

Factly Weekly

Compilation

2025

**For UPSC CSE Prelims
Exam**

1st Week

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IMF's latest World Economic Outlook

News: The International Monetary Fund (IMF) has released the latest update of its World Economic Outlook (WEO) on July 29th.

About IMF's latest World Economic Outlook

Growth rates in %	2023	2024	2025 (forecast)
World Output	3.5	3.3	3
US	2.9	2.8	1.9
China	5.4	5	4.8
Euro Area	0.5	0.9	1
Germany	-0.3	-0.2	0.1
UK	0.4	1.1	1.2
Japan	1.4	0.2	0.7
Russia	4.1	4.3	0.9
India	9.2	6.5	6.4
Pakistan	-0.2	2.5	2.7

Source: IMF

Source – IMF

- The **World Economic Outlook (WEO)** provides a **comprehensive picture of the global economy** as well as details of **individual countries**.
- **Released by:** International Monetary Fund (IMF)
 - The IMF releases the WEO **twice every year**, in April and October, apart from **updating** it twice – in January and July.
- **Key Highlights of WEO 2025 Report**
 - **Theme:** Global Economy: Tenuous Resilience amid Persistent Uncertainty
 - **Key takeaways:** There are **two main takeaways** for the state of the global economy.
 - The **global economy** has proven to be **resilient, albeit tenuous**
 - The **outlook** is plagued by **persistent uncertainty**
 - **Global scenario:** Global growth is projected at **3.0 percent for 2025** and **3.1 percent in 2026**.
 - The forecast for 2025 is 0.2 percentage point **higher** than that in the reference forecast of the April 2025 World Economic Outlook (WEO) and 0.1 percentage point **higher** for 2026.
 - **Indian scenario:** India continues to be a **bright spot** in the global economy.
 - It is expected to grow **4% in 2025**.
 - India is fast **bridging the gap** and ensuring that it **overtakes one developed economy after another**, at least in terms of total GDP.

About International Monetary Fund (IMF)

- The International Monetary Fund (IMF) is a specialized agency of the United Nations, established in **1944 at the Bretton Woods Conference**.
- **Headquarters:** Washington D.C.
- **Members:** IMF currently has 191 member countries.
- **Objectives of the IMF**
 - To promote international monetary cooperation and exchange rate stability.
 - To facilitate balanced growth of international trade and global economic stability.
 - To reduce poverty and foster high levels of employment and sustainable economic growth.
 - To provide a forum for consultations and policy advice among member countries.

CRIB- A new Human Blood group

News: A new blood group, previously unidentified anywhere in the world, has been discovered in a South Indian woman from Kolar district in Karnataka.

About CRIB- A new Human Blood group

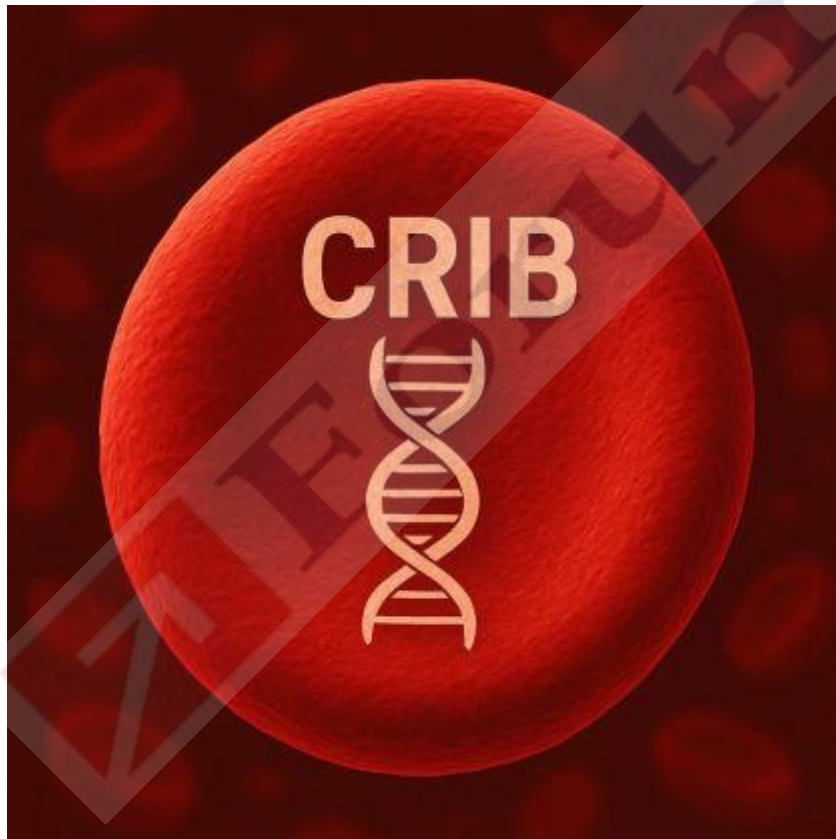


Figure 1. Source – Health Magazine

- The CRIB blood group is a **newly identified blood type** outside the existing major systems like ABO and Rh.
- **Full form:** In recognition of its origin, the group has been officially named 'CRIB', with **CR** representing **Cromer** and **IB** standing for **India, Bengaluru**.
- **System:** It belongs to the **INRA (Indian Rare Antigen) blood group system**, which was officially recognized by the **International Society of Blood Transfusion (ISBT)** in 2022.
- It is an **entirely new antigen** not fitting into the **43 known blood group systems** previously recognized by the ISBT.
- **Characteristics**
 - It is characterized by the **absence of a high-prevalence antigen** found in most people.

- This absence of a common antigen makes **blood transfusions extremely complex** as only other CRIB-negative blood can be used, which is extremely rare.

- **Importance**

- It plays a crucial role in **cases of Hemolytic Disease of the Fetus and Newborn (HDFN)**, where **antibodies from the mother attack the red blood cells of the fetus**.
- Identifying the **CRIB group early in such cases** could help **prevent life-threatening complications** during pregnancy.

“Wise Use of Wetlands”

News: Member countries of the Ramsar convention have adopted India’s resolution on ‘Promoting Sustainable Lifestyles for the wise use of Wetlands’ at Ramsar COP15 in Zimbabwe.

About “Wise Use of Wetlands”

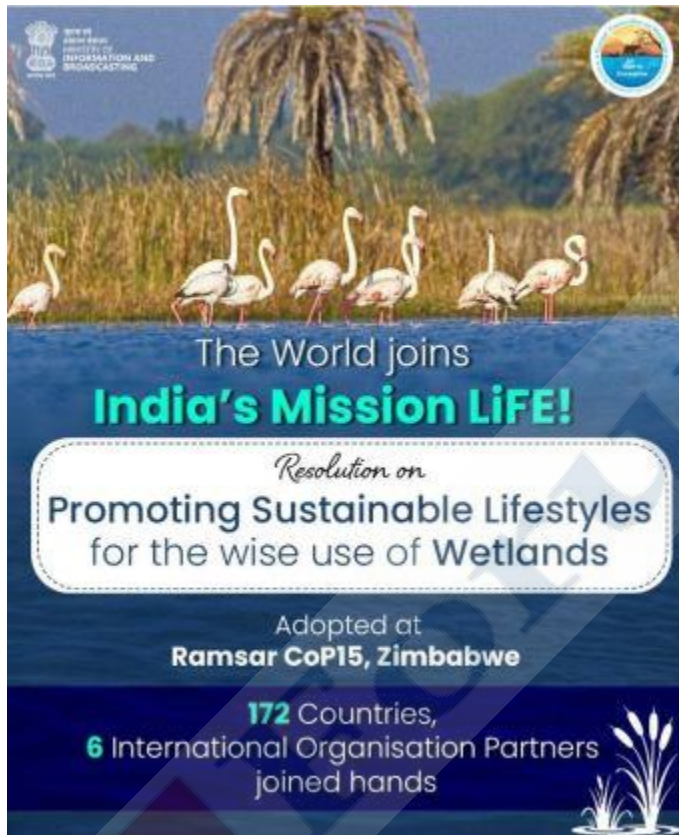


Figure 2. Source – MIB

the importance of:

- **adopting national wetland policies**, either separately or as a component of wider initiatives such as national environmental action plans;
- **developing programmes** covering wetland inventory, monitoring, research, training, education and public awareness;
- **developing integrated management plans** at wetland sites.
- **Prohibited activities:** The concept of “wise use” also prohibits a number of activities in notified wetlands including:

- The “**wise use**” of wetlands is the central philosophy of the **Ramsar Convention**.

- **Definition:** The **Ramsar Convention** defines wise use of wetlands as the **maintenance of wetlands’ ecological character**, achieved through the implementation of **ecosystem approaches**, within the context of **sustainable development**”.

- The wetland wise use concept focuses on **ecological character; ecosystem approach and sustainable development**.

- **Decentralized approach:** Wise use also recognises that **management of wetlands** should be **decentralised**.

- **Party obligations:** Contracting Parties **commit to work towards the wise use** of all the wetlands and water resources in their territory, through **national plans, policies and legislation, management actions and public education**.

- In **1990** the Contracting Parties adopted **Guidelines for the implementation of the wise use concept**. The Guidelines emphasized

- **conversion for non-wetland** uses including encroachment of any kind; setting up of any **industry** and expansion of existing industries; disposal of **construction and demolition waste**; **poaching**; discharge of **effluents** among others.
- **Recent Developments in Wetland Conservation in India**
 - National Plan for Conservation of Aquatic Ecosystems (NPCA)
 - The Wetlands (Conservation and Management) **Rules, 2017**
 - **Wetlands of India Portal (2021)**: Launched on **October 2, 2021**, this portal provides comprehensive information on India's wetlands.
 - **Wetlands Rejuvenation Programme**: Initiated by MoEFCC in 2020, this program aims to rejuvenate over 500 wetlands across India.
 - **Amrit Dharohar Scheme**: Launched with the Union Budget 2023-24, the Amrit Dharohar Scheme is a key initiative aimed at optimizing wetland utilization over the next three years.
 - **Centre for Wetland Conservation and Management (CWCM)**: Established on World Wetland Day 2021, this center focuses on addressing research needs and knowledge gaps in wetland conservation.

About Ramsar Convention and India

- It is an international treaty for the **conservation and wise use of wetlands**.
- It is named after the **Iranian city of Ramsar**, on the Caspian Sea, where the treaty was signed on **February 2, 1971**.
- **India** ratified the convention on **February 1, 1982**.
- India has **91 Ramsar Sites** (1.36 million ha), which is the **largest network in Asia** and **third largest globally**.

Mount Cilo

News: Turkey's glaciers, particularly on Mount Cilo and Mount Ararat, are rapidly melting due to the accelerating impacts of climate change.

About Mount Cilo

- Mount Cilo is located in the Yüksekova district of Hakkâri Province, in the southeasternmost part of Turkey, near the borders with Iraq and Iran.
- It is the second-highest mountain in Turkey
- Mount Cilo is part of the **East Taurus Mountains** (*Doğu Toroslar*) and lies within the **Hakkâri Mountains** range.
- The mountain forms the western part of the **Cilo-Sat Mountains National Park**, which was officially established in the year **2020**.
- Mount Cilo features **five prominent peaks**: **Uludoruk Peak**, **Suppa Durek Peak**, **Kosedireği Mountain**, **Kisara Mountain** and **Maunseli Sivrisi**

INS Himgiri

News: Recently, the Indian Navy formally took delivery of the advanced guided-missile frigate *Himgiri*.

About INS Himgiri

- It is the **first Project 17A ship** to be built by GRSE.
- It is **third vessel in the Nilgiri-class series** under Project 17A.

- These warships are **designed to be versatile, multi-mission platforms** capable of addressing current and future maritime threats. *Himgiri* represents a significant leap in the Indian Navy's operational capabilities.
- It was designed by the **Warship Design Bureau (WDB)** and the construction was overseen by the **Warship Overseeing Team in Kolkata**.

Features

- The frigate is equipped with **state-of-the-art weaponry**, including the *BrahMos* cruise missile system for anti-ship and land-attack missions, and the *Barak 8* missile system for air defence.
- The ship features a **modular and ergonomic design** and an **advanced AESA radar and modern combat management systems**.
- The ship is capable of **conducting anti-air, anti-surface, and anti-submarine warfare operations**.
- It is powered by a **combination of diesel engines and gas turbines (CODAG configuration)**, allowing enhanced speed and agility.
- The ship is also **equipped with full aviation facilities to support the operation of helicopters onboard**, thereby enhancing its surveillance and strike capabilities.
- With 75% indigenous content, the construction of *Himgiri* demonstrates India's robust defence manufacturing capabilities.

Ashtamudi Lake

News: Kerala HC directs State government and SWAK to constitute Ashtamudi Wetland Management Unit for its conservation.

About Ashtamudi Lake

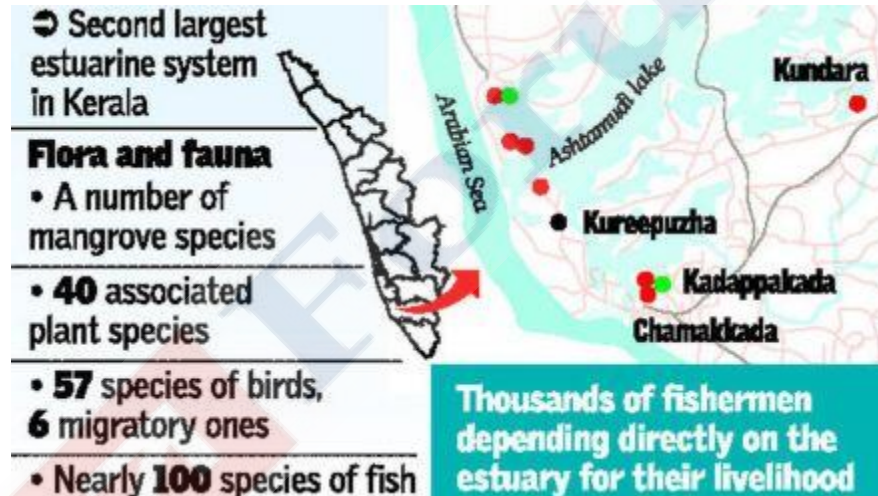


Figure 3. Source – TH

- It is a unique large **palm-shaped** (also described as octopus-shaped) **brackish-water estuarine lake**.
- **Location:** It is located in the **Kollam District of Kerala**.
- It is often referred to as the **gateway to the backwaters of Kerala**.
- It is **second only in size** to the **Vembanad estuary** ecosystem of the state.
- **Naming:** **Ashtamudi** means '**eight hills or peaks**' (Ashta : 'eight'; mudi : 'peaks')

in the local Malayalam language.

- The name is **indicative of the lake's topography** with its **multiple branches**.
- **Recognition:** It was included in the list of **wetlands of international importance**, as defined by the **Ramsar Convention**, in **2002**.
- **Drainage:** The lake is fed by several rivers, including the **Kallada River**, and eventually **drains into the Arabian Sea via Neendakara estuary**.

- **Activities:** One of the most popular activities on Ashtamudi Lake is embarking on a **houseboat cruise**.
 - These **traditional Kerala houseboats** are known as '**kettuvallams**'.
- **Biodiversity:** The lake's ecosystem supports numerous species of fish, **amphibians, reptiles, and invertebrates**.
 - The surrounding **wetlands and mangroves** provide habitat for a variety of bird species, including **kingfishers, herons, egrets, and cormorants**.
 - The **Kallada River**, which flows into Ashtamudi Lake, is a vital **breeding ground** for many species of fish, including the popular **pearl spot fish (karimeen)**.
- **Historical and cultural significance**
 - The lake and its surrounding areas have been important centers of trade and commerce for centuries, with **Kollam (formerly Quilon)** serving as a prominent **port town**.
 - The Ashtamudi region is also known for its traditional **coir industry**.

Supply and Use Tables (SUTs)

News: The Ministry of Statistics and Programme Implementation (MoSPI) has released the 'Supply and Use Tables of 2020-21 and 2021-22'.

About Supply and Use Tables (SUTs)



Government of India
Ministry of Statistics and
Programme Implementation

Figure 4. Source – MoSPI

- The Supply and Use Tables (SUTs) represent a **detailed snapshot of all economic activities** taking place in the economy.
- They are **powerful analytical tools** that present the structure of an

economy as well as interlinkages among the various economic actors.

- **Released by:** Ministry of Statistics & Programme Implementation
- **Purpose of SUT**
 - They serve **multiple purposes** and have gained prominence due to their **statistical robustness and analytical flexibility**.
 - They offer a **comprehensive framework** that **integrates the three approaches to measuring Gross Domestic Product (GDP)—production, income, and expenditure** within a unified structure.
 - SUT is a very powerful tool for **comparing and reconciling data from diverse sources**, thereby improving the coherence and consistency between production and expenditure estimates.
 - **Compilation of product-wise value of output** by different industries, net product taxes, trade and transport margin, import on supply side, and intermediate consumption by different industries, final use, export by products make the SUT more data demanding.

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- These detailed product-level information by industry enables policymakers, researchers, and academicians to undertake **granular analysis** of the structure, composition and dynamics of the **economy**.
- **SUT Framework**
 - **Supply and Use Tables (SUT)** are presented as **two interlinked matrices**: the **Supply Table and the Use Table**, structured in a product-by-industry matrix.
 - The **Supply Table** captures the **total supply of goods and services**, both from domestic production by industry and from imports.
 - The **Use Table** records the **utilization of these products** across various components—intermediate consumption by industries, final consumption, gross capital formation, and exports.

Grant in aid to National Cooperative Development Corporation (NCDC)

News: The Union Cabinet has approved the Central Sector Scheme “Grant in aid to National Cooperative Development Corporation (NCDC)” with an outlay of Rs.2000 crore for a period of four years from 2025-26 to 2028-29.

About Grant in aid to National Cooperative Development Corporation (NCDC)

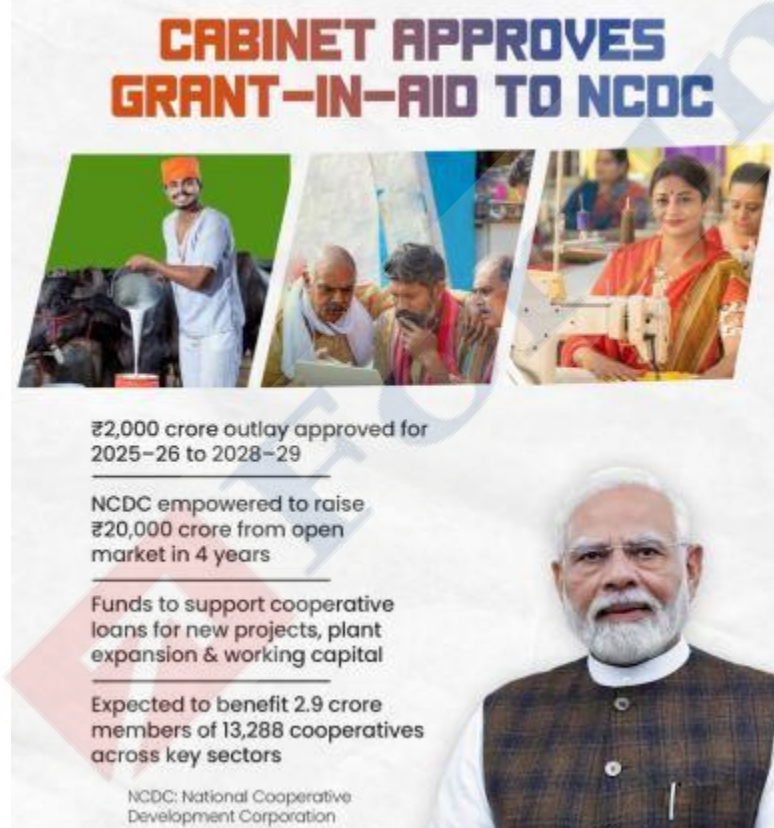


Figure 5. Source – PIB

agency for this scheme for the purpose of **disbursement, follow up, monitoring** of implementation of project, and **recovery** of loan disbursed out of the fund.

- It is a scheme to provide **financial support to the cooperative societies** throughout the country
- **Type:** Central Sector Scheme
- **Outlay:** The scheme provides a **budgetary support of 2000 crore for a period of four years** from 2025-26 to 2028-29 (Rs.500 crore each year from FY 2025-26).
- **Financial implications:**
 - On the basis of grant in aid of Rs.2000 crore, NCDC will be able to **raise Rs.20,000 crore** from open market over a span of four years.
- **Benefits**
 - The scheme will benefit approximately **9 crore members of 13,288 Cooperative societies** of various sectors like Dairy, Livestock, Fisheries, Sugar, Textile, Women led cooperatives across the country.
- **Implementation strategy and targets:**
 - NCDC will be the **executing**

- NCDC will **provide loans to cooperatives either through state government or directly**, as per NCDC guidelines.
- NCDC will provide loans to cooperatives, **long term credit** for setting up/ modernization/ technology upgradation/ expansion of project facilities for various sectors and working capital to run their businesses efficiently and profitably.
- **Impact, including employment generation potential:**
 - Funds provided to these cooperatives will lead to **creation of income generating capital assets** and provide cooperatives with much needed **liquidity** in the form of working capital.
 - It will be an essential tool to **bridge the socio-economic gap** and increase **participation of women** in the workforce.
 - It will also create widespread **employment opportunities** across different skill levels.

About National Cooperative Development Corporation (NCDC)

- The NCDC was established by an **Act of Parliament in 1963** as a **statutory Corporation** under the **Ministry of Cooperation**.
- **Functions**
 - Planning, promoting and financing programmes for production, processing, marketing, storage, export and import of agricultural produce, food stuffs, certain other notified commodities.
 - It finances projects in the rural industrial cooperative sectors and for certain notified services in rural areas like water conservation, irrigation and micro irrigation.
 - It provides direct funding of projects under its various schemes of assistance on fulfillment of stipulated conditions.

Nomination of Panel of Chairperson

News: Lok Sabha Speaker Om Birla announced that N K Premachandran has been nominated as an empanelled member to preside over the proceedings of the House.

About Nomination of Panel of Chairperson



Source – Lok Sabha

- **Enabling provision:** The **Panel of Chairperson** is **nominated** under **Section 9** in **Rules of Procedure and Conduct of Business in Lok Sabha**.
- **Rule 9:** According to the rule, at the **commencement of the House or from time to time**, as the case may be, the **Speaker** shall nominate from **amongst the members** a panel of **not more than 10 Chairpersons**, anyone of whom **may preside over the House** in the **absence** of the Speaker and the Deputy Speaker when **so requested** by the Speaker or, in the **absence** of the Speaker, by the Deputy Speaker.
- A Chairperson so nominated, **holds office until a new Panel of Chairpersons is nominated**, unless he/she **resigns** earlier from the Panel or is appointed a Minister or elected as Deputy Speaker.
- A **minister cannot** be a member of panel of chairpersons.
- Any one member of panel of chairpersons may **preside** over the House in the **absence** of the Speaker and the Deputy Speaker.
- A member of the panel of chairpersons **cannot preside** over the House, when the office of the Speaker or the Deputy Speaker is **vacant**.
 - During such time, the **Speaker's duties** are to be performed by such member of the House as the **President may appoint** for the purpose.
- It is **not necessary** that the **chairpersons** must be from the **ruling party only**.
 - As per the procedure, **leaders of different parties suggest names of their members** for the panel, after that the Speaker appoints them to the panel.

Darwin Tree of Life (DTOL)

News- The Darwin Tree of Life (DTOL) project is nearing the completion of its first phase.



Figure 6. Source- Economist

About Darwin Tree of Life (DTOL)

- It is a large-scale *genome sequencing project* that aims to decode the complete genetic information of around *70,000 species of eukaryotic organisms found in Britain and Ireland*.
- These eukaryotic species include: *Animals, Plants, Fungi, Protists*

Eukaryotes are organisms made up of complex cells that *contain a well-defined nucleus* and other membrane-bound structures (organelles).

This makes them more advanced than *prokaryotes* like bacteria and archaea, which lack a nucleus.

Earth BioGenome Project (EBP)

The *DTol project* is part of the broader Earth BioGenome Project (EBP), a global scientific effort with the following key features:

- **Objective:** To sequence, catalogue, and study the genomes of all known eukaryotic species on Earth.
- **Timeline:** 10 years
- **Implementation:** Through a global network of researchers, scientific institutions, and partner projects.

Significance of the DTol Project

- **Advances scientific understanding** of biodiversity, evolutionary relationships, and species classification.
- **Supports conservation efforts** by generating genomic data crucial for protecting endangered species and ecosystems.
- **Drives innovation** in fields like *medicine, agriculture, and biotechnology* by uncovering beneficial genes and biological traits present in nature.

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme

News: Prime Minister Narendra Modi recently released the 20th installment of the PM-Kisan scheme from Banauli in Varanasi during his visit to the city.

About Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme



Figure 7. Source – NIC

- The **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** is a **Central Sector Scheme** launched by the Government of India to provide income support to landholding farmer families.

- **Launched:** The scheme was officially launched by Prime Minister Narendra Modi on **February 24, 2019**, and it came into effect from **December 1, 2018**.

- **Objective:** To supplement the financial needs of farmers in procuring inputs for agriculture and allied

activities, as well as to support domestic needs.

- **Features:** Under the scheme, each eligible farmer family receives **₹6,000 per year**, which is paid in **three equal installments of ₹2,000** every **four months**. The amount is directly transferred to the beneficiary's bank account through the Direct Benefit Transfer (DBT) system.
- A farmer family under the PM-KISAN scheme is defined as a unit consisting of a husband, wife, and minor children who own cultivable land according to the land records maintained by the respective State or Union Territory.

- Initially, the scheme was limited to small and marginal farmers who owned up to **2 hectares of cultivable land**.
- However, from **June 1, 2019**, the scheme was extended to include **all landholding farmer families** regardless of the size of their landholdings. To be eligible, the land must be in the name of the applicant.

Apna Ghar Initiative

News: The Ministry of Petroleum and Natural Gas has launched a new initiative, '**Apna Ghar**', to improve the safety and welfare of long-haul truck drivers.

About Apna Ghar Initiative



Figure 8. Source – MoPNG

- The '**Apna Ghar**' initiative was launched by the **Ministry of Petroleum and Natural Gas**.
 - It aims to improve the **safety, comfort, and welfare** of truck drivers during long-distance journeys.
 - The initiative supports India's trucking community, which plays a vital role in maintaining national supply chains.
 - As of **July 1, 2025**, **368 'Apna Ghar' units** have been established. These units have a total of **4,611 beds**.
 - The facilities have been set up by **Public Sector Oil Marketing Companies (OMCs)** at their retail fuel outlets.
- Objective of the Programme**
- To provide **resting and refreshment facilities** for truck drivers on **national and state highways**.
 - To reduce **driver fatigue** and promote **road safety**.
 - To improve the **quality of life** for truckers by offering hygienic and dignified rest areas.

Key Facilities Offered

- Each Apna Ghar unit includes:
 - Dormitory accommodation** for rest and sleep.
 - Restaurants or dhabas** offering meals.
 - Clean toilets and dedicated bathing areas**.
 - Self-cooking spaces** for those who prefer to cook their own food.
 - Purified drinking water** to ensure hygiene and safety.
- A dedicated '**Apna Ghar**' **mobile application** has been launched.
 - The app allows: **Online bookings, User registrations and real-time access** to facility information.

Rhisotope Project

News: A South African university launched an anti-poaching campaign with a unique approach – injecting radioactive isotopes into rhino horns.

About Rhisotope Project



Source – IAEA

- It is a pioneering conservation initiative begun in **South Africa in 2021**, aiming to **combat rhino poaching** by injecting safe, traceable amounts of **radioactive isotopes into live rhinoceros horns**.
- **Launched by:** **University of the Witwatersrand**, with support of the International Atomic Energy Agency (IAEA)
- **Objective:** The Project aims at safely **inserting radioactive isotopes** into rhino horns to deter poachers and **stop smuggling** by making the horns **detectable at international borders**.
- **Working/Procedure**
 - **Injection:** A small **hole** is drilled in the horn and **Radioisotope** is inserted into it.
 - The **radioactive isotopes or radioisotopes** are the **unstable** form of an element that **emit radiation** to transform into a more stable form.
 - The radiation can be **traced**, and typically causes changes in the substance it falls upon.
 - **Detection:** The tests conducted under the Project confirmed that individual horns could be **detected** inside full **40-foot shipping containers** by radiation portal monitors (RPMs) already deployed at borders, ports, and airports worldwide.
 - **Safety:** The procedure, according to the researchers, has proven to **show no harm to the rhinos** themselves, while making the horn “useless” and “poisonous” to humans.

Poaching Crisis

- **South Africa** has the **largest population of rhinos** with an estimated **16,000** but the country experiences high levels of poaching with about **500 rhinos killed for their horns every year**.
- According to the IUCN, the **global rhino population** was estimated to be about **500,000 at the start of the 20th century**. It has since **dwindled to 27,000**, owing to the burgeoning demand for rhino horns.

Other Projects to Save Rhino

- **Dehorning of Rhinos:** The project involves the removal of horns of Rhino's in order to deter poaching.
 - A **2024 study** showed that dehorning rhinos **reduced poaching by 78 per cent** over seven years on eight reserves, while another study established that this measure **impacted** their **ability to socialize** with their peers and noted **reductions in the sizes of their home ranges**.

Investor Education and Protection Fund Authority (IEPFA)

News: The Investor Education and Protection Fund Authority (IEPFA) is in the final phase of testing its Integrated Portal, designed to streamline claim processes and enhance accessibility for both investors and companies.

About Investor Education and Protection Fund Authority (IEPFA)



Figure 9. Source – IEPFA

- It is dedicated to **safeguarding investor interests** by facilitating the **return of unclaimed shares and dividends** and advancing **financial literacy**
- It is a **statutory body** in India, established in **2016** under the **Companies Act, 2013**.
- **Nodal Ministry:** Ministry of Corporate Affairs
- **Mission:** Its primary mission is to **protect investors' interests**, promote **financial literacy**, and ensure the **return of unclaimed shares, dividends**, and other investor dues.
- **Functions:** The Authority is entrusted with the responsibility of **administration of the Investor Education Protection Fund (IEPF)**, make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.
- The **IEPF** is to be utilized for :
 - The **refund** in respect of unclaimed dividends, matured deposits, matured debentures
 - Promotion of **investors' education**,

awareness and protection

- **Distribution of any disgorged amount** among eligible and identifiable applicants who have suffered losses due to wrong actions by any person
- **Reimbursement of legal expenses** incurred in pursuing class action suits under sections 37 and 245 by members

- **Initiatives taken:** Through flagship initiatives such as **Niveshak Didi, Niveshak Panchayat, and Niveshak Shivir**, IEPFA empowers individuals to make **informed financial choices** and fosters a **financially aware citizenry**.

Battery Waste Management Rules (BWMR)

News: With growing volumes of lithium batteries waste in country, there is a need to re-analyze the Battery Waste Management Rules (BWMR).

About Battery Waste Management Rules (BWMR)



Figure 10. Source – ET

- There is a growing volume of battery waste in India, with lithium batteries alone accounting for 7,00,000 of the 1.6 million metric tonnes of e-waste generated in 2022.

- Recognizing these risks, the government notified the **Battery Waste Management Rules (BWMR) in 2022** to ensure sustainable management and recycling.

Battery Waste Management Rules (BWMR), 2022

- **Released by:** Ministry of Environment, Forest, and Climate Change

- The rules replaced the **Batteries (Management and**

Handling) Rules, 2001.

- These rules guide the **channelisation of depleting resources** towards **refurbishment or recycling**.
- **Key Provisions of the Battery Waste Management Rules, 2022**

- **Comprehensive coverage:** The rules apply to **all types of batteries** – Electric Vehicle batteries, portable batteries, automotive batteries, and industrial batteries, including both new and refurbished batteries.
- **Extended Producer Responsibility (EPR):** Producers (including manufacturers and importers) are responsible for the **collection, recycling, and refurbishment** of waste batteries.
 - They must ensure waste batteries are collected and processed for recycling/refurbishment, and recovered materials go back into new battery production.
- **Collection & recycling targets:** Specific **targets for the recovery** of battery materials:
 - 70% by 2024-25
 - 80% by 2026
 - 90% from 2026-27 onwards
 - 100% of collected waste batteries must be recycled or refurbished

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- **Centralized online portal:** Establishment of a centralized portal for:
 - Registration and reporting for producers, recyclers, and refurbishers
 - Management of EPR certificates
 - Monitoring and compliance.
- **Polluter Pays Principle (PPP):** Environmental **compensation** is imposed on producers who **fail to meet their EPR targets**.
- **Ban on landfilling & incineration:** Prohibits disposal of waste batteries in landfills or by incineration to ensure environmentally sound management.
- **Mandatory registration:** All **producers, recyclers, and refurbishers** must register on the central portal for legal compliance and to continue their operations.
- **Role of public authorities & entities:** Public Waste Management Authorities and collection entities must **hand over** collected batteries only to **registered recyclers or refurbishers**.
- **Strict auditing and monitoring:** Regular audits and committee-based monitoring mechanisms are provided to ensure the effective enforcement of the rules.

Battery Waste Management (Amendment) Rules, 2025

- The Battery Waste Management (Amendment) Rules, 2025 further amend the 2022 rules.
- These amendments **focus** on enhancing recycling practices, promoting the use of recycled materials in battery production, and strengthening the framework for Extended Producer Responsibility (EPR).

Key Provisions of Battery Waste Management (Amendment) Rules, 2025

- **Prices of EPR Certificates:** The Central Pollution Control Board shall fix the **highest and the lowest price for EPR certificates**.
 - The prices shall be **equal to 100% and 30%, respectively of the Environmental Compensation leviable** on the obligated entities for **non-fulfilment of Extended Producer Responsibility** obligations.
 - **Earlier**, EPR certificates were generated by CPCB through the centralised online portal based on the recycled or refurbished quantities and assigned to recyclers or refurbishers, who could sell the assigned EPR certificates to Producer in exchange of waste batteries.
- The **Central Pollution Control Board** shall **prepare and recommend guidelines for imposition and collection of Environmental Compensation** from producers and entities involved in refurbishment and recycling of waste battery, in case of non-compliance of these rules.
 - **Earlier, Committee for Implementation** constituted by Central Pollution Control Board (CPCB) used to prepare and recommend guidelines for imposition and collection of Environmental Compensation.

HOPE Analog Mission in Tso Kar Valley, Ladakh

News: Indian Space Research Organisation (ISRO) has formally kicked off its first high-altitude analogue mission, Human Outer Planetary Exploration (HOPE), in the Tso Kar valley in Ladakh.

About HOPE Analog Mission in Tso Kar Valley, Ladakh



Source – Firstpost

- It is **ISRO's first full-scale analogue simulation mission**.
- **Full name:** HOPE is short form of – Human Outer Planetary Exploration.
- **Operated by:** The mission has been **built** and is being **operated by Protoplanet**, a Bengaluru-based startup.
 - It is being **backed by ISRO's Human Spaceflight Centre**.
 - It also involves scientific contributions from **IIT Bombay, IIT Hyderabad, IIST, and RGCB Trivandrum**.
- **Schedule:** The mission is scheduled to be conducted from **1st to 10th August 2025**.
- **Set up at:** It has been set up in one of the most **Mars-like environments** on Earth, a high-altitude, cold desert in **Tso Kar valley in Ladakh** located **4,530 m** above sea level.
- **Aim:** The Mission is **focused on people, testing** how humans handle the **physical and mental challenges** they would likely face during a **long space journey**, such as a crewed mission to Mars.
- **Components:** The Hope habitat is made up of **two interconnected modules**:
 - An 8-metre-wide **living unit** for the crew, and
 - A 5-metre **utility module** that contains essential equipment and support systems.
- **Experiments to be done:** Some of the key areas being tested include:
 - **Monitoring physical health:** Real-time monitoring of how the crew's body responds to high altitude and low-oxygen conditions.
 - **Studying mental well-being:** Analysis of stress levels, cognitive functioning, and teamwork performance in an enclosed and isolated setting.
 - **Testing new tech:** Field testing of advanced equipment like biomedical devices, prototype spacesuits, and communication tools under simulated Mars conditions.
 - **Running emergency drills:** Simulations of possible mission crises, such as equipment failure or health emergencies, to test how well response protocols work in extreme environments.

Mahanadi River

News: After a prolonged legal battle over sharing Mahanadi river water in a designated tribunal, Odisha and Chhattisgarh have now expressed willingness to resolve the dispute amicably between themselves.

About Mahanadi River

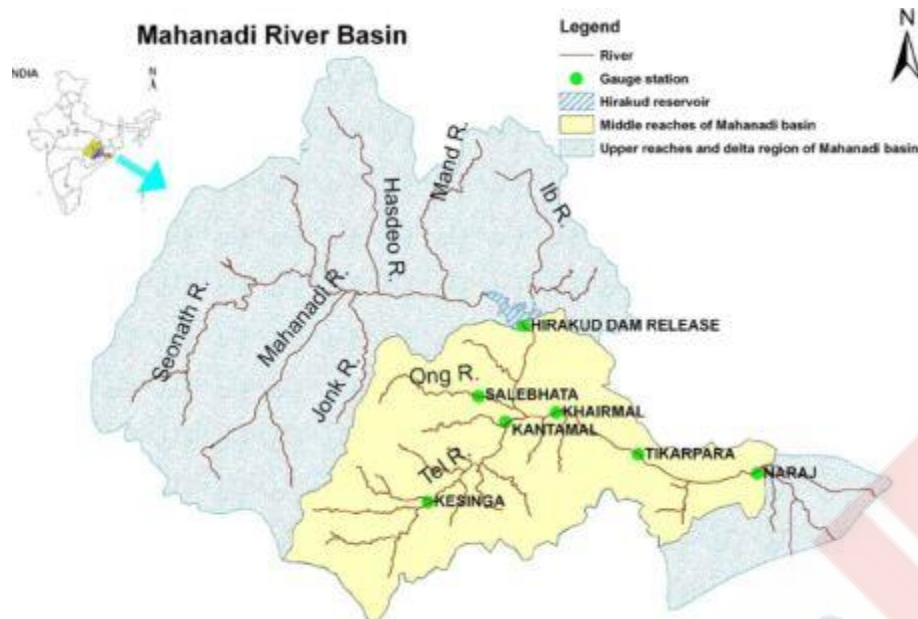


Figure 11. Source – Research Gate

- The Mahanadi (literally meaning **big river**) is an important river of the Peninsular India.

- **Source:** It has its source in the northern foothills of **Dandakaranya** near **Sihawa in Raipur District** of Chhattisgarh at an elevation of **442 m**.

- **Drainage basin**

- The **upper part of its drainage basin** lies in the **saucer-shaped basin** called the '**Chhattisgarh Plain**'.

- **53 %** of the drainage basin of this river lies in

Madhya Pradesh and Chhattisgarh, while 47 per cent lies in Odisha.

- The river is **bounded** in the north by **Central India hills**, in the south and east by the **Eastern Ghats** and in the west by **Maikal hill range**.
- **Course of river**
 - From its source, the river takes a north easterly course.
 - Beyond **Seorinarayan** it flows **eastwards** and after entering **Odisha**, it turns southwards below the **Hirakud Dam**.
 - Further below it turns **eastwards near Sonepur**.
 - On reaching the **Eastern Ghats**, the river flows through a narrow Gorge for 23 km near **Tikkarpara Range** and finally emerges in a **delta at Naraj** 11 km west of **Cuttack**.
 - **Falls into:** The Mahanadi finally empties itself in the **Bay of Bengal** after flowing for a distance of **857 km**.
- **Tributaries:** This basin is surrounded by hills on the north, west and south as a result of which a large number of tributaries join the main river from these sides.
 - **Left bank tributaries:** lb (251 km), the Mand (241 km), the Hasdo (333 km) and the Sheonath (383 km)
 - **Right bank tributaries:** Ong (204 km), the Jonk (196 km), and the Tel (295 km)
- **Delta:** The delta of Mahanadi spreads over an area of **9,500 sq. km** and is over **150 km broad**.
- **Mahanadi Water Dispute**
 - **Parties involved:** The dispute is between Odisha and Chhattisgarh.
 - **Legal action and Tribunal formation:** In November 2016, Odisha moved the Supreme Court seeking formation of a tribunal.
 - The Government of India constituted the **Mahanadi Water Disputes Tribunal in 2018** under the **Inter-State Water Disputes Act**.

Inter-State River Water Disputes Resolution in India

- **Constitutional and legal framework**

- **Article 262 of the Constitution:** It empowers Parliament to legislate for the adjudication of disputes relating to waters of inter-state rivers or river valleys.
 - It also allows Parliament to bar the jurisdiction of the Supreme Court and other courts over such disputes.
- **Entry 56 of the Union List:** Regulation and development of inter-State rivers and river valleys.
- **Inter-State River Water Disputes (ISRWD) Act, 1956:** It serves as the chief statutory mechanism for resolving such disputes.

Note: For more on the topic, please click [here](#).

Kopili River

News: In a significant move towards reviving river-based trade and promoting sustainable logistics in Assam, National Waterway-57 (River Kopili) has been made operational.

About the Kopili River

- Kopili River is a **major tributary of the Brahmaputra River**, joining it on the left bank.
- **Origin:** The Kopili River **originates on the southwestern slopes of Shillong Peak in Meghalaya**.
- It is an inter-state river that flows through both Meghalaya and Assam. It finally joins the Brahmaputra at a place known as Kopilimukh.
- It is the **largest south bank tributary of the Brahmaputra** in Assam.
- It is **surrounded by the Jayanti Hills on the west and the South Cachar and Mikir Hills** on the east.
- **Tributaries:** In its upper part, the river gets water from smaller rivers like Kharkor, Myntriang, Dinar, Longsom, Amring, Umrang, Longku, and Langkri.
 - In the lower areas of Assam, it is joined by other rivers such as Diyung, Jamuna, Umkhen-Borapani, Killing, Umtrew (also called Digaru), and Kolong.

District Flood Severity Index (DFSI)

News: The District Flood Severity Index (DFSI) has been developed by researchers from IIT Delhi and IIT Gandhinagar.

About District Flood Severity Index (DFSI)

- It is to provide a **comprehensive, data-driven tool to assess the impact of floods at the district level across India**.
- DFSI helps by **measuring both the size of floods and their impact on people's lives**.
- DFSI utilises **annual flood data from the Indian Meteorological Department (IMD)**, collected since 1967, which primarily covers large-scale riverine floods.
- **Key Parameters Used:**
 - Mean duration (in days) of flood events
 - Percentage of district area historically flooded
 - Total deaths caused by floods

- Number of people injured
- District population
- **Impact-Based Approach:** DFSI focuses on the human impact displacement, injuries, and deaths, providing a more holistic view of flood severity.
- **Significance:** DFSI can guide disaster management planning, prioritize resource allocation, and encourage better data collection at finer spatial scales.

Key Findings of the District Flood Severity Index (DFSI)

- **Patna ranks highest** on the DFSI due to its high population density, significant flood-affected areas, and human impact, despite fewer flood events.
- **Thiruvananthapuram** recorded the **most flood events** (231+), but doesn't appear in the top 30 on DFSI, showing that frequency alone doesn't determine severity.
- **Assam districts** like **Dhemaji, Kamrup, and Nagaon** feature prominently due to frequent and impactful flooding.
- **Urban flooding**, often caused by poor planning, differs from **riverine flooding** in rural areas, requiring tailored responses.

Flash Floods and Cloudbursts

News: A cloudburst led to flash floods in the high altitude villages of Uttarkashi, killing four people, leaving at least 60 people missing.

About Flash Floods and Cloudbursts



Figure 12. Source – Livemint

- A flash flood occurs when an **overwhelming quantity of water** rushes into an area over a very **short time** – often within minutes or hours of intense rainfall.
- In some cases, they are **triggered** by sudden **dam breaches** or **obstructions in rivers** giving way.
- **Features**
 - Unlike **regular floods** that rise gradually, flash floods strike **swiftly and with force**.
 - Water levels can rise in under **30 minutes**, catching people off guard and leaving little time to evacuate.
- **Common causes of flash floods include:**
 - Intense rainfall over a short duration
 - Steep slopes that rapidly channel water downhill
 - Urban drainage systems that prevent water absorption
 - Dry or hardened ground, especially after drought or wildfires
 - Sudden release of blocked water or dam breaches
- **Past examples**

- **India – 2013, Uttarakhand** disaster where flash floods, triggered by melting glaciers and torrential rain, left thousands dead or missing.
- **Spain – 2018**, a flash flood in Majorca, Spain, turned streets into rivers within an hour, killing more than a dozen people.
- **Germany – 2021**, floods in Germany washed away entire villages after days of relentless rain overwhelmed rivers and reservoirs.

About Cloudbursts

- A cloudburst refers to an **extreme amount of rain falling in a very short duration** over a **limited geographical area**, typically less than 20-25 kilometres.
- The India Meteorological Department (IMD) defines a cloudburst as **rainfall exceeding 100 mm per hour over a small region**.
- Cloudbursts often **occur in mountainous regions** like Himachal Pradesh, Uttarakhand, or Jammu and Kashmir.
- **Reason:** It is due to orographic lift i.e. when moist air rises rapidly due to terrain and cools quickly, releasing massive rainfall.

Relation between Flash floods and Cloudbursts

- **Cloudbursts** can **trigger flash floods**, especially in hilly terrain, but they are **not the same**.
- A **cloudburst** refers to the **rainfall event**, while a **flash flood** refers to the **result** – the **sudden overflow of water**.
- One can occur **without** the other.

Sarnath – Ancient Buddhist Site

News: India has submitted this year a dossier titled ‘Ancient Buddhist Site, Sarnath’ to the UNESCO World Heritage Centre for the 2025-26 nomination cycle.

About Sarnath – Ancient Buddhist Site



Figure 13. Source – ASI

- **Location:** It is a sacred city located in **north-east of Varanasi** near the **confluence of the Ganges and the Varuna rivers** in Uttar Pradesh, India.

● Historical/Religious significance

- It is **one of the four most important Buddhist pilgrimages** in the world for being the site where **Gautama Buddha taught Dharma** for the first time.

- The **other three** most important pilgrimages are **Lumbini** (the birthplace of Gautama Buddha), **Bodh Gaya** (the location of Lord Buddha's enlightenment), and **Kushinagar** (the location of Buddha's parinirvana).

- It is also said that Lord **Buddha's Dhammacakkappavattana Sutta** was written in Sarnath.

● Architectural Marvels of Sarnath

- **The Dhamekha Stupa:** A conspicuous structure believed to be the **dwelling place of Pañcavaggiya monks** after leaving Lord Buddha.
 - It was constructed by **Emperor Ashoka**.
 - It is considered the **sacred ground** where the voice of **Buddhism first resonated**.
- **The Chaukhandi Stupa:** Presently undergoing reconstruction, this stupa marks the site where **Buddha met his first disciples**.
- **The Ashoka Pillar (Lion Capital of Ashoka):** Despite facing fragmentation during Turk invasions, this pillar is an enduring imperial patronage symbol.
 - Its **emblem** also graces the **Indian flag**.
- **Monastery around Dhamekha Stupa:** Adding to the spiritual ambiance, the monastery around the Dhamekha Stupa offers a glimpse into the **communal life of the monks**.
- **Mulagandhakuti Vihara:** This modern temple stands where **Lord Buddha** is believed to have **spent his first rainy season in meditation**.
- **Sarnath Archaeological Museum:** Housing a vast **collection of artifacts**, it provides a visual narrative of **Sarnath's historical and cultural evolution**.

Ayurveda Aahara

News: The Food Safety and Standards Authority of India (FSSAI), in consultation with the Ministry of Ayush, have released a definitive list of Ayurvedic food preparations under the category of "Ayurveda Aahara."

About Ayurveda Aahara



Source – PIB

- Ayurveda Aahara refers to **food products** developed in line with the holistic **dietary principles of Ayurveda**, one of the world's **oldest systems of health and wellness**.
- **Need:** With rising **public interest in preventive health and sustainable living**, Ayurveda Aahara is increasingly recognised as a trusted nutritional choice that **harmonises** tradition with modern dietary habits.
- **Released by:** Food Safety and Standards Authority of India (FSSAI), in consultation with the **Ministry of Ayush**
- **Aim:** This initiative aims to **assist Food Business Operators (FBOs)** by providing a clear and credible reference for the manufacture of Ayurveda Aahara products.
- **Significance**
 - It brings India's **time-honoured food wisdom into the mainstream**, following the introduction of the **Food Safety and Standards (Ayurveda Aahara) Regulations in 2022**.
 - These regulations recognise foods based on recipes, ingredients, and processes from authoritative Ayurvedic texts.

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- The definitive list of Ayurveda Aahara products marks a pivotal step in aligning **India's traditional knowledge systems with modern regulatory frameworks.**
- **Authenticity:** The list is issued under **Note (1) of Schedule B of the regulations**, drawing directly from **classical Ayurvedic texts listed in Schedule A**, ensuring the authenticity and traditional basis of these food formulations.
 - The new list brings **unprecedented clarity and confidence to consumers and businesses**

Asian Giant Tortoise

News: The critically endangered Asian Giant Tortoise has been successfully reintroduced into the Zeliang Community Reserve located in Nagaland's Peren district.

About Asian Giant Tortoise



Figure 14. Source- Asian Survival Alliance

behavior. Instead of digging holes like other tortoises, the female gathers leaves into a large pile, lays up to **50 eggs** inside it, and then guards the nest by sitting on top.

- She actively **protects the eggs from predators and intruders**, making her one of the few tortoise species to show such maternal care.
- **Threats:** The population of Asian giant tortoises has declined drastically **due to tribal hunting and loss of habitat.**
- Today, only a few individuals remain in the wild, and the species is on the brink of extinction if conservation efforts are not scaled up.
- **Protection status:** It is listed as **Critically Endangered by the IUCN.**

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Sahel Region

News: Russia has strengthened its influence in West Africa's Sahel region by signing a significant nuclear agreement with Niger.

About Sahel Region

- The **Sahel Region** is a **semi-arid belt** located in **western and north-central Africa**.
- It extends approximately **5,000 kilometers** from the **Atlantic Ocean** in the west to the **Red Sea** in the east.
- The Sahel acts as a **transitional zone** between: the **Sahara Desert** to the north and the **humid savannas** of sub-Saharan Africa to the south.
- The Sahel passes through parts of **10 African countries: Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Eritrea, and (sometimes also includes parts of Ethiopia)**.
- The **highest point in the Sahel is Mount Koel in Burkina Faso**, which stands at just 448 meters above sea level.
- **Vegetation:** Semi-arid grasslands, savannah, and thorn shrublands.
- **Climate:** The Sahel has a tropical, semi-arid climate characterized by a hot, dry season and a short rainy season.

WHO Classifies Hepatitis D as Cancer-Causing

News: The World Health Organisation (WHO) recently announced the reclassification of hepatitis D as cancerous, emphasising the urgency for preventing viral hepatitis, which is a growing public health crisis.

About Hepatitis D



Figure 15. Source – BS

- **Hepatitis D** is an **inflammation of the liver** caused by the **hepatitis D virus (HDV)**, which requires **hepatitis B virus (HBV)** for its replication.
- Hepatitis D infection **cannot occur in the absence of HBV**. So, **Chronic HDV** occurs only in people living with **HBV**.
- **Chronic HDV infection** is considered the **most severe** form of chronic viral hepatitis due to more **rapid progression** towards **liver-related death** and

hepatocellular carcinoma.

- **Carcinogenic:** HDV has recently been **classified as carcinogenic to humans** by the **International Agency for Research on Cancer (IARC) monograph programme**, just like hepatitis B and C.
- **Vulnerable population:** Populations that is more likely to have HBV and HDV co-infection include **indigenous populations, recipients of haemodialysis and people who inject drugs**.
- **Impact:** HDV affects globally nearly **5% (an estimated 12 million)** of people who have a chronic infection with **HBV**.
- **Transmission**

- HDV is **blood borne** and transmission may occur **through contact with infected human blood** or other bodily fluids.
- It may also be transmitted through **sexual intercourse**, or rarely from a **mother to her child before or around birth (vertical transmission)**.
- HDV can also spread **within families in endemic areas**.
- **Symptoms**
 - Symptoms usually include fever, fatigue, loss of appetite, nausea, vomiting, dark urine, pale-coloured stools, jaundice (yellow eyes) and even fulminant hepatitis.
- **Treatment**
- There is **no separate vaccine** for hepatitis D.
 - The **only way** to stop it is by getting the **hepatitis B vaccine**, which protects against both viruses.
- The **antiviral bulevirtide** has emerged in Europe as an approved therapy offering improved outcomes.

Biochar

News: The CO₂ removal technologies such as biochar are expected to play a crucial role as the Indian carbon market set to be launched in 2026.

About Biochar



Figure 16. Source – TH

Biochar is a type of **charcoal rich in carbon** and is produced from **agricultural residue and organic municipal solid waste** (also called biomass).

- **Purpose:** The main purpose for the creation of biochar is for **carbon sequestration**.
- **Formation:** It is made by **burning** the biomass in a controlled process called **pyrolysis**.
 - During pyrolysis, organic materials are **burned** in a container with very **little oxygen**.
 - As the materials burn, they **release little to no contaminating fumes**.
 - During the pyrolysis process, the organic material is **converted into biochar**, a stable form of carbon that **can't easily escape** into the atmosphere.
 - The energy or heat created during pyrolysis can be **captured and used as a form of clean energy**.
- **Physical characteristics:** It is **black, highly porous, lightweight, fine-grained** and has a **large surface area**.

- **Chemical features:** Approximately **70 percent** of its composition is **carbon**.
- The **remaining** percentage consists of **nitrogen, hydrogen and oxygen** among other elements.
- **Applications of biochar as a carbon sink**

- **In Agriculture:** Biochar can **hold carbon in the soil** for 100-1,000 years due to its strong and stable characteristics, making it an effective long-term carbon sink.
 - Applying biochar can improve **water retention**, particularly in **semi-dry and nutrient-depleted soils**.
 - It can **abate nitrous oxide emissions by 30-50%** (a greenhouse gas with 273-times the warming potential of CO₂).
- **Soil retention:** Biochar can also **enhance soil organic carbon**, helping restore degraded soils.
 - This process is modeled after a **2,000-year-old practice in the Amazonian basin**, where indigenous people created areas of rich, fertile soils called **terra preta** (meaning “dark earth”).
- **In carbon capture applications:** The modified biochar can **adsorb CO₂ from industrial exhaust gases**.
- **In the construction sector:** It can be explored as a low-carbon alternative to **building materials**.
 - Adding 2-5% of biochar to **concrete** can **improve mechanical strength**, increase **heat resistance** by 20%, and capture 115 kg of CO₂ per cubic meter, making building materials a stable carbon sink.
- **In wastewater treatment:** It offers a **low-cost and effective** option to reduce pollution.
 - India generates more than 70 billion lt. of wastewater every day, of which 72% is left untreated. A kilogram of biochar, along with other substances, can treat 200-500 lt. of wastewater, implying a biochar demand potential of 2.5-6.3 million tones.

World Food Programme (WFP)

News: India launched a new collaborative initiative with the support of the UN World Food Programme to strengthen Rice Fortification and Supply Chain Management in Nepal.

About World Food Programme (WFP)



Figure 17. Source – UN WFP

- It is an **international organization** within the **United Nations (UN)** that provides **food assistance worldwide**.
- **Aim:** It aims to **eradicate hunger and malnutrition**.
- It is the world's **largest humanitarian organization** and the leading provider of **school meals**.
- It provides **passenger services for humanitarian workers** through its management of the **United Nations Humanitarian Air Service (UNHAS)**.
- **Established in:** **1961** by the United Nations General Assembly (**UNGA**).
- **Headquarters:** It is headquartered in **Rome** and has offices in 87 countries.
- **Objective:** It was established as the lead agency to **respond to food emergencies** and help **combat hunger**.
- **Global presence:** It has its presence in **over 120 countries** and territories to carry out its mission.
 - In 2023 it supported over 152 million people.

- **Funding:** Its operations are entirely funded through the **voluntary contributions** of donor governments, institutions, corporations and individuals.
- **Partnerships:** It works with **governments**, other United Nations **agencies**, non-governmental organizations, private companies and others.
 - It is an **executive member** of the **United Nations Sustainable Development Group**, with a priority to achieve **SDG 2, “zero hunger”, by 2030.**
- **Recognition:** It was awarded the **Nobel Peace Prize in 2020** for its efforts to **provide food assistance in areas of conflict** and to prevent the use of food as a weapon of war and conflict.
- **Reports published:**
 - **Global Report on Food Crises**
 - **The State of Food Security and Nutrition in the World** (in collaboration with the FAO, IFAD, UNICEF and WHO)

Leap-1 Mission

News: Dhruva Space is preparing to launch its first commercial satellite mission called LEAP-1.

About Leap-1 Mission

- It is the first **commercial satellite mission** launched by India’s space-tech startup, **Dhruva Space**.
- LEAP-1 marks Dhruva Space’s transition from tech demonstration to full-scale commercial satellite deployment.
- **Launch Timeline & Vehicle:** Scheduled for **Q3 2025** aboard **SpaceX’s Falcon 9** rocket.
- It is based on Dhruva Space’s **indigenously developed P-30 satellite platform**. This platform was successfully **space-qualified** during the **LEAP-TD mission** aboard **ISRO’s PSLV-C58** in **January 2024**.
- **Payloads: The mission carries two payloads:**
- **Nexus-01:** Developed by **Akula Tech**.
 - It features a sophisticated **Artificial Intelligence (AI) module** designed for **onboard data processing** and **AI/ML model re-training** using live sensor inputs.
 - This AI system supports real-time applications such as **fire detection, spectral analysis, and dynamic decision-making in space.**
- **Esper Satellites’ OTR-2 mission:** Developed by **Esper Satellites**
 - It carries a **cutting-edge hyperspectral imager** that delivers **spectrally rich Earth observation data** via the **EarthTones API**.
 - This data serves multiple domains, including **defence, agriculture, mining, disaster response, and environmental monitoring.**

Intermediate-Range Nuclear Forces (INF) Treaty

News: Russia has officially announced that it no longer considers itself bound by the INF Treaty.

About the Intermediate-Range Nuclear Forces (INF) Treaty:

- The **Intermediate-Range Nuclear Forces (INF) Treaty** obligated the **United States and the Soviet Union** to **eliminate and permanently renounce** all of their **nuclear and conventional ground-launched ballistic and cruise missiles** with ranges between **500 and 5,500 kilometers**.
- It was **signed in 1987** between the **United States** and the **Soviet Union** (now Russia).

- **Purpose:**
 - To reduce the nuclear threat by eliminating specific categories of nuclear and conventional missiles.
 - Aimed to halt the **escalating arms race** during the Cold War, particularly in Europe.
- **Key Leaders Involved:** **Ronald Reagan** (U.S. President) and **Mikhail Gorbachev** (Soviet Leader)
- The **United States withdrew** from the treaty in 2019, citing **Russia's alleged violations**. Following this, **Russia has now officially abandoned** its commitment to the treaty.

Carriage of Goods by Sea Bill, 2025

News: The Parliament passed the Carriage of Goods by Sea Bill, 2025, marking a significant step in the government's ongoing effort to modernise India's maritime legal framework.

About Carriage of Goods by Sea Bill, 2025



Figure 18. Source – PIB

realities

- **Key central government powers:** The Bill gives the central government two key powers:
 - **Issuing Directions:** The government can issue **guidelines or instructions to help implement** the provisions of the Bill effectively.
 - **Amending Rules:** The government can **update or modify the rules** related to **bills of lading (listed in the schedule of the Bill)** through notifications, without needing to bring a new law to Parliament.

- The Bill replaces the nearly **century-old** colonial period Indian **Carriage of Goods by Sea Act of 1925**, aligning Indian law with **international maritime conventions**.
 - The Act establishes the **responsibilities, liabilities, rights, and immunities** in case of goods carried from a port.
- **Objective:** The main objective of the new law is to **modernise India's maritime shipping regulations** and make them **easier to understand and apply**.
- **Key features:**
 - **Adopts Hague-Visby Rules:** Aligns Indian law with international maritime standards for **bills of lading and cargo liability**.
 - Legal **safeguards** for parties in shipping contracts
 - **Regulatory flexibility** for the government to adapt the law as needed
 - **Replacement of the outdated 1925 law** with language better suited to current trade

About Bill of Lading

- This is a **legal receipt issued by a shipping company** to the person sending the goods.
- It lists **what goods are being shipped**, their **quantity** and **condition**, and **where they are going**.
- It also **acts as proof of ownership** of the goods and is essential for international trade.

About Hague-Visby Rules

- The Hague-Visby Rules is a set of **international rules for the international carriage of goods by sea**.
- They are a slightly updated version of the **original Hague Rules** which were drafted in Brussels in 1924.

Merchant Shipping Bill, 2025

News: The Lok Sabha cleared the 'Merchant Shipping Bill, 2025', aimed at streamlining maritime governance with a modern and internationally compliant approach.

About Merchant Shipping Bill, 2025



Figure 19. Source – DD News

● Key Provisions

- **Mandatory registration:** As per the Bill, all vessels, regardless of propulsion method or tonnage, must be registered, including new provisions for temporary registration of vessels designated for recycling.
 - The existing **Merchant Shipping Act, 1958** stipulates that only a ship that is **wholly owned by an Indian citizen**, company or society can be **registered** under the Indian flag.
- **Ownership and registration of chartered foreign vessels:** Indian entities can now charter foreign vessels and register them as Indian vessels under specific conditions.
 - The Bill also allows **temporary registration** of vessels for recycling of ships in India to boost the ship recycling business.

- It is a **progressive, future-ready legislation** that replaces the **outdated Merchant Shipping Act of 1958**.

- The Merchant Shipping Act, 1958 had become **bulky, fragmented, and outdated with 561 sections**, failing to address contemporary maritime challenges or fully implement India's obligations under several key **International Maritime Organization (IMO) conventions**.

- **Aim:** The Bill is aimed at **streamlining maritime governance** with a modern and internationally compliant approach.

- **Relaxed ownership criteria:** It allows partial ownership by Indian citizens, companies registered in India, cooperative societies, and Overseas Citizens of India (OCIs). This opens the sector to wider domestic and global investment.
- **Welfare of seafarers:** The Bill expands welfare and protection provisions to **all Indian seafarers**, whether on Indian or foreign-flagged vessels.
 - Seafarers gain **better access to social security** and improved **working conditions**.
- **Pollution control & environmental protection:** It fully incorporates the **MARPOL** and **Wreck Removal Conventions**, making it mandatory for all vessels to possess pollution prevention certification, regardless of tonnage.
- **Institutional and regulatory changes:** The **Director-General of Shipping** is redesignated as the **Director-General of Marine Administration**, with expanded powers to regulate maritime education, training, and security.
- **Stricter penalties:** It **increases** fines and penalties for offences like endangering life, concealment of vessel nationality, and environmental violations, to ensure compliance and deterrence.

RBI Tightens Co-lending Norms

News: The Reserve Bank of India (RBI) has issued revised guidelines to strengthen the co-lending framework between banks and non-bank financial companies (NBFCs).

RBI Tightens Co-lending Norms



Figure 20. Source – BS

- **Co-lending:** It is a brilliant example of **financial teamwork** where two financial institutions, like a big bank and an NBFC, team up to **give out loans together**.

- It refers to the **collaborative loan service** where two lending institutions jointly fund loans to borrowers.

- This partnership **allows both entities to distribute their resources** more efficiently, providing customers with the combined expertise and financial

muscle of both lenders.

Revised Guidelines of RBI

- The new framework will **supersede the co-lending guidelines issued in 2020**, which were **limited to priority sector lending**.
- The revised rules will **come into force from 1 January 2026**, though lenders may **choose** to implement them earlier based on their internal policy.
- Under the new **Co-lending Arrangements (CLA) Directions, 2025**, all **regulated entities**—including **commercial banks** (excluding small finance banks, regional rural banks, and local area

banks), **all-India financial institutions, and NBFCs** (including housing finance companies)—must retain a minimum of 10 per cent of every loan on their books.

- **Uniform NPA Tagging To Prevent Arbitrage**
 - To **address regulatory gaps**, the RBI has introduced **borrower-level asset classification**.
 - If a loan is classified as a **Special Mention Account (SMA) or Non-performing Asset (NPA)** by **one** lending partner, the **same classification must be adopted by the other**
 - This information must be **shared on a near real-time basis** to avoid regulatory arbitrage.
- **Borrowers' Charges**
 - **Borrowers will now be charged a blended interest rate**, calculated as the weighted **average of each partner's internal rate** based on their share of funding.
 - All other charges must be disclosed in the **Key Facts Statement (KFS)** and factored into the **Annual Percentage Rate (APR)**.
- **Borrower Protection and Operational Clarity**
 - The new rules mandate **detailed loan agreements** specifying **borrower eligibility criteria, product structure, partner roles, and fee arrangements**.
 - A **single point of contact** must be designated for the borrower throughout the loan lifecycle, and any change must be communicated in advance.
- **Dedicated Escrow Account.**
 - **Disbursements and repayments** are to be routed exclusively through a **dedicated escrow account**.
 - Partner lenders must **reflect their loan share within 15 days of disbursal**; **failure** to do so will result in the **loan remaining on the originating lender's books**, with transfer allowed **only under RBI's Transfer of Loan Exposure guidelines**.
- **Transparency and Timeline**
 - **Lenders** are now required to **publicly disclose co-lending arrangements** on their websites and in their financial statements.
 - These disclosures must **cover loan amounts, sectors served, interest rates, fees, and partner names**.
 - **Credit policies** must be **updated accordingly**, and institutions must devise business continuity plans to safeguard borrowers in case of partnership termination.

Employee Stock Option Plan (ESOP)

News: Mahindra to gift Rs. 500 cr. in company stock to over 14,000 workers as Diwali bonus through Restricted Stock Units (RSUs), a form of employee stock option plan (ESOP).

About Employee Stock Option Plan (ESOP)

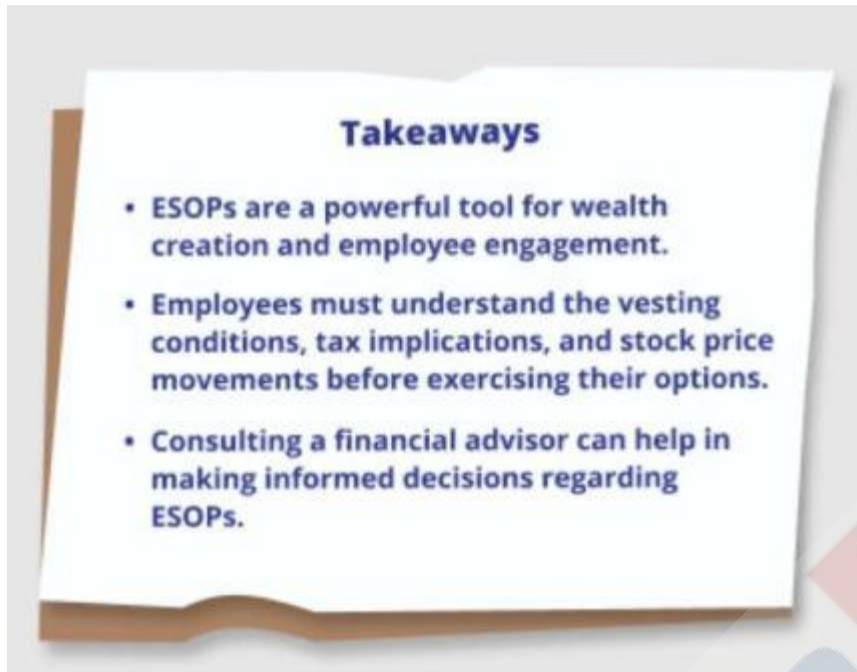


Figure 21. Source – SEBI

- An Employee Stock Option Plan (ESOP) is a **benefit scheme** where companies offer employees the right to buy shares at a predetermined price after a specific period.

- It is a way to reward employees, align their interests with the company's success, and improve motivation and retention.

- **Reasons to provide ESOP:** Companies provide ESOPs for several reasons –

- **Employee Retention:** Employees stay longer to receive their stock options.

- **Performance Incentive:** Employees are motivated to

improve company performance, leading to higher stock value

- **Ownership Culture:** Employees feel like stakeholders, fostering loyalty and commitment.
- **Alternative to Cash Compensation:** Start-ups and companies with limited cash can use ESOPs as a reward mechanism
- **Working procedure**
 - **Grant of Options:** The company gives employees the **option** (not obligation) to buy shares at a fixed price
 - **Vesting Period:** Employees **must stay with the company** for a specified time before they can exercise their options.
 - **Exercise Period:** After the vesting period, employees can **purchase shares at the predetermined price**.
 - **Selling Shares:** Once exercised, employees can **sell shares in the open market**, benefiting from price appreciation.
- **Key Terms in ESOPs**
 - **Stock Options:** The right to buy shares in the **future at a fixed price**.
 - **Vesting Period:** The time an employee must **wait before exercising options** (minimum 1 year as per SEBI regulations).
 - **Exercise Price (Strike Price):** The price at which **employees can buy shares**.
 - **Exercise Period:** The window during which **employees can purchase** shares after vesting.
 - **Expiration Date:** The **deadline** to exercise stock options before they become invalid.
- **ESOPs in India are regulated by**
 - **SEBI** (Share Based Employee Benefits and Sweat Equity) Regulations, 2021 for listed companies.
 - **Companies Act, 2013** for unlisted companies.

- **Tax rules under the Income Tax Act, 1961**, where employees are taxed at the time of exercising options and again when selling shares.
- **Process for Employees**
 - **Option Grant:** The company offers stock options to eligible employees.
 - **Vesting Period Completion:** Employees meet the service duration requirement.
 - **Exercise of Options:** Employees purchase shares at the pre-decided price.
 - **Selling Shares:** Shares can be sold in the open market, subject to tax and lock-in rules.
- **Benefits for Employees**
 - Opportunity to own company shares at a lower price.
 - Potential for significant wealth creation if stock price increases.
 - Aligns employee growth with company success.
- **Risks for Employees**
 - If stock price falls, options may lose value.
 - Employees need to pay upfront to buy shares.
 - Taxes apply at the time of exercise and sale.

Mount Kilimanjaro

News: Arunachal mountaineer Kabak Yano successfully summits Mount Kilimanjaro.

About Mount Kilimanjaro

- **Location**– northeastern Tanzania.
- **Type**– Stratovolcano – composed of layers of ash, lava, and rock.
- Its highest point is the Kibo summit, which rises to 19,340 feet (5,895 metres), **making it the tallest mountain in Africa.**
- Kilimanjaro has three main volcanic peaks: **Kibo, Mawensi, and Shira.**
- The park was designated a **UNESCO World Heritage Site in 1987.**
- It has lost more than 90% of its ice cap since 1900, becoming a prominent symbol of climate change.