigrades



- A team of researchers has identified the genetic mechanisms that help a newly discovered species of tardigrades (*Hypsibius henanensis*) **withstand high levels of radiation**.
- These creatures have the capability to survive radiation **levels nearly 1,000 times higher than the lethal dose for humans**.
- Also known as **water bears or moss piglets**, the species comprises thousands of genes, which **become more active when exposed to radiation**.
- They protect the microscopic animals' DNA from damage and repair breaks
- The findings could one day be **harnessed to help protect astronauts** from radiation during space missions, clean up nuclear pollution or improve cancer treatment.

Asiatic Golden Cat

- The elusive Asiatic golden cat (*Catopuma temminckii*) has been rediscovered in Assam's **Manas National Park**.
- The Golden cat is **a medium-sized wild feline** found across **Northeast India, Southeast Asia, and southern China**.
- The species thrives in a **wide range of habitats**, from tropical rainforests to sub-alpine forests, at elevations of up to 3,738 metres.

- Its rediscovery in Manas National Park **underscores the need for continued conservation efforts to ensure its survival** in the region.
- *Catopuma temminckii* is listed as **Near Threatened** under the **IUCN Red List** and is **Protected under Schedule 1 of Wildlife (Protection) Act, 1972**.



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Keywords

1. **Cobefy:** This new **antipsychotic drug**, a combination of xanomeline and trospium chloride, is the first to treat **schizophrenia** by targeting cholinergic receptors, avoiding the side effects of traditional dopamine-focused treatments.
2. **Gender Performativity:** It is the theory that **gender and gender roles are social performances** suggests that behaviours associated with being “manly” or “feminine” are learned and enacted **based on societal expectations**, rather than being inherent or natural traits
3. **Precision Medicine:** sometimes known as “**personalised medicine**” is an emerging approach for **disease treatment and prevention** that takes into account **individual variability in genes**, environment, and lifestyle for each person.
>> It is in contrast to a one-size-fits-all approach, in which disease treatment and prevention strategies are developed for the average person, with less consideration for the differences between individuals.
4. **Internet Vigilantism:** It refers to taking justice into one’s own hands online through actions like public shaming, targeted surveillance, unwanted attention, and coercion to influence public opinion and punish individuals. This form of activism involves using the internet for punitive actions without legal authority.
5. **Ossification Test:** The procedure that analyses bones to determine age involves taking x-rays of bones like the clavicle, sternum, and pelvis. These bones are selected because they experience significant changes as a person ages. The degree of growth or development in these bones helps estimate the individual’s age.
6. **Click-to-Cancel Rule:** The **Federal Trade Commission (FTC)** of the US government announced the “**Click-to-Cancel**” Rule to make it easier for consumers to cancel subscriptions, memberships, and other recurring-payment services. This rule mandates that sellers provide a cancellation process as simple as the sign-up process, aiming to address deceptive practices in the digital economy
7. **Non-Kinetic Warfare:** It includes tactics like cyberattacks, electronic warfare, and economic strategies, often involving non-military players. With advances in technology, it can be more destructive than traditional warfare. For example, cyberattacks on critical infrastructure can severely disrupt a country, as seen globally.
8. **Exercise Naseem-Al-Bahr:** It is biennial naval exercise between the **Indian Navy and Royal Navy of Oman** since 1993. The 2024 edition was held in Goa. Oman is the first Gulf country with which all the three wings of India’s defence forces hold joint exercises.
9. **KAZIND-2024** - 8th edition of annual India-Kazakhstan Joint Military Exercise was held in Uttarakhand. **It was started in the year 2016.**
10. **PM Young Achievers Scholarship Award Scheme for Vibrant India (PM-YASASVI):** It is a Centrally Sponsored Scheme implemented by the **Ministry of Social Justice and Empowerment** as a comprehensive **umbrella scheme** aimed at uplifting students from **Other Backward Classes (OBC), Economically Backward Classes (EBC), and Denotified Tribes (DNT)** by providing Pre-Matric and Post Matric Scholarships.

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Sreedhanya Suresh IAS
Inspector General of
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Meera K IAS
Sub Collector (SDM)
Ernakulam



Safna Nazarudeen IAS
Sub Collector (SDM)
Thiruvalla



Kiran P B IPS
Asst. Commissioner
of Police
Malappuram



Ankit Asokan IPS
City Police
Commissioner
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