Factly Monthly

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ZSI records 683 faunal discoveries in 2024

News: Zoological Survey of India's flagship publication, Animal Discoveries-2024, documents 683 new faunal discoveries from across the country.

ZSI records 683 faunal discoveries in 2024



- Animal Discoveries-2024: It is Zoological Survey of India's flagship publication which documents 683 new faunal discoveries from across the country, 459 of the species being new and 224 newly recorded in India.
- State-wise distribution: Kerala emerged as the top contributor with 101 discoveries (80 new species and 21 new records), followed by Karnataka (82), Arunachal Pradesh (72), Tamil Nadu (63) and Bengal (56).
- In contrast, **Chandigarh**, **Delhi**, **Haryana and Telangana** reported the **lowest** number of species.
- Version 2.0 of the Checklist of Fauna of India: It is also released by ZSI which is an inventory comprising 1,05,244 species and subspecies.
- The updated checklist spans 121 taxonomic groups, from protists to mammals.
- Insects particularly beetles, moths, flies, and bees dominate the diversity, while among vertebrates, fish is the most represented group.
- Animal Taxonomy Summit (ATS- 2025): The 110th celebrations of establishment of ZSI coincide with the third ATS- 2025, hosted by ZSI from June 30 to July 3.
- The summit is focused on three key themes—taxonomy, systematics and faunal diversity & conservation.

Bar Council of India (BCI)

News: The Bar Council of India (BCI) has clarified that any Master of Laws (LL.M.) programme offered without its prior approval, will be considered unauthorised.

About Bar Council of India (BCI)





Source - BCI

- It is a **statutory body** created by Parliament under the **Advocates Act, 1961**.
- Purpose: It was established to regulate and represent the Indian Bar.
- **Functions:** The following statutory functions under **Section 7** cover the Bar Council's regulatory and representative mandate:
 - To lay down standards of professional **conduct and etiquette** for advocates.
 - To lay down procedure to be followed by its disciplinary committee and the disciplinary committees of each **State Bar Council**.
 - To safeguard the **rights**, **privileges and interests of advocates**.
 - To promote and support **law reform**.
 - To promote **legal education** and to lay down standards of legal education.
 - To recognise Universities whose degree in law shall be a qualification for enrolment as an advocate.
 - The BCI visits and inspects Universities or directs the State Bar Councils to visit and inspect Universities for this purpose.
 - To organise legal aid to the poor.
 - To recognise the **foreign qualifications in law** obtained outside India for the purpose of admission as an advocate in India.
 - To manage and invest the funds of the Bar Council.
 - To provide for the **election of its members** who shall run the Bar Councils.

Composition

- It consists of members elected from each State Bar Council, the Attorney General of India, and the Solicitor General of India who is an ex-officio member.
- The members from the State Bar Councils are elected for a period of five years.



• The Council elects its **own Chairman and Vice-Chairman** for a period of **two years** from **among its members.**

Secondary Pollutants

News: CREA study says that secondary pollutants constitute up to third of PM2.5 pollution in the country.

About Secondary Pollutants

Source - Envira

- **Secondary pollutants** are air pollutants that are **not emitted directly** from a source (such as vehicles or factories) but are **formed in the atmosphere** through **chemical reactions** involving primary pollutants and other atmospheric components like sunlight, oxygen, and water vapor.
- Their formation often makes them **harder to control**, as they can arise from various combinations of precursors and environmental conditions.
- Examples of secondary pollutants
 - \circ Tropospheric Ozone (0_3)
 - Sulfuric acid and Nitric acid (component of acid rain)
 - Peroxyacetyl Nitrate (PAN)
 - Particulate Matter (PM)
 - Photochemical Smog
- As per a study from the Centre for Research on Energy and Clean Air (CREA), Secondary pollutants, particularly ammonium sulphate, are responsible for nearly one-third of India's fine particulate matter (PM2.5) pollution.
 - **Ammonium sulphate** results from the reaction between sulphur dioxide (SO2) and ammonia (NH3) in the atmosphere,
- The **main driver** of ammonium sulphate formation and more than 60% of SO2 emissions in India originate from **coal-fired thermal power plants**.
- This makes them a critical **target for reducing secondary PM2.5 pollution** through the implementation of **flue gas desulphurisation (FGD) systems**.

Botrytis fungus

News: A recent study found that Botrytis fungi, known for creating noble rot in fine wines, have a unique genetic setup.

About Botrytis fungus

- It is a necrotrophic fungus that infects ripe grapes.
- The fungus pierces the grape skin, causing **dehydration** as water evaporates. This concentrates the **sugars**, **acids**, **and flavors** in the grape, which is essential for producing **botrytized wines**.
- This fungus belongs to the **Ascomycetes group** and reproduces through spores housed in sac-like structures called *asci*.
- Botrytis-infected grapes are used to craft renowned and high-value dessert wines such as Sauternes (France), Tokaji Aszú (Hungary) etc.

About Fungi

- Fungi are **eukaryotic** organisms with a true nucleus and membrane-bound organelles.
- They belong to the **Kingdom Fungi** in the domain **Eukarya**.
- Examples include **mushrooms**, **yeasts**, **molds**, and *Penicillium notatum*.



- Fungi are **closer to animals** than plants in terms of evolution.
- The **cell wall** of fungi is made of **chitin**.
- Fungi reproduce **sexually** (ascospores, basidiospores) or **asexually** (conidia, sporangiospores).

RailOne App

News: The Union Railway Minister launched a new app, RailOne, in New Delhi on 40th Foundation Day of Centre for Railway Information Systems (CRIS).

About RailOne App

- It is a **comprehensive**, **all-in-one application** with a **user-friendly** interface, focused on **improving passenger interface** with railways.
- **Developed by:** Centre for Railway Information Systems (CRIS)
- **Benefits:** It **integrates** all the passenger **services** such as:
 - O Unreserved UTS Tickets via R-Wallet to Get 3% Discount
 - Live train tracking
 - Grievance redressal
 - E-catering, porter booking & last-mile taxi
- **Space saving App:** The app is space-saving, as there is no need to install multiple apps.
 - The user can use their existing user credentials of RailConnect or UTSonMobile App to register on RailOne.
 - The users will not have to carry several applications for different services of IR.
 - It features a single-sign-on with login via mPIN or biometric.
 - It supports existing RailConnect & UTS credentials.

Note: Reserved tickets will continue to be offered on IRCTC.

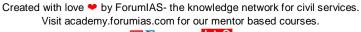
 RailOne app has also been authorised by IRCTC just like many other commercial apps who have partnered with IRCTC.

Certificate of Deposit (CD)

News: News: PSU Banks' share in certificates of deposits issuance rises to 69% from 6% in three years, leading to their market share zooming from single digit to nearly 70% in three years.

About Certificate of Deposit (CD)

- A Certificate of Deposit (CD) is a **negotiable**, **unsecured money market instrument** issued by scheduled commercial banks and select All-India Financial Institutions (FIs) that offers **a fixed interest rate** on a **lump-sum deposit for a predetermined period**.
- Key Features:
 - Issuer: Scheduled commercial banks and specified financial institutions (excluding Regional Rural Banks and Local Area Banks).
 - **Eligible investors: Individuals** (including NRIs on a non-repatriable basis), corporations, companies, trusts, funds, associations, etc.
 - Minimum amount: 1 lakh from a single subscriber and in multiples of Rs. 1 lakh thereafter.
 - Tenure: Ranges from 7 days to 1 year for banks; for financial institutions, from 1 to 3 years.





- Interest & returns: Issued at a discount to face value; returns equal the difference between issue price and face value. Interest is fixed and guaranteed.
- **Negotiability:** CDs are freely transferable and can be traded in the secondary market before maturity.
- No lock-in period: Investors can sell CDs before maturity, subject to market conditions.
- Taxation: Interest income on CDs is fully taxable under the Income Tax Act.
- **Regulation:** Governed by the Reserve Bank of India (RBI).

Operation MELON

News: The Narcotics Control Bureau has achieved a major breakthrough by dismantling India's most prolific darknet drug syndicate under its Operation Melon.

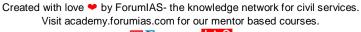
About Operation MELON

- It is an operation by the **Narcotics Control Bureau (NCB)** in 2025 that dismantled "**Ketamelon**," India's most sophisticated **darknet drug syndicate**.
- This high-impact operation was led by the NCB Cochin zonal unit.
- **Ketamelon:** It had established a wide network for shipping **Lysergic Acid Diethylamide (LSD)** to major cities, including Bengaluru, Chennai, Bhopal, Patna, and Delhi, as well as in Himachal Pradesh and Uttarakhand.
 - 'Ketamelon' was India's only 'Level 4' darknet vendor operating actively over the past two vears.
 - LCD: Also known as acid, blots, and stamp, LSD is a hallucinogenic drug.
 - It is **odourless, colourless, and tasteless**, and can be painted onto small paper pieces that users lick or swallow.
 - Zambada: In 2023, the NCB had busted the then biggest darknet based LSD cartel named 'Zambada'.
 - It was the only cartel in the country with **5-star rating operating from Delhi** National Capital Region.
 - **Ratings:** The cartels on the darknet are rated on the scale of 1 to 5 levels based on the potency of the drug sold, and their "customer service".

C-FLOOD Platform

News: Union Minister of Jal inaugurates C-FLOOD, a Unified Inundation Forecasting System at Shram Shakti Bhawan, New Delhi.

About C-FLOOD Platform







Source - World of India

National Supercomputing Mission.

• It is a **web-based platform** that provides **two-days advance inundation forecasts** up to village level in the form of flood inundation maps and water level predictions.

Developed by C-DAC, CWC, and NRSC under the

- Developed by: Centre for Development of Advanced Computing (C-DAC), Pune and Central Water Commission (CWC), Department of Water Resources, River Development & Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti.
- Ministries involved: This initiative executed under the National Supercomputing Mission (NSM)
 jointly steered by Ministry of Electronics and Information Technology (MeitY) and Department of
 Science and Technology (DST).
- Features
 - The platform will act as a unified system integrating flood modelling outputs from national and regional agencies, offering a comprehensive decision-support tool for disaster management authorities.
 - At present, the system covers the **Mahanadi**, **Godavari**, **and Tapi river basins**, with more river basins to be incorporated in the future.
 - The platform uses advanced 2-D hydrodynamic modelling to simulate flood scenarios.

Community Forest Resource Rights (CFRR)

News: The Chhattisgarh forest department has withdrawn its directive barring other government departments, NGOs, and private entities from undertaking any work related to Community Forest Resource Rights (CFRR).

About Community Forest Resource Rights (CFRR)





Source - DTE

- These are **legal rights** granted to **forest-dwelling communities**, empowering them to protect, regenerate, conserve, and manage forest resources within their traditional or customary boundaries.
- These rights are recognized under **Section 3(1)(i)** of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of **Forest Rights) Act, 2006 (FRA).**

• Key Provisions

- Legal recognition: CFRR legally acknowledges the traditional rights of communities over forest land and resources, shifting management authority from the forest department to the Gram Sabha.
- Scope: Rights extend to customary common forest land, including reserved and protected forests, sanctuaries, and national parks, provided the community has traditionally accessed and managed these areas.
- **Gram Sabha as nodal body:** The Gram Sabha becomes the primary authority for forest management, empowered to make rules for forest use, conservation, and protection.
- **Protection from eviction:** Communities cannot be displaced from their recognized forest areas **without their explicit consent**.

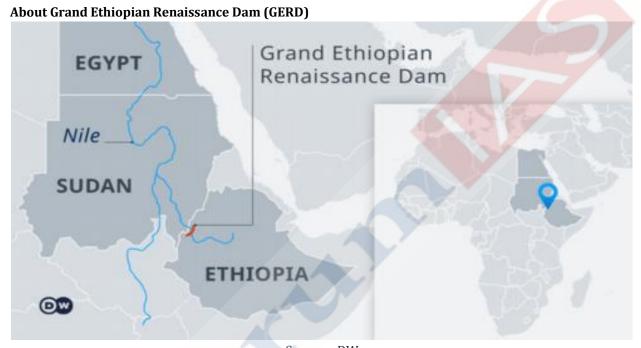
Objectives and Benefits

- Sustainable livelihoods: CFRR enables communities to sustainably harvest non-timber forest produce (NTFP) such as honey, bamboo, and medicinal plants, supporting local livelihoods.
- Conservation and biodiversity: The Rights empower communities to protect forests from deforestation, mining, and other external threats, promoting biodiversity and climate resilience.
- Cultural and customary Rights: They recognize and safeguard traditional knowledge, cultural practices, and rituals related to forests.
- **Decentralized governance:** They **democratize forest governance** by vesting decision-making powers in local institutions, fostering participatory and inclusive management.
- Implementation Status (as of year 2025)

 Limited progress: Only three states – Maharashtra, Chhattisgarh, and Odisha – in India have recognised a notable number of CFRR, with Maharashtra being the only state where these rights have been operationalised.

Grand Ethiopian Renaissance Dam (GERD)

News: Ethiopia's Prime Minister said a multi-billion-dollar mega-dam on the Blue Nile, Grand Ethiopian Renaissance Dam (GERD), is complete and will be officially inaugurated soon.



Source - DW

- It is a **gravity dam** built on the **Blue Nile River** in **Benishangul-Gumuz region of Ethiopia**, near the **border with Sudan**.
 - The Blue Nile is a major tributary of the Nile River.
 - It originates from **Lake Tana in Ethiopia**.
- It was formerly known as the **Millennium Dam** and sometimes referred to as the **Hidase Dam**.
- Features
 - The project to build it was started in **2011**.
 - Largest in Africa: It is considered Africa's largest hydroelectric project stretching 1.8 km wide and 145 metres (475 feet) high.
 - Capacity: At full capacity, the huge dam can hold as much as 74 billion cubic metres of water
 and could generate more than 5,000 megawatts of power more than double Ethiopia's
 current output.
- **Issue:** It has been a source of **tensions** with **downstream nations Egypt and Sudan** who worry, it will affect their **water supply**.
 - Egypt relies on the Nile for 97 percent of its water needs.



Key facts about Trinidad and Tobago

News: The PM announces that sixth generation Indian-origin citizens of Trinidad and Tobago will receive Overseas Citizens of India card soon.

Key facts about Trinidad and Tobago



Figure 2. Source - World Atlas

- It is an **island country** of the **southeastern West Indies**, forming the two southernmost links in the **Caribbean chain**.
- Location: It lies close to the continent of South America, northeast of Venezuela and northwest of Guyana between the Caribbean Sea and the North Atlantic Ocean.
- Capital: Port of Spain, located on the northwestern coast of Trinidad.
- It consists of two main islands—
 Trinidad and Tobago—and several smaller islands.
- Trinidad: It is the larger one of the two islands and is separated from the Venezuelan coast by the Gulf of Paria.
- Tobago: It is the smaller island and lies 30 km to the northeast of Trinidad.
- **Little Tobago**: It lies about a mile

off Tobago's northeastern coast and is also called Bird of Paradise Island.

- It was once noted as the **only wild habitat of the greater bird of paradise** outside of New Guinea; however, the bird is no longer found there.
- **Terrain:** The terrain of the islands is a mixture of **mountains and plains**.
- **Northern Range:** It is located in the island **of Trinidad** and is a **continuation** of the coastal ranges of the **Andes Mountains in Venezuela**.
 - Waterfalls: Blue Basin Falls and the Maracas Falls, both 298 feet (91 metres) high.
- Climate: It has a maritime tropical climate comprising of a dry season and rainy season.
- Resources
 - La Brea Pitch Lake: World's largest natural asphalt deposit.
 - **Tobago Main Ridge: Oldest legally protected rainforest** reserve in Western Hemisphere (est. 1776).
 - **Leatherback Turtles**: One of the **world's densest nesting sites**, with around 10,000 turtles annually (Mar–Jul).
 - They are categorized as **Critically Endangered** on the IUCN Red List.
 - Government: It is a multiparty republic with a President (head of state) and Prime Minister (head of government)



SPREE 2025

News: The Employees' State Insurance Corporation (ESIC) has approved SPREE 2025 during its 196th ESI Corporation Meeting held in Shimla, Himachal Pradesh.

About SPREE 2025



Figure 3. Source - PIB

- It is a special initiative aimed at **expanding social security coverage** under the ESI Act.
- **Aim:** It is aiming to bring left-out establishments and workers into the ESI fold and ensure broader social protection.
- Full name: Scheme for Promotion of Registration of Employers and Employees
- Launched by: Employees' State Insurance Corporation (ESIC)
- Nodal Ministry: Ministry of Labour & Employment
- Features: The scheme will be active from 1st July to 31st December 2025 and provides a one-time opportunity for unregistered employers and employees—including contractual and temporary workers—to enrol without facing inspections or demands for past dues.

Under SPREE 2025:

- Employers can register their units and employees digitally through the ESIC portal, Shram Suvidha and MCA portal.
- Registration will be considered

valid from the date declared by the employer.

- No contribution or benefit will apply for periods prior to registration.
- No inspection or demand for past records will be made for the pre-registration period.

Benefits

- inclusive and accessible social security
- simplified registration process
- offering immunity from retrospective liabilities

India unveils Aluminium, Copper Vision Documents

News: Coal and Mines Minister released the Copper and Aluminium Vision Documents at the International Conference on Sustainable and Responsible Mining in Hyderabad.

India unveils Aluminium, Copper Vision Documents





Source - PIB

The Aluminium Vision Document

- The document lays the foundation for a **globally competitive** and **environmentally responsible** aluminium industry.
- Key goals outlined in the Vision Document:
 - Scale up aluminium **production six-fold by 2047**
 - Expand bauxite production capacity to 150 million tonnes per annum (MTPA)
 - **Double** the national aluminium recycling rate
 - Adopt low-carbon technologies for sustainable production
 - Strengthen **raw material security** through targeted policy reforms
- Future demand: Aluminium demand in India will rise six-fold by 2047 and to meet this demand, India must ramp up production from current 4.5 million tonnes per annum to nearly 37 MTPA over the next two decades, which will need an additional investment of over ₹20 lakh crore.
- Status of Aluminium production
 - O Bauxite (a sedimentary rock) is the primary ore of Aluminium.
 - India is the world's second largest producer of aluminium, it accounts for just 6% of global production pointing to a massive untapped potential.
- Global production
 - World production of aluminium was at 67 million tonnes in 2022.
 - **China** continued to be the leading producer with a share of about **60%** which is followed by Russia (6%), Canada (4.47%), UAE (4%), India (3.46%) and Bahrin (2.39%).

Copper Vision Document

- Aim: It aims for a six fold increase in demand by 2047 and outlines plans to add 5 million tonnes per annum of smelting and refining capacity by 2030.
- Focus: It focuses on scaling up secondary refining, enhancing domestic recycling, and reducing dependence on open-market imports by securing overseas mineral assets through global partnerships
- It lays the foundation for a sustainable, resilient and future-ready copper ecosystem for the country.



Status of copper resources

- **India: India** is **not** self-sufficient in the production of copper ore.
- O Distribution in In India:

States (%age)	Copper rich region/ Famous mines
Rajasthan (52.25%)	Khetri-Singhana belt in Jhunjhunu district, Kho-Dariba area in Alwar and Delwara-Kirovali in Udaipur.
Madhya Pradesh (23.28%)	Malanjkhand belt of Balaghat and Kherlibazar-Bargaon area of Betul
Jharkhand (15.14%)	Singhbhum district

Global reserves:

- The world reserves of copper are assessed at **1000 million tonnes** of copper content.
- Chile has the largest share, accounting for about 19% of world reserves, followed by Peru (12%), Australia (10%), Russia & Congo (8% each), Mexico & USA (5% each), China (4%), Poland (3%), Indonesia, Zambia & Kazakhstan (2% each).

17th BRICS Summit, 2025

News: Prime Minister Shri Narendra Modi participated today in the 17th BRICS Summit being held in Rio de Janeiro, Brazil on 6-7 July 2025.

About 17th BRICS Summit, 2025



Source - PMO

- Host (President): Brazil
- Theme: 'Strengthening Global South Cooperation for More Inclusive and Sustainable Governance'



- **Focus of 2025 Summit:** The Brazilian Presidency will focus on **two priorities**:
 - The Global South Cooperation; and
 - o BRICS Partnerships for Social, Economic, and Environmental Development
- Brazil also proposes to focus on six core areas:
 - Global health cooperation;
 - Trade, investment, and finance;
 - Climate change;
 - Artificial intelligence (AI) governance;
 - o Multilateral peace and security architecture; and
 - Institutional development.

About BRICS

- It is an intergovernmental organization **comprising ten countries** Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran and the United Arab Emirates.
- Genesis of Idea: The idea of a BRICS-like group can be traced back to Russian foreign minister Yevgeny Primakov and to the two forums RIC (Russia, India, China) and IBSA (India, Brazil, South Africa).
- BRIC was originally a term coined by British economist Jim O'Neill.
- **First Summit:** The **first summit in 2009** featured the founding countries of **Brazil, Russia, India, and China**, where they adopted the acronym **BRIC**.
- First expansion: In April 2010, South Africa attended the 2nd BRIC summit as a guest.
 - In September 2010, it joined the organization which was then **renamed BRICS**, and attended the **3rd BRICS summit in 2011 as a full member**.
- BRICS expanded to BRICS+ (second expansion): Iran, Egypt, Ethiopia, and the United Arab Emirates attended their first summit as member states in 2024 in Russia.
 - **Indonesia** officially joined as a member state in **early 2025**, becoming the **first Southeast Asian member**.

Tokara Islands

News: In a rare seismic occurrence, over 1,000 earthquakes have struck Japan's Tokara Islands in the past two weeks, causing widespread fear among residents and triggering evacuation orders.

About Tokara Islands



Figure 4. Source: Nippon

- The **Tokara Islands** are a remote archipelago located between **Kyushu** (southern Japan) and the **Amami Islands**.
- They are also known as the **Toshima Islands.**
- There are **12 islands** in the Tokara chain, out of which **7 are inhabited** and the rest are uninhabited or too rugged for settlement.



- From north to south, the inhabited islands are **Kuchinoshima**, **Nakanoshima**, **Tairajima**, **Suwanosejima**, **Akusekijima**, **Kodakarajima**, and **Takarajima**.
- Kuchinoshima is the northernmost inhabited island and is closest to mainland Kyushu.
- **Nakanoshima** is the largest island in both area and population.

International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty)

News: Farmers, policymakers warn Centre against proposed amendments to the International Treaty on Plant Genetic Resources for Food and Agriculture (the 'Plant Treaty').

About International Treaty on Plant Genetic Resources for Food and Agriculture



Source - FAO

- It is an **international agreement** between member countries to **conserve**, **use and manage plant genetic resources for food and agriculture** around the world for the benefit of people everywhere.
- It is also known as the **Plant Treaty**.
- It was **adopted** by the the **Food and Agriculture Organization (FAO)** of the United Nations on 3 November **2001**.
 - The Treaty **entered into force on 29 June 2004**.
- It is a legally binding instrument.
- Aim: The Treaty aims at-
 - recognizing the enormous contribution of farmers to the diversity of crops that feed the world;
 - establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials;
 - ensuring that recipients share benefits they derive from the use of these genetic materials.
- The Treaty ensures that farmers and plant breeders access, easily, the raw genetic material needed
 to develop new crop varieties, including those with higher yields and those that are resilient to climate
 change.



- Mechanisms: It provides a global solution to the challenges of crop diversity loss and climate change adaptation through mechanisms such as the Multilateral System and Benefit-sharing Fund.
- It is a **Multilateral System on Access and Benefit-sharing** covers **64 of the world's major crops**, accounting for about **80% of our food derived from plants**.
- The **genetic resources of our most important food crops** are **managed and exchanged** by member countries and other stakeholders **according to the provisions** of the International Treaty.
- Contracting Parties: As of 1 April 2025, the International Treaty has **154 Contracting Parties** (members), including the European Union (EU).

Phone Tapping in India

News: The Delhi High Court rejected the plea of an accused who challenged a trial court's order accepting evidence gathered by the CBI through phone-tapping.

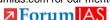
Phone Tapping in India



Source - ToI

- **Phone tapping:** Also known as **cell phone monitoring or tracing**, it is the practice of employing various **applications to follow a user's phone calls** and other actions.
- The targeted individual is largely not informed of any such activity during this operation.
- The law on tapping: The government's powers to intercept communications is laid down in three pieces of legislation-
 - The **Indian Post Office Act, 1898** allows for the **interception of communication** through **post (Section 26)**;
 - The Indian Telegraph Act, 1885 is used for tapping voice calls (Section 5(2));
 - Section 5(2) of the Act states that both state and central governments can, "on the
 occurrence of any public emergency, or in the interest of the public safety",
 authorize interception.
 - The **Information Technology Act, 2000** governs the interception of **WhatsApp messages, emails, etc. (Section 69).**

Grounds for phone tapping



Article 19(2): The grounds — the interest of the sovereignty, and integrity of India; the security of the state; friendly relations with foreign states; public order; or preventing incitement to the commission of an offence — are enumerated as "reasonable **restrictions**" under Article 19(2) of the Constitution.

Safeguards against interception

- **Article 21:** The right to have telephone conservation in the privacy of one's home or office is part of the Right to Life and Personal Liberty enshrined in Article 21 of the Constitution, which cannot be curtailed **except** according to the procedure established by law.
- PUCL vs Union of India Case The Supreme Court upheld the law, but it laid down procedural safeguards for its application which are -
 - **Tapping** of telephones is **prohibited without** an authorizing **order** from the **Home** Secretary, Government of India or the Home Secretary of the concerned State Government.
 - The order, unless it is renewed shall cease to have authority at the end of two months from the date of issue. Though the order may be renewed, it cannot remain in operation beyond six months.
 - Tapping must be **limited to the address specified in the order** or to address (es) likely to be used by a person specified in the order.
 - All copies of the intercepted **material must be destroyed** as soon as their retention is not necessary.
 - Within two months of ordering a phone tap, a committee comprising the cabinet **secretary**, the law secretary and the telecom secretary shall review the order.
 - The scrutiny by the board has also been included under Rule 419-A (17) of the Telegraph Rules.

Seine River

News: Paris reopens the River Seine for public swimming after century-long ban.

About Seine River

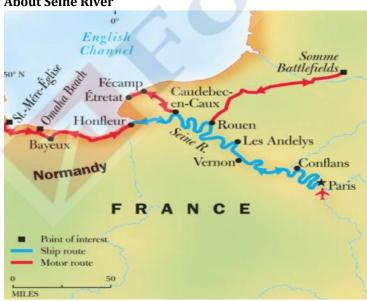


Figure 5. Source – National Geography

- •It is a 777 km-long river in **northern**
- Drainage basin: Its drainage basin is in the **Paris Basin** covering most of **northern**
- •Origin: It originates at Source-Seine, 30 km northwest of **Dijon** in northeastern France in the **Langres plateau**.
- It flows through **Paris** and **ends into the** English Channel at Le Havre (and Honfleur on the left bank).
- •It is the **second longest** river of France after the Loire River.
- •Important tributaries: Marne, Yonne, Oise, and Aube rivers



• Cultural importance: UNESCO has added the banks of the Seine in Paris—the Rive Gauche and Rive Droite—to its list of World Heritage Sites in Europe.

Pressurised Heavy Water Reactor (PHWR)

News: The Atomic Energy Regulatory Board (AERB) has approved the operational license for Units 3 and 4 of the Kakrapar Atomic Power Station (KAPS) in Gujarat.

About Pressurised Heavy Water Reactor (PHWR)

- The Pressurised Heavy Water Reactor (PHWR) forms the foundation of the **first stage** of India's **Three-Stage Nuclear Power Programme**.
- It operates using **natural uranium** as fuel, which contains approximately **99.28% uranium-238**.
- During the fission process, the reactor generates **plutonium-239** as a by-product.
- This plutonium-239 is later used to create Mixed Oxide (MOX) fuel, a combination of uranium and plutonium, which will serve as fuel for Fast Breeder Reactors (FBRs) in the second stage of the programme.
- The PHWR uses **heavy water** (D₂O) as both the **coolant** and **neutron moderator**, allowing the reactor to sustain a chain reaction even with natural uranium.
- Advantages
 - They use **thin-walled pressure tubes** instead of a large pressure vessel, which is typically used in other reactor types such as Pressurised Water Reactors (PWRs).
 - This design reduces the potential severity of accidents in case of a rupture, making the reactor inherently **safer and easier to manage**.

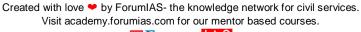
About Atomic Energy Regulatory Board (AERB)

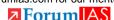
- The Atomic Energy Regulatory Board (AERB) is a regulatory authority in India.
- It was established in November 1983 under the provisions of the Atomic Energy Act, 1962.
- AERB is responsible for **ensuring the safety of nuclear and radiation facilities and activities** across the country.
- **Objective:** Its primary objective is to **protect human health and the environment** from potential risks associated with **ionizing radiation and nuclear energy.**
- The Board functions as the **regulatory body for nuclear safety**, setting standards, granting licenses, and enforcing compliance.

Rashtriya Sarvekshen by PARAKH, 2024

News: The results of the PARAKH RS have revealed that Punjab, Himachal Pradesh, Kerala, Dadra Nagar Haveli and Daman & Diu and Chandigarh are the best performing States and Union Territories in school education.

About Rashtriya Sarvekshen by PARAKH





PARAKH Rashtriya Sarvekshan 2024: At a Glance



*PARAKH Rashtriya Sarvekshan 2024 covers more approximately 88,000 sampled schools including Government, Government-Aided, Central Government and Private Recognized institutions.

Figure 6. Source - NCERT

Educational Research and Training (NCERT)

- Aim: It aims to evaluate the progress of learners in the Foundational, Preparatory, and Middle stages of education, providing valuable insights into their development.
- Sample system: Samples for assessing the foundational level will be drawn from grade 3, for the preparatory level from grade 6, and for the middle stage from grade 9.
- **Focus areas:** The **four** major areas of focus for PARAKH are:
 - Capacity Development in Competency Based Assessment
 - Large-Scale Achievement Survey
 - Equivalence of School Boards
 - Holistic Progress Cards for the Foundational, Preparational, Middle and Secondary Stages.
- Features of PARAKH, Rashtriya Sarvekshan 2024
 - It operates at the **district level**, providing insights into student progress.
 - The survey uses a paper-based approach with **OMR technology**.

Key Highlights of PARAKH RS, 2024

- Coverage: It covered 21.15 lakh students from 74,229 schools across 781 districts in all 36 States and UTs.
- **Region-wise findings**
 - Overall: Punjab, Himachal Pradesh, Kerala, Dadra Nagar Haveli and Daman & Diu and **Chandigarh** are the **best performing States and Union Territories** in school education.
- **Grade-wise findings**
 - O Grade 3:
 - **Punjab, Himachal Pradesh and Kerala** emerged as the **top** performing states in Grade 3.
 - Sahebganj in Jharkhand and Reasi and Rajouri from Jammu and Kashmir were the **low performing districts** for this segment.
 - Grade 6:
 - Kerala, Punjab and Dadra Nagar Haveli and Daman & Diu were the top performers for **Grade 6**.

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Full name: Performance Assessment, Review. and Analysis of Knowledge for Holistic Development (PARAKH) Rashtriya Sarvekshen (RS)

Earlier it was known as the National Achievement Survey (NAS) conducted since 2001.

Conducted by: National Council

- North Garo Hills, South Garo Hills and South West Garo Hills of Meghalaya were the three low performing districts in this category.
- O Grade 9:
 - **Punjab, Kerala and Chandigarh** were the best performing States for **Grade 9**.
 - Shi Yomi of Arunachal Pradesh, South West Garo Hills and North Garo Hills of Meghalaya were the low performing districts in this segment.

Maize

News: The Agriculture Minister says that India aims to double maize output to 86 mn tonne by 2047.

About Maize

- Globally, maize is known as **queen of cereals** because it has the **highest genetic yield potential** among the cereals.
- It is the **second rated grain** used collectively in the form of foodstuff or fodder.
- It is also used as **animal feed in poultry**.
- Conditions required
 - Climate:

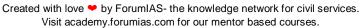
CLIMATE			
Temperature	Rainfall	Sowing	Harvesting
25°C - 30°C	50-100cm	Temperature	Temperature
	/ A.C.	25°C - 30°C	30-35°C

Source - Apni Kheti

- **Sowing season:** In India, maize is principally grown in **two seasons** Monsoon (kharif) and winter (rabi).
 - **Kharif maize** represents around **83% of maize area** in India, while **rabi maize** correspond to **17%** maize area.
- Soil: Maize can be grown successfully in a variety of soils ranging from loamy sand to clay loam.
 - O However, soils with **good organic matter content** having **high water holding capacity** with **neutral pH** are considered good for higher productivity.
- It requires a comparatively **lesser ripening timespan of three months.**

Maize Production in India

- India is the 5th largest producer and 14th largest exporter of Maize in the world.
- **Production:** India's maize production has grown from **10 million tonne in the 1900s to the current 42.3 million tonne.**
- Yield: India's average maize productivity stands at **7 tonne per hectare**, with some states like **West**Bengal and Bihar performing above the national average.
- **Producing states:** The predominant maize growing States that contribute more than 80% of the country's total maize production **are Andhra Pradesh (20.9%), Karnataka (16.5%), Rajasthan**





(9.9%), Maharashtra (9.1%), Bihar (8.9%), Uttar Pradesh (6.1%), Madhya Pradesh (5.7%) and Himachal Pradesh (4.4%).

- **Varieties:** The Indian Council of Agricultural Research (ICAR) has developed **265 maize varieties**, including 77 hybrids and 35 bio-fortified varieties.
- Major export destinations (2023-24): Vietnam, Nepal, Bangladesh, Malaysia and Thailand.

NER District SDG Index (2023-24)

News: NITI Aayog releases second edition of the North Eastern Region District SDG Index (2023-24).

About NER District SDG Index (2023-24)

Top 10 districts in NER District SDG Index 2023-24

Top 10 districts

State	District	Score	Rank
Mizoram	Hnahthial	81.43	1
Mizoram	Champhai	79.86	2
Tripura	Gomati	78.79	3
Nagaland	Mokokchung	78.43	4
Tripura	West Tripura	77.64	5
Nagaland	Kohima	76.93	6
Tripura	South Tripura	76.71	7
Sikkim	Gangtok	76.64	8
Mizoram	Kolasib	76.50	9
Nagaland	Dimapur	76.29	10

Source - Niti Aayog

- Developed by: The Index is developed by the NITI Aayog and the Ministry of Development of North Eastern Region (MoDoNER), with technical support from UNDP.
- Objective: The Index assesses the performance of 121 districts across the eight North Eastern states on the Sustainable Development Goals (SDGs).
- First edition: The first edition of Index was released in August 2021.
- Categorization: Districts are categorized into four categories:
 - i. Achiever: Score equals 100 (achieved the targets set for identified indicators);
 - ii. Front Runner: Score between 65 and 99 (excluding 100);
 - iii. **Performer**: Score between 50 and 65 (excluding 65);
 - iv. **Aspirant**: Score less than 50.
- **Importance:** The Index serves as a **key policy tool** for evidence-based governance, resource allocation, and accelerating sustainable and inclusive development in the region.



Key Findings

- Highest and lowest rankings: Hnahthial in Mizoram emerged as the top-performing district with a composite score of 81.43, while Longding in Arunachal Pradesh ranked lowest at 58.71.
- All districts in Mizoram, Sikkim, and Tripura achieved the Front Runner status (scores between 65–99), with none in the Achiever (score of 100) or Aspirant (score below 50) categories.
- Most consistent: Sikkim showed the most consistent performance across districts, with only a 5.5-point difference between the highest and lowest scoring districts.
 - **Tripura** also performed strongly with **minimal intra-state variation**.

Namibia

News: Recently, Prime Minister Narendra Modi visited Namibia, marking the first visit by an Indian Prime Minister to the country in nearly three decades. This visit concludes his five-nation outreach to the Global South and seeks to strengthen cooperation.

About Namibia

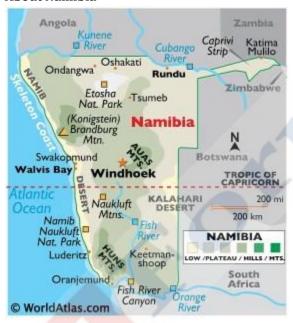
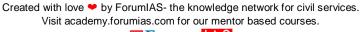


Figure 7. Source: Atlas del Mundo

- It is located in **southwestern Africa**.
- **Bordering states:** It borders Angola, Zambia, Botswana, South Africa, and the Atlantic Ocean.
- The Orange River marks the southern border with South Africa, while the Kunene and Okavango Rivers partly form the northern border with Angola.
- It is the second least densely populated country in the world after Mongolia.
- **Capital:** Windhoek
- It gained independence from South Africa on March 21, 1990
- **Major geographical zones:** Namib Desert (west), Central Plateau, Kalahari (east)
- Major rivers: Kunene, Okavango, Zambezi, Orange
- **Climate:**Arid to semi-arid, low rainfall, high temperature variations
- Major physical features: Etosha Pan and Fish

River Canyon

- Ethnic groups: Ovambo (majority), Kayango, Herero, Nama, Damara
- Most spoken languages: English, Ovambo, Khoekhoe, and Afrikaans.
- **Economy: Mining** (diamonds, uranium, base metals) is the largest GDP contributor. **Agriculture** employs 35% but contributes only 11% to GDP. **Fishing** and **tourism** are key sectors
- Major conservation areas: Etosha National Park, Skeleton Coast, and Namib-Naukluft Park





World Bank Ranks India Among the Most Equal Countries

News: The World Bank's Spring 2025 Poverty and Equity Brief has ranked India as the fourth most equal country in the world based on the Gini Index, with a score of 25.5.

Key Highlights of the Report

The Gini Index is a statistical tool that **measures income inequality** within a country. A **score of 0 represents perfect equality**, while **100 denotes perfect inequality**.

- This Gini score is **lower than that of China (35.7), the USA (41.8), and the UK (34.4)**, indicating that income distribution in India is more equitable than in many advanced economies, including all **G7 and G20 countries**.
- Among 167 countries, **Slovak Republic** ranks first with a Gini score of **24.1**, followed by **Slovenia** (24.3), **Belarus** (24.4), and then **India** (25.5).
- The report highlights that **India falls in the 'moderately low inequality' group** and is very close to joining the 'low inequality' category.
- India has lifted 171 million people out of extreme poverty since 2011–12.
- The World Bank has also revised the global poverty line from \$2.15/day to \$3/day to account for inflation and real consumption needs.
- As a result of this revision, the **extreme poverty rate in India** has dropped from **27.1% in 2011–12 to just 5.3% in 2022–23**, reducing the number of people living in extreme poverty from **344 million to 75 million**.

Kharai camels

News: In a dramatic rescue, 33 camels – belonging to the rare and endangered Kharai breed – were saved from the high tide in the Arabian Sea near Vadinar Jetty in Gujarat's Devbhumi Dwarka.

About Kharai camels



Figure 8. Source – DTE

- •They are a rare and unique breed of dromedary camel (with a single hump).
- •They derive their name from the local term "Khara," meaning saline, reflecting its adaptability to both desert and

coastal

ecosystems.

- They are also known as the "Swimming Camel," it can traverse long distances across water.
- Habitat: They are endemic to the coastal regions of Kutch in Gujarat state.
- Features
 - $\circ\quad$ They can swim up to 3 km in the open deep seas and have webbed feet for swimming.



- Diet: Their diet includes various plants, shrubs and mangroves.
 - They have a strong **digestive system to tolerate salty vegetation**.
- **Ecological role:** Their **grazing** is a **pollinating process** that helps to **regenerate** the mangrove forests.
- The camel's **milk is rich in nutrients** and has potential **therapeutic benefits**.
- **Conservation:** They have been preserved by the **Rabari and Fakirani Jat tribes** (the camel **pastoralist**) for over 400 years.
- Threats:
 - Expanding salt pans have eaten up large tracts of dense and thriving mangroves
 - Industrial activities
 - Climate change
- IUCN Status: Endangered

Cat Bonds

News: In India, low penetration of disaster risk insurance like Cat bonds, for individual property and livelihoods leaves much of the population exposed to irretrievable damage and loss.

About Cat Bonds

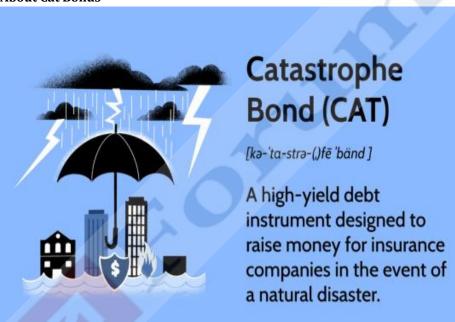
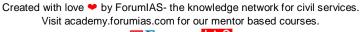


Figure 9. Source - Investopedia

- These are a unique hybrid insurance-cum-debt financial product that transforms catastrophic insurance cover into a tradable security.
- The **term** 'cat bonds' are a short for the 'catastrophic bonds'.
- These are effective in transferring pre-defined risk to bond investors, ensuring quicker payouts and a much-reduced counterparty risk.
- Working
- Bond creation:The sovereign nations
- can **create** the bonds, **sponsor** it and **pay the premium**, with the **principal being the sum insured**.
- Intermediaries: The sponsor requires an intermediary to issue the bond to reduce counter-party risk. Intermediaries can include the World Bank, the Asian Development Bank or a reinsurance company.
- Gain or loss: If a disaster occurs, the investor runs the risk of losing a part of the principal.





- That's the reason for higher coupon rates of such bonds, compared to regular debt instruments.
- **Variation in coupon rates:** There is much variation in coupon rates for a cat bond **depending on the risks** earthquakes garner lower premiums, as low as 1-2%, compared to hurricanes or cyclones.
- Need for India
 - The unpredictability and increase in frequency of extreme weather events like cyclones, floods, forest fires and devastating earthquakes in South Asia have increased India's exposure to disaster-risk.
 - India needs to ring-fence its public finances for post-disaster reconstruction.
- Disadvantages
 - A **defectively designed cat bond** could lead to **no payout** despite a **significant disaster**.
 - **For example**, an earthquake cat bond designed for a magnitude threshold of 6.6M for a certain grid may fail if a 6.5M event occurs and causes extensive damage.
 - Despite a contract if a disaster doesn't occur, it could lead to questions on the desirability of such expense.

Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2025

News: The Union Ministry of Environment, Forest and Climate Change has recently notified the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2025.

About Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2025



Figure 10. Source - DTE

- The Rules are released under the Environment (Protection) Act, 1986.
- They will come into force from **April 1**, **2026**.
- They amend the existing Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
- Key provisionsNew EPRframework: They

introduce a **comprehensive Extended Producer Responsibility (EPR)** framework for **non-ferrous metals**, including **aluminum**, **copper and zinc and its alloys**.

• They will be a significant step toward **circular economy principles**.



- Recycling target: The rules establish a recycling target structure that progressively increases from 10 per cent in 2026-2027 to 75 per cent by 2032-2033 for products made of non-ferrous metals.
- **Coverage:** The framework covers an extensive range of products, from **beverage cans and** packaging foils to electrical fittings and furniture.
- Online portal: An online portal will be established by the Central Pollution Control Board (CPCB).
 - This portal will serve as a single point for data collection and will manage registration for all entities involved in the non-ferrous metal waste ecosystem, including
 - manufacturers,
 - o producers,
 - collection agents,
 - o refurbishers, and
 - o recyclers.
 - It will also facilitate the **filing of half-yearly and annual returns**, the fulfillment of **EPR obligations**, and the **transaction** of **EPR certificates**.
- Producers can meet their EPR targets by purchasing these certificates from registered recyclers through the online
- Validity of the EPR certificate: They shall be valid for two years from the end of the financial year in which it was generated.

Admiralty (Jurisdiction & Settlement of Maritime Claims) Act, 2017

News: The Kerala High Court has ordered the conditional "arrest" of Liberian container ship MSC Akiteta II, after the Kerala government filed an admiralty suit.

About Admiralty (Jurisdiction & Settlement of Maritime Claims) Act, 2017



Figure 11. Source - Tol

- The Act governs maritime disputes in India.
- Under the Act,
 admiralty suits can
 be filed for maritime
 claims such as damage
 to ships, ownership
 and agreement
 disputes, loss of life,
 wage issues, and
 environmental
 damage.
- Admiralty suit

is a **legal** proceeding pertaining to maritime law and disputes.

• The 2017 law replaced the colonial-era **Admiralty Court Act, 1861**, and **Colonial Courts of Admiralty Act, 1890**.



- The **previous laws** gave jurisdiction **only to the High Courts of Bombay, Calcutta and Madras**, as these were the **only major ports in India earlier**.
- Now, the HCs of Kerala, Karnataka, Odisha, Telangana and Andhra Pradesh also have jurisdiction over maritime disputes.
- **Court's jurisdiction:** The jurisdiction of the courts extends **up to the territorial waters** of their respective jurisdictions.
 - The limit of territorial waters is **up to 12 nautical miles** from the nearest point of a low-water line along the coast, including the **seabed**, **subsoil and airspace above**
- Claims over environmental damages
 - Section 4 of the Admiralty Act: This section states that the High Court may exercise
 jurisdiction to hear and determine any question on a maritime claim, against any vessel,
 arising out of damage caused by the vessel to the environment; measures taken to remove
 such damage; compensation for such damage etc.
 - Under the Merchant Shipping Act, 1958, ship owners are liable for oil pollution damage in the event of leaks.
 - Environment Protection Act, 1986 empowers authorities to take action against polluters.
 - National Green Tribunal (NGT) can also be approached to seek environmental compensation.

Aspirational DMF Programme

News: Union Minister of Coal and Mines released operational guidelines of 'Aspirational DMF Programme' for the convergence of DMF initiatives with the Aspirational District Programme (ADP) and Aspirational Block Programmes (ABP).

About Aspirational DMF Programme







Source - PMO

- The programme is launched for the **convergence** of **District Mineral Foundation (DMF) initiatives** with the **Aspirational District Programme (ADP) and Aspirational Block Programmes (ABP).**
- Launched by: Ministry of Coal and Mines
- Feature: Its guidelines are designed to strategically align District Mineral Foundation (DMF) planning and implementation with the development priorities identified under ADP and ABP, which focus on improving socio-economic indicators in India's most underserved regions.

About District Mineral Foundation (DMF)

- It is a **trust** set up as a **non-profit body**, in those **districts affected by the mining works**, through amendment in the **Mine and Minerals Development Regulation (Amendment) Act, 2015.**
- **Objective:** The objective of District Mineral Foundation is to work for the interest of the benefit of the persons and areas affected mining related operations in such manner as may be prescribed by the State Government.
- Funding: It is funded through the contributions from the holder of major or minor mineral concession in the district.
- **Composition:** The composition and functions of the District Mineral Foundation shall be such as may be prescribed by the State Government.
- **PMKKKY:** The **Pradhan Mantri Khanij Kshetra Kalyan Yojana** is implemented by the District Mineral Foundations from the funds accruing to them in terms of the MMDR Act, 1957.
 - PMKKKY provides for utilization of at least 70% of the funds for high priority areas like:
 (i) drinking water supply; (ii) environment preservation and pollution control measures; (iii) health care; (iv) education; (v) welfare of women and children; (vi) welfare of aged and



- disabled people; (vii) skill development; and (viii) sanitation ix) housing, (x) agriculture, and (xi) animal husbandry.
- While, up to 30% of the funds shall be utilized for other priority areas (i) physical infrastructure; (ii) irrigation; (iii) energy and watershed development; and (iv) any other measures for enhancing environmental quality in mining district.

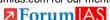
INS Nistar

News: The Indian Navy is set to commission its first indigenously designed Diving Support Vessel (DSV) INS Nistar at the Naval Dockyard in Visakhapatnam on July 18.



Source - PIB

- It is India's first indigenous Diving Support Vessel (DSV).
- Built by: The ship has been indigenously designed and constructed by state-owned Hindustan Shipyard Limited.
- It is the first ship of two-member class of DSVs, the second being Nipun.
- Name: The name of the ship 'Nistar' in Sanskrit translates to rendering rescue.
- Emblem: An 'anchor' which traditionally symbolises reliability and faith, and a 'dolphin' regarded as a seafarer's friend and a harbinger of fair weather.
- Motto: Surakshita Yatharthta Shauryam (Deliverance with Precision and Bravery)
- Features
 - It has a length of approximately **120 metres** and displacement of more than **10,000 tonnes**.
 - **Indegenously built:** A total of 120 MSMEs have participated in the construction of this vessel, achieving more than **80 per cent indigenous content**.
 - Equipments:
 - O It is the 'Mother Ship' for the Deep Submergence Rescue Vehicle (DSRV).
 - Its onboard diving complex includes both air and saturation diving systems, along with underwater **Remotely Operated Vehicles (ROVs) and Side Scan SONAR**.



- Functions: These ships will be deployed for deep sea diving and submarine rescue operations.
 - It will be capable of conducting search and rescue operations and carrying out helicopter operations at sea.

Earlier version

- The erstwhile INS Nistar was acquired by the Indian Navy from the erstwhile USSR in 1969 and was commissioned in 1971.
 - O It was decommissioned in 1989.

TALASH Initiative

News: The National Education Society for Tribal Students (NESTS), an autonomous organization under the Union Ministry of Tribal Affairs has launched the TALASH initiative.

About TALASH Initiative



Figure 12. Source - MoTA

- Full name: Tribal Aptitude, Life Skills and Self-Esteem Hub
- It a national programme to support the all-round development of students in Eklavya Model Residential Schools (EMRSs).
- It is an innovative digital platform designed to equip EMRS students with essential tools for self-discovery and career planning.
- Launched by: The program is launched by the National Education Society for Tribal Students (NESTS), in collaboration with UNICEF India.
- Aim: It aims to improve both the education and personal growth of tribal students across India.
- Expected outcomes: It is expected to benefit over 1,38,336 students enrolled in EMRSs across 28 States and 8 Union Territories, making it a truly national movement

for inclusive education.

• The initiative offers:

- **Psychometric Assessments:** Inspired by **NCERT's 'Tamanna' initiative**, TALASH offers a common aptitude test to help understand each student's strengths and interests.
 - Based on the test results, students receive Career Cards that suggest the best career options suited to their skills and abilities.
- **Career Counselling:** The platform guides students toward informed career decisions, helping them align their aspirations with their aptitudes.



- Life Skills & Self-Esteem Modules: TALASH has special sections that help students learn important life skills like solving problems, communication skills, and handling emotions. These build confidence and self-value of students.
- **E-Learning for Teachers:** A specialized portal equips educators with resources and training to effectively mentor and support students in their academic and personal journeys.

About NESTS

- The National Education Society for Tribal Students (NESTS) is an autonomous organization under the Ministry of Tribal Affairs.
- It is dedicated to **providing quality education to tribal students** through Eklavya Model Residential Schools (**EMRSs**) across India.

Lake Turkana

News: The scientists have found 18-20 million years old enamel proteins from tropical Turakan Lake basin, unraveling palaeobiology of extinct taxa.

About Lake Turkana

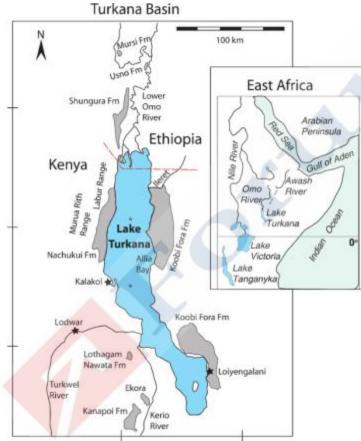
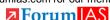


Figure 13. Source - ResearchGate

- It is a saline lake located mainly in northern Kenya, with its northern end stretching into Ethiopia.
- It lies in the eastern arm of eastern Africa's Rift Valley, which is part of the East African Rift System.
- It is the world's largest permanent desert lake and the world's largest alkaline lake.
- o **By volume** it is the **world's fourth-largest salt lake** after the Caspian Sea, Issyk-Kul, and Lake Van (passing the shrinking South Aral Sea).
- **Type:** It is an **endorheic lake** (meaning no outflow) and water loss occurs mainly through **evaporation**.
- Water source: Its only perennial tributary is the Omo River, which flows from Ethiopia.
- **Biodiversity:** The Lake hosts 79 fish species, including 12 endemics, and the **largest population of Nile crocodiles.**
- Recognition: The Lake Turkana National Parks site was inscribed on the World Heritage List in 1997.
- Threat: Lake Turkana is now threatened by the construction of the Gilgel Gibe III Dam in Ethiopia due to the damming of the Omo river which supplies most of the lake's water.



Machine Vision-Based Inspection System (MVIS)

News: Indian Railways has signed an MoU with the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) for the installation of a Machine Vision-Based Inspection System (MVIS).

About Machine Vision-Based Inspection System (MVIS)



Source - PIB

- It is an automated system designed to detect defects in Rolling Stock.
 - It **leverages the power of AI and machine learning** to automate and optimize the inspection process of rolling stock.

Functioning

- It is equipped with technologies that capture high-resolution images of the under-gear of moving trains and automatically detect any hanging, loose, or missing components.
- On the detection of anomalies, the system generates real-time alerts to facilitate prompt response and preventive action.

Importance

• The technology is expected to significantly **enhance the safety** of train operations, **reduce manual inspection**, and help **avoid potential accidents** and service disruptions.

Advantages

- The primary advantage of MVIS is its **ability to carry out consistent monitoring without disrupting regular train services**.
- It reduces reliance on manual inspections and frees up skilled labour for critical repair and maintenance tasks.
- It will **detect problems before they become serious**, which minimises service disruptions and helps keep trains running on schedule.

ASTRA Missile

News: DRDO and the IAF successfully conducted flight tests of the Astra missile off the coast of Odisha.

About ASTRA - Indigenous Beyond Visual Range Air-to-Air Missile

 Astra is an indigenously developed Beyond Visual Range Air-to-Air Missile (BVRAAM) comprising the missile and its launcher.



- It has been jointly developed by the **Defence Research and Development Organisation (DRDO) and the Indian Air Force (IAF).**
- The missile is designed to intercept and eliminate highly maneuverable aerial targets flying at supersonic speeds.

Specifications

- The missile has an operational range of **80 to 110 kilometers**.
- It can operate at altitudes of up to 20 kilometers.
- Astra is **3840 mm in length** and has a **diameter of 178 mm**.
- Its flight duration ranges between 100 to 120 seconds.
- The missile is equipped with a high-explosive pre-fragmented warhead.
- It can travel at speeds up to Mach 4.5.
- Astra is powered by a **solid rocket motor propulsion system**.
- It **uses a radar** proximity fuse for detonation.
- The guidance system includes **inertial navigation**, **mid-course updates**, **and terminal active radar homing** with a range of 13 kilometers.
- Advanced guidance and navigation systems enable ASTRA to deliver highly accurate strikes.
- The missile is **launched from the Su-30 MKI aircraft platform.**

'Ordinarily Resident' in Electoral Rolls in India

News: The Election Commission of India (EC) has initiated a Special Intensive Revision (SIR) of the electoral rolls in Bihar, kindling the debate around the term 'ordinarily resident'.

'Ordinarily Resident' in Electoral Rolls in India



Figure 14. Source – ET

- Section 19 of the Representation of the People Act (RP Act), 1950 mandates that a person must be 'ordinarily resident' in a constituency to be included in its electoral roll.
- **Section 20 of the RP Act** defines the term '**ordinarily resident**'.
- O **Definition:** A person is said to be ordinarily resident in a place if **he uses that place for sleeping.** He **need not be eating in that place** and may be eating from a place outside.
- O This Section clarifies that ownership of property alone does not confer ordinary residence.
- Temporary absence from

residence does not affect ordinary residency status.

 Special categories: Certain groups—armed forces personnel, those employed abroad by the government and constitutional office holders—are deemed ordinarily resident where they would have been otherwise.



- Persons in jail, legal custody, or certain institutions are not considered ordinarily resident at those locations.
- Section 20A (added in 2010) allows Non-Resident Indians (NRIs) to register and vote in their home constituencies based on passport address.
- **Judicial precedent:** In **Manmohan Singh case, 1999**; the Gauhati High Court has interpreted ordinary residence **as habitual, permanent residence with intent to dwell.**

Aircraft Accident Investigation Bureau (AAIB)

News: The Aircraft Accident Investigation Bureau (AAIB) has released a preliminary report of the deadly Air India flight crash in Ahmedabad.

About Aircraft Accident Investigation Bureau (AAIB)



Figure 15. Source - AAIB

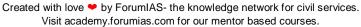
- It is India's official agency responsible for investigating civil aviation accidents and serious incidents.
- It operates under the Ministry of Civil Aviation (MoCA) and functions independently from regulatory bodies to ensure unbiased, evidence-based investigations in line with international standards.
- Legal basis
- Aircraft Act, 1934(Section 7): The Act empowers the government to

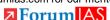
make rules for investigating aircraft accidents.

- Until 2012, the Air Safety Directorate of the Directorate General of Civil Aviation (under the aviation ministry) investigated accidents and safety-related incidents.
- Aircraft (Investigation of Accidents and Incidents) Rules, 2012 (amended in 2017 and 2021): The Rules formalize AAIB's mandate, powers, and procedures.
- International alignment: The body functions in accordance with Annex 13 of the Chicago Convention (International Civil Aviation Organization, ICAO), which sets global standards for aircraft accident investigations.

Functions

- Categorization of "occurrences": It classifies 'Safety Occurrences' involving aircraft operating in the Indian airspace into the categories of Accidents, Serious Incidents and Incidents.
- Investigation: It investigates all accidents and serious incidents involving aircraft with All
 Up Weight (the total weight of an aircraft with passengers and cargo) of more than
 2,250 kg, as well as Turbojet aircraft.





- Objective: The sole objective of the investigations carried out by AAIB is the prevention of accidents and incidents and not to apportion blame or liability.
- Evidence collection: It deputes one or more Investigators to reach the site and gather evidence soon after it receives notice of the incident.
 - The **aim** is to **gather and preserve perishable evidence**, including the samples of the wreckage and retrieving the black boxes, and so on.
- **Report:** It publishes the report after completion of Investigation and acceptance of the same by the Director General, AAIB, on its website.
 - The accepted **Reports** are also forwarded to **International Civil Aviation Organisation (ICAO)** and the **States participating** in the investigation.
- It also conducts **safety studies** from time to time.
- It also facilitates the investigation and administrative work of Court or Assessors
 appointed by the Central Government as per Rule 12 of Aircraft (Investigation of Accidents
 and Incidents) Rules, 2017.

Gharial, Sloth Bear added to Centre's critically endangered species scheme

News: The Standing Committee of National Board for Wildlife (SCNBWL) has recommended the inclusion of gharial and sloth bear in the Centre's Species Recovery Programme.

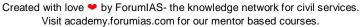
Gharial, Sloth Bear added to Centre's critically endangered species scheme



Source - MoEFCC

About Gharials

- It is a species of **Asian crocodilian** distinguished by their **long, thin snouts** which resembles a **pot** (ghara in Hindi).
- **Habitat:** They prefer to live in **riverine habitats** with deep, clear, fast-moving water and steep, sandy banks.
- Distribution: It was once found across Bangladesh, Bhutan, India, Myanmar, Nepal and Pakistan.
 - However, currently it survives in several severely fragmented populations in India and Nepal.





o In India, Gharials are present in Chambal, Yamuna, Ganga, Son, Sharda, Girwa, Gandak, Ramganga, Mahanadi and Brahmaputra

Conservation status

- o **IUCN Red list:** Critically Endangered
- o Wild Life (Protection) Act, 1972: Schedule I
- **CITES:** Appendix I
- Threats: Construction of Dam, barrages, and water abstraction, entanglement in fishing nets, River bed cultivation and sand mining.

Conservation initiatives

- Project Crocodile: Indian government launched the Project with UNDP and FAO in 1975.
 - It included an intensive captive rearing and breeding programme intended to revive dwindling gharial population.
- The National Chambal Sanctuary (Madhya Pradesh, Rajasthan and Uttar Pradesh) and Ken Gharial Wildlife Sanctuary (Madhya Pradesh) are wildlife sanctuaries in India.

About Sloth bears

- Sloth bears are **one of the eight bear species** found across the world.
- They are myrmecophagous, i.e. they find bugs and termites to be their most sought after meal.
- Habitat: It is a forest-dwelling bears that inhabits tropical or subtropical regions of India and Sri
- **Distribution:** Around **90% of the species' population** is found in **India**. A small population of bears is also found in **Nepal and Sri Lanka**.
- Characteristics
 - They are very **fond of honey**, hence their alternative name of "honey bear".
 - They **do not hibernate**.

Threats

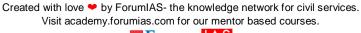
- Exploited as dancing bears by the nomadic Kalandar community members
- Human sloth bear conflict in States like Gujarat, Rajasthan and Maharashtra
- Habitat loss
- Poaching for body parts
- Hunted because of their aggressive behaviour and destruction of crops

Conservation Status

- IUCN Red List: Vulnerable
- CITES: Appendix I
- Wildlife (Protection) Act of India, 1972: Schedule I

About Endangered Species Recovery Plans (ESRP)

- It is a targeted conservation initiative in India aimed at protecting, reviving, and ensuring the long-term survival of critically endangered and threatened species.
- It operates under the broader framework of the Integrated Development of Wildlife Habitats (IDWH), a centrally sponsored scheme of the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Implementing agency: Wildlife Institute of India (WII)





• So far, **24 (with gharial and sloth bear) species** including Snow Leopard, Asiatic Lion, Great Indian Bustard etc. have been identified under the Species recovery programme.

Jarawa Tribe

News: Considering the 16th census, experts believe that conducting a census among the six main indigenous tribes in the Andaman and Nicobar Islands will not be tough. This is because the Central Government has already made contact and is running several welfare measures for these tribes.

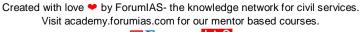
About Jarawa Tribe

- The Jarawa are an indigenous nomadic tribe living on the Andaman Islands in India.
- They are believed to have migrated from Africa nearly **50,000–60,000 years ago.**
- The Jarawas are among the world's oldest surviving tribal groups.
- The Jarawa tribe is recognized as a Particularly Vulnerable Tribal Group (PVTG).
- They reside primarily in regions of **Middle and South Andaman Islands**, areas known for their **dense tropical forests**, **mangrove ecosystems**, and **unspoiled coastlines**,
- They live in small groups of **40–50 people**. The **Jarawa** build their shelters, called **chhappas**, within the forest and typically shift their location every few months.
- They maintain a largely **egalitarian society**, with **no formal leadership or hierarchical structure**.
- The Jarawas possess a **rich cultural and historical heritage**, with well-developed **beliefs, customs**, and their own unique **language**, **Jarawa**.
- They are also known for their **skill in music and dance**, which form an integral part of their cultural expression.
- They hunt wild pigs, turtles, and fish using bows and arrows and collect fruits, roots, tubers, and wild honey.
- They make their bows from **chooi wood**, which they collect from **Baratang Island**.
- There are about **400 Jarawa people** today.

Nominated Members of Rajya Sabha

News: The government has nominated four people of eminence to the Rajya Sabha, including former foreign secretary Harsh Vardhan Shringla, Special Public Prosecutor Ujjwal Nikam, C Sadanandan Master, and historian Meenakshi Jain.

About Nominated Members of Rajya Sabha







Source - Mathrubhumi

Constitution provisions regarding Nominated Members of Rajya Sabha

- Article 80: "Composition of the Council of States" The Council of States shall consist of:
 - Twelve members to be nominated by the **President** in accordance with the provisions of clause (3):
 - Not more than two hundred and thirty-eight (238) representatives of the States and of the Union territories.
- Qualification: Clause 3 of the Article 80 lays down the qualifications for the appointment:
 - The members to be nominated by the President shall consist of persons having special knowledge or practical experience in respect of such matters as the following, namely — Literature, science, art and social service.
- Powers and Privileges of Nominated Members
 - The nominated member can **join a political party within six months** of taking his/her seat in the House.
 - They **enjoy** all **the powers and privileges** to which the elected Members of Parliament are entitled.
 - They can take part in the proceedings of the House in the normal manner.
 - **Voting:** They are **not allowed to vote in the election of the President**.
 - They do have the **right to vote in the election of the Vice-President**.

Maratha Military Landscapes included in UNESCO World Heritage List

News: Maratha Military Landscapes of India has been inscribed on the UNESCO World Heritage List, becoming India's 44th property to receive this recognition.

About Maratha Military Landscapes included in UNESCO World Heritage List



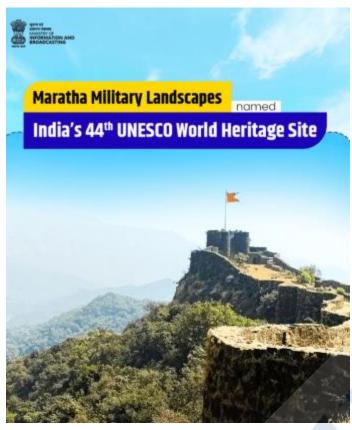


Figure 16. Source - MIB

- It is an extraordinary network of twelve forts that demonstrates the strategic military vision and architectural ingenuity of the Maratha Empire.
- Built in the period **from 17th century to 19th century**.
- Distribution: The Landscapes include twelve majestic forts, eleven of which are in Maharashtra and one is in Tamil Nadu.
- The selected sites, include Salher, Shivneri, Lohgad, Khanderi, Raigad, Rajgad, Pratapgad, Suvarnadurg, Panhala, Vijaydurg, and Sindhudurg in Maharashtra, along with Gingee Fort in Tamil Nadu.
- Protection level: Protected under -
- Archaeological Survey of India: Shivneri fort, Lohgad, Raigad, Suvarnadurg, Panhala fort, Vijaydurg, Sindhudurg and Gingee fort.
- O Directorate of Archaeology and Museums, Government of Maharashtra: Salher fort, Rajgad, Khanderi fort and Pratapgarh fort.
- **Terrain:** The forts are located across a range of diverse terrains reflecting a

sophisticated understanding of geography and strategic defence planning.

- O Hill forts: Salher, Shivneri, Lohgad, Raigad, Raigad, and Gingee forts
- **Hill-forest fort:** Pratapgad fort
- O Hill-plateau fort: Panhala fort
- **Coastal fort:** Vijaydurg fort
- Island forts: Khanderi, Suvarnadurg, and Sindhudurg forts
- Importance: Together, they form a cohesive military landscape that highlights the innovation and regional adaptation of fortification traditions in India.

Note: India ranks 6th globally and 2nd in Asia Pacific Region for the most number (44 as of July 15th, 2025) of World Heritage Sites.

Exercise Talisman Sabre 2025

News: India has made its debut in Australia's largest bilateral military exercise, Exercise Talisman Sabre, marking a significant milestone in the deepening defence and security cooperation between the two nations in the Indo-Pacific region.

About Exercise Talisman Sabre 2025

Source - Australian Army

- It is a biennial, multinational military exercise led by Australia and the United States.
- Objectives

- Enhance joint operational capability and readiness in simulated crisis-action planning and multi-domain operations.
- Strengthen coalition partnerships and collective security arrangements.
- Inaugural edition: Talisman Sabre began in 2005 as a biennial joint exercise between the United States and Australia.
- 2025 edition: It is the 11th edition and will involve approximately 35,000 military personnel from 19 countries and an additional 3 observer countries, making it one of the largest iterations of the exercise to date.
- Participating countries: Canada, Fiji, France, Germany, India (for the first time), Indonesia, Japan, the Netherlands, New Zealand, Norway, Papua New Guinea, the Philippines, South Korea, Singapore, Thailand, Tonga, and the United Kingdom.
 - Malaysia and Vietnam are attending as observers.
- **Locations:** The exercise is conducted **primarily across Australia** (notably **Queensland**, the Northern Territory, and offshore ranges)
 - The exercise will also take place in **Papua New Guinea**, Australia's nearest neighbor. It is the **first time** Talisman Sabre activities have been held outside Australia.

Arboviral Diseases

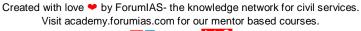
News- The WHO has released its first integrated guidelines for managing arboviral diseases

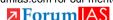
About Arboviral Diseases

- Arboviral diseases are infections caused by arthropod-borne viruses transmitted to humans through bites of infected insects, mainly mosquitoes and ticks.
- It is commonly transmitted by **Aedes mosquitoes**.
- The Aedes aegypti mosquito **can transmit several viruses** within the same region, often at the same time
- Example: Common examples include West Nile, Zika, Chikungunya, Dengue, and Eastern equine encephalitis.
- Transmission: Some viruses may also spread through blood transfusion, organ transplant, sexual contact, or mother-to-child transmission.
- **Symptoms:** Fever, diarrhoea, vomiting, body aches, skin rash, bleeding (in dengue and yellow fever), headache, neck stiffness, excessive sleepiness, seizures, and unconsciousness—often appearing within a few days to two weeks after a mosquito or tick bite.
- **Prevention:** Use insect repellents, wear protective clothing, and eliminate standing water to reduce mosquito breeding. Ensure window and door screens are intact.

Global Risk & Impact

- Over **5.6 billion people** globally are **at risk** of arboviral infections.
- These diseases are **endemic to tropical and subtropical regions** and are **rapidly expanding** in range.
- Infections often appear with similar flu-like symptoms, making diagnosis challenging.
- **Simultaneous circulation** of multiple arboviruses is common in several regions.





Prime Minister Dhan-Dhaanya Krishi Yojana (PM DDKY)

News: The Union Cabinet chaired by the Prime Minister has approved the "Prime Minister Dhan-Dhaanya Krishi Yojana" for a period of six years, beginning with 2025-26 to cover 100 districts.

About Prime Minister Dhan-Dhaanya Krishi Yojana (PM DDKY)

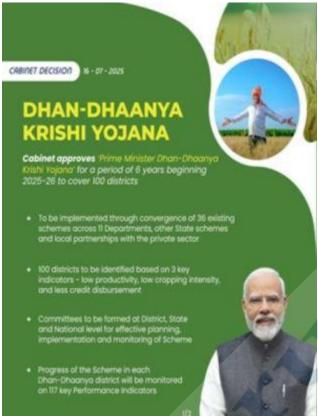


Figure 17. Source - PIB

- It is a first of its kind scheme, **focusing exclusively on agriculture and allied sectors**.
- •The scheme was first announced in the **Union Budget 2025-26**.
- The Scheme draws inspiration from **NITI Aayog's Aspirational District Programme**.
- •Convergence: The Scheme will be implemented through convergence of 36 existing schemes across 11 Departments, other State schemes and local partnerships with the private sector.
- •Outlay: Budget documents do not provide a separate allocation for the scheme.
- **Objectives:** The scheme has **five** objectives:
- Enhancing agricultural productivity
- OAdopting crop diversification and sustainable agriculture practices
- OAugmenting post-harvest storage at the panchayat and block level
- OImproving irrigation facilities
- \circ Facilitating availability of long-term and short-term credit.
- Implementation of scheme
- oldentification of districts: 100 districts will be

identified based on three key indicators of low productivity, low cropping intensity, and less credit disbursement.

- Number of districts: The number of districts in each state/UT will be based on the share of Net Cropped Area and operational holdings.
 - However, a **minimum of 1 district** will be selected from **each state**.
 - **Planning Committees:** The **Committees** will be formed at **District, State and National level** for effective **planning, implementation and monitoring** of the Scheme.
 - O District Agriculture and Allied Activities Plan will be finalized by the District Dhan Dhaanya Samiti, which will also have progressive farmers as members.
 - The District Plans will be aligned to the national goals of crop diversification, conservation of water and soil health, self-sufficiency in agriculture and allied sectors as well as expansion of natural and organic farming.
- Monitoring: Progress of the Scheme in each Dhan-Dhaanya district will be monitored on 117 key Performance Indicators through a dashboard on monthly basis.

Pradhan Mantri Rashtriya Bal Puraskar (PMRBP)

News: The Ministry of Women and Child Development is reiterating its call for nominations to the Pradhan Mantri Rashtriya Bal Puraskar (PMRBP) 2025, awards.

About Pradhan Mantri Rashtriya Bal Puraskar (PMRBP)



Figure 18. Source - PIB

- This award is a unique recognition to celebrate the extraordinary achievements of children.
- **Organised by:** Ministry of Women and Child Development
- This award is the highest
 civilian honor for children in
- It is awarded annually to children in the age group of 5-18 years for their exceptional abilities and outstanding achievements in seven categories:
- Categories: Bravery,
 Social Service, Environment,
 Sports, Art and Culture, and
 Science and Technology.
- Eligibility and Nomination
- i. Any child who is an **Indian Citizen** and is a **resident** of

- India.
- ii. Age Criterion: **5 18 years** (as on 31.07.2025)
- iii. The act/achievement should be **within 2 years** preceding the last date of nomination.
- iv. Any individual or institution can nominate.
- V. Children may also apply through **self-nomination**.

Decoration

- i. Medal
- ii. Certificate
- iii. Citation Book

Number of Awardees

- Maximum 25 awards can be given in a year, however the limit may be relaxed by the PMRBP Committee.
 - All nominations received for the Pradhan Mantri Rashtriya Bal Puraskar (PMRBP) shall be placed before the PMRBP Committee, which is to be constituted by the Minister for Women and Child Development.

Ceremony

• The Awards to be announced on **December 26 on 'Veer Bal Diwas'**.

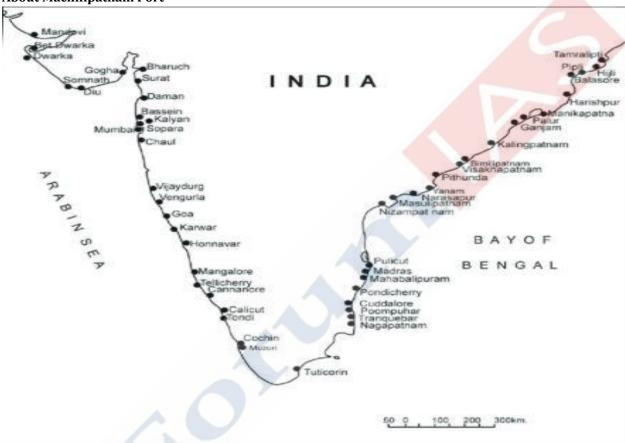


• The awards will be **conferred by the President of India**, at a special ceremony/function to be held in **New Delhi**.

Machilipatnam Port

News: The historic port of Machilipatnam is revived again after being a dead dock town for ages.

About Machilipatnam Port



Source - ResearchGate

- **Location:** It is a port city located at the mouth of the **River Krishna** on the Bay of Bengal in the Krishna district of **Andhra Pradesh**.
- It was also known as Masulipatnam or Bandar or Masuala in ancient times.
- Ancient existence: The port's existence dates back to at least the Satavahana period (3rd century BCE), mentioned as Maisolos by Ptolemy and as Masalia in the Periplus of the Erythraean Sea (1st century CE).
- **Medieval era:** Under **Qutb Shahi rule** (16th–17th centuries), it became the principal port for the **Kingdom of Golkonda**, exporting textiles from the Krishna-Godavari delta.
- **European era:** It was also **one of the first places** where the East Indian Company **set up a factory** in the country, in the early 17th century.
- **Economic importance:** It was a vital center for trade with ancient Rome, Persia, China, Southeast Asia, and later, European traders. The port specialized in exporting:
 - **Muslin** (fine cotton cloth, for which the word "muslin" is derived)
 - O Spices, **textiles**, diamonds, turmeric, sugar, elephants, and other goods.



• It is known for its handloom industry, which produces **Kalamkari textiles**.

Decline

- The port **lost prominence to Madras (Chennai)** due to changing British colonial trade policies and **siltation**
- **Current development:** A **modern Greenfield Port** is under rapid construction at **Manginapudi**, near Machilipatnam.

Port Cities of Ancient India

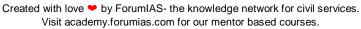
Port City	Features		
Lothal	Located in Gujarat, part of the Harappan (Indus Valley) Civilization; well-planned port structures.		
Poompuhar (Kaveripattinam)	At the mouth of the Kaveri River in Tamil Nadu; Chola period, mentioned in Sangam literature.		
Arikamedu	Located near Puducherry, known as Podouke in Greek and Roman records		
Tamralipti	Located at the Ganga-Bay of Bengal confluence in West Bengal, a Gupta era port, gateway to Southeast Asia.		
Sopara (Maharashtra)	A main port of Satavahanas		
Korkai	Pandya port on Tamraparni in Tamil Nadu, renowned for pearl fishery and trade with Rome and Southeast Asia.		
Motupalli	Flourished under Kakatiya Dynasty in Andhra Pradesh		
Tondi (Tyndis)	Chera period in Tamil Nadu, a satellite port for Muziris		
Bharuch (Barygaza)	On the Narmada River in Gujarat, connected with Arabs, Greeks, Romans, Africans, Chinese, and Egyptians		

PM Professorships

News: The ANRF has launched the PM Professorships initiative to strengthen research ecosystems in State universities across India.

About PM Professorships

- Launched by: Anusandhan National Research Foundation (ANRF), the new apex body for scientific research funding in India.
- **Objective:** To utilize the extensive knowledge and experience of active, eminent, and superannuated/retired scientists and professionals.
- **Fellowship Amount:** Rs. 30 lakh per annum.





- Research Grant: Rs. 24 lakh annually for consumables, domestic travel, contingencies, equipment, etc.
- **Institutional Overhead:** Rs. 1 lakh per annum for the host university.
- Eligibility— It can be applied by retired scientists, overseas scientists, including Non-Resident Indians (NRIs), Persons of Indian Origin (PIOs), Overseas Citizens of India (OCIs) and Industry professionals and Professors of Practice with proven innovation and research records.
- **Duration:** The Prime Minister Professorship term can last up to five years, contingent upon performance assessments conducted by a designated expert committee.
- Eligible host institutions are state universities listed as Category A spoke institutions in the latest PAIR program by ANRF. Applicants must be ready to move to the chosen university full-time and have a clear plan to help improve its research and innovation.

Mitochondrial Donation Treatment (MDT)

News: At least eight babies have been born in the UK using DNA from three people, thanks to a groundbreaking fertility technique designed to stop the passing on of inherited genetic diseases.

About Mitochondrial Donation Treatment (MDT)

How mitochondrial donation treatment works



Source - The Guardian

- It is a **form of IVF** that **replaces faulty mitochondrial DNA** in the **patient's eggs** with healthy mitochondrial DNA from a **donor egg**.
- It helps in preventing serious and often fatal conditions linked to mitochondrial defects
- Process
 - Mitochondria are tiny structures in cells that produce energy.
 - When they don't work properly, they can lead to severe conditions affecting the brain, muscles, heart and other organs.
 - MDT works by **removing the faulty mitochondria in a woman's egg** and **replacing** them with **healthy ones from a donor**.
 - The **mother's nuclear DNA**, which makes up most of a person's genes, is **kept intact**.
 - O So, the **baby inherits DNA from three people:** the **mother, the father, and the donor**
 - However, the **donor's contribution is less than 1%** of the child's total genetic material.



Note: The **UK** became the **first country** to approve the use of mitochondrial donation in 2015.

Tribal Genome Sequencing Project of Gujarat

News: Gujarat has become the first Indian State to launch a genome sequencing initiative focused exclusively on tribal communities.

About Tribal Genome Sequencing Project of Gujarat



Source - ToI

- It is an initiative to **sequence the genomes of 2,000 individuals** across **17 tribal districts** of Gujarat, **aiming** to identify and manage inherited disorders.
 - Gujarat will become the first Indian state to start this kind of initiative.
- Implementing agency: It is being spearheaded by the Gujarat Biotechnology Research Centre (GBRC).
- **Background:** This initiative was announced in the **state budget** (2025-26), under a project named 'Creation of Reference Genome Database for Tribal Population in Gujarat'.
- **Diseases to be detected:** The project will focus on **early diagnosis** and **treatment** of **sickle cell anaemia, thalassaemia, and hereditary cancers**—all disproportionately affecting tribal populations.
- Techniques employed
 - The genome sequencing will involve state-of-the-art sample collection, processing, and data interpretation systems.
 - **Genetic markers** for natural immunity and other traits will be **catalogued**, enabling personalised healthcare interventions in the future.
- Significance
 - The project is expected to pave the way for **precision medicine**, **early diagnosis**, **and targeted treatments** specifically **tailored to the health needs** of tribal populations.
 - In addition, their **health profile** will be linked to **basic health services**.



Akash Prime

News: India has achieved a significant milestone by successfully destroying two Aerial High Speed Unmanned targets at high-altitude in Ladakh by Akash Prime.

About Akash Prime



Source - PIB

- It is the latest edition of the surface-to-air missile defence system.
- **Developed by:** It is **developed by the DRDO** and **produced** by Bharat Electronics Limited (**BEL**) and Bharat Dynamics Limited (**BDL**).
- It is the **fourth version** of the **Akash Missiles Defence System**.
 - The first three were Akash Mk-1, Akash-1S, and Akash NG.
- Key features of Akash Prime
 - It is installed with an indigenously developed **active radio frequency seeker**, which improves the precision against agile targets like cruise missiles, fighter jets or drones.
 - It is specifically optimised for **high altitude and low temperature territories** like the India-Tibet border.
 - It is incorporated with enhanced **thermal shielding**.
 - Range: It can engage targets at an altitude of 18 km at a distance of 30 km away.

Comparisons between Akash NG and Akash Prime

- Akash NG has a range of 70-80 km compared to the 27-30 km range of the Akash Prime.
 - It is **sleeker and lighter and utilises** a more advanced **dual-pulse solid rocket motor**, replacing the older ramjet engine for improved performance.
 - It is mobile, and its smaller ground system footprint makes it easier to deploy and transport.
- Akash NG is the future with longer range and smarter tech.
 - Akash Prime, on the other hand, is designed for specific terrain with lower temperatures and higher altitudes, smarter tech, reliable and rugged.

About Akash Missile Defence System

• It is a **medium range**, **surface-to-air missile system** which provides a**rea air defence** against multifarious air threats to mobile, semi mobile and static vulnerable forces and areas.

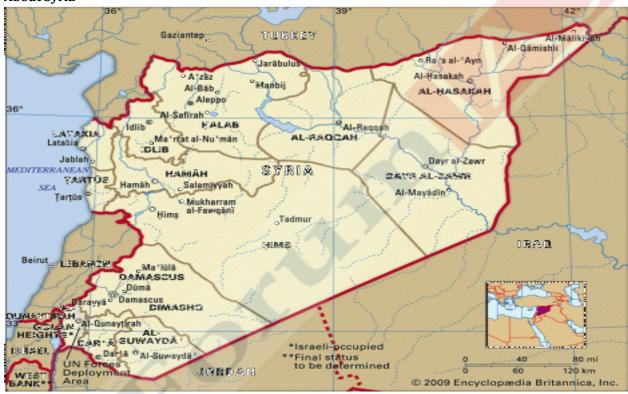


- It consists of a **single battery** with **radar and four launchers**.
 - Each has **three missiles** with 60kg high explosive, **64 targets** and can **attack up to 12 of them**.
- The system provides **coverage up to 2,000 square km**.

Key Facts about Syria

News: Recently, the Israeli military carried out a fresh wave of airstrikes targeting areas close to the Syrian army and the Ministry of Defence headquarters in Damascus.

About Syria



Source: Britannica

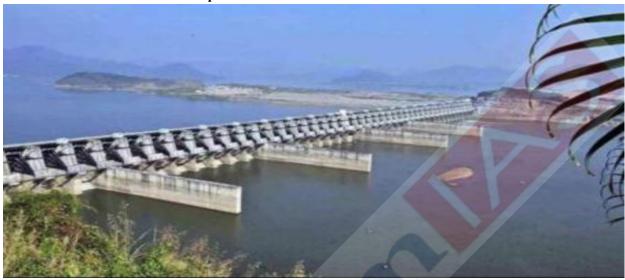
- Location: Western Asia, eastern Mediterranean
- Borders: It is bordered by Turkey, Iraq, Jordan, Israel, Lebanon, and the Mediterranean Sea.
- **Highest Point:** Mount Hermon.
- **Terrain**: Coastal plains, northwest mountains (Anti-Lebanon, Jabal al-Druze), central/eastern plateau and desert, and fertile Euphrates valley.
- Its area includes territory in the Golan Heights that has been occupied by Israel since 1967
- **Rivers & Reservoirs**: The Major rivers are the Euphrates, the Orontes and the Tigris. Lake Assad is the largest reservoir.
- **Climate**: Mediterranean coast; semi-arid steppe inland; arid desert in east.
- It got independence on 17 Apr 1946.
- Ethnic Groups: Arabs, Kurds, plus Turkmen, Assyrians, Circassians, Armenians, Druze, etc.



Inter-State River Water Disputes Resolution in India

News: The Union government will form a high-level expert committee to address inter-state water issues between Telangana and Andhra Pradesh on Krishna and Godavari rivers.

About Inter-State River Water Disputes Resolution in India



Source - TNIE

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.
 - It provides for the establishment of Water Disputes Tribunals for the adjudication of disputes among states regarding the sharing of river waters.
 - **Defined time limits:** The **Act** was most recently **amended in 2002** to set defined time limits for tribunal formation and award.

Resolution mechanisms

- **Negotiation and agreement:** Initially, states are encouraged to resolve disputes through dialogue and mutual agreement.
- Dispute Resolution Committee (DRC): When negotiations fail, the Central Government may constitute a Disputes Resolution Committee (DRC) comprising a chairperson, expert members, and representatives from the disputing states.
 - The DRC is tasked to reach an amicable settlement through negotiation, typically within one year (extendable by six months).
- Water Disputes Tribunal: If the DRC cannot resolve the issue, the matter is referred to a dedicated Water Disputes Tribunal.

- The tribunal must be constituted within a year of the request and is expected to deliver its decision within three years (extendable by two more years). Its decisions are binding on the contested parties.
- Tribunals have been set up for rivers including Krishna, Cauvery, Mahanadi, Mahadayi, Ravi & Beas, Vansadhara, etc.

Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS)

News: Union Minister of State for Minority Affairs George Kurian on Thursday inaugurated the PM-VIKAS Skill Development and Women Entrepreneurship Programme at the Indian Institute of Information Technology (IIIT) Kottayam.



Source - MoMA

- It is a **flagship ccheme** of the **Ministry of Minority Affairs** which converges five erstwhile schemes
 - Seekho aur Kamao
 - USTTAD
 - Hamari Dharohar
 - Nai Roshni and
 - Nai Manzil.
- Type: It is a Central sector (CS) scheme.
- It is aligned to the 15th Finance Commission cycle period up to 2025-26.
- Aim: The scheme focuses on **upliftment of six notified minority communities** through the following:
 - Skilling and Training (Non-traditional and traditional)
 - Women Leadership and Entrepreneurship
 - Education (through National Institute of Open Schooling)
 - Infrastructure Development (through Pradhan Mantri Jan Vikas Karyakram)



- Credit facilities: The scheme also provisions to facilitate credit linkages by connecting beneficiaries
 with loan programs offered by the National Minorities Development & Finance Corporation
 (NMDFC).
- The Export Promotion Council for Handicrafts (EPCH) is a knowledge partner of the Ministry under the PM VIKAS scheme to extend support to artisans trained under traditional training components of the scheme.
- Placement criteria: Under the PM VIKAS Scheme, the implementing partners are to ensure placement of 75 per cent of total candidates trained under NSQF aligned skill programs.

Global Wetland Outlook, 2025

News: The Global Wetland Outlook 2025 warns that wetlands are vanishing faster than any other natural system.

About Global Wetland Outlook

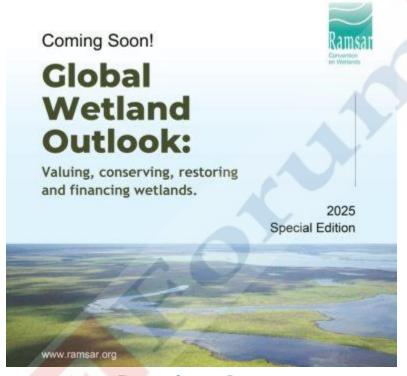
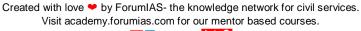


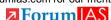
Figure 19. Source – Ramsar.org

- It is the flagship report of the Convention on Wetlands (famously known as Ramsar Convention), developed by its Scientific and Technical Review Panel (STRP).
- The **first edition** of the Global Wetland Outlook was published in **2018**.
- It provides the most current and comprehensive data on the extent, condition, and trends of wetlands worldwide, their economic and societal value, and the steps needed for their conservation, restoration, and sustainable financing.
- The report is being launched in the lead-up to the **COP15**, which will take place in **Victoria Falls**, **Zimbabwe**, from 23 to 31 July 2025.

Key Highlights of Global Wetland Outlook 2025

- Africa's wetlands among the most degraded in the world.
- 22% of the world's wetlands have been lost since 1970 and an additional one-fifth of the world's remaining wetlands could be at risk by mid-century without urgent action.
- Wetlands cover just 6% of earth's surface, but deliver ecosystem services valued at more than 7.5% of global GDP up to \$39 trillion annually including water purification, carbon storage, coastal protection, and support for food systems and livelihoods.
- The world is losing wetlands at an annual rate of 0.52%.
- Reson for degradation: The urbanization and industrial development as key drivers of this
 decline.





Case studies:

- i. **Zambia's Kafue Flats:** Here, an initial \$300,000 **restoration initiative** has grown into a **\$1 million annual investment** that sustains biodiversity and the ecosystem services that support roughly **3 million people**.
- ii. **Regional Flyway Initiative**: It is a \$3 billion partnership across Asia, aims at restoring more than 140 wetlands critical to migratory birds and nearly 200 million people.
- Way Forward suggested: Four pathways to reversing wetland loss and unlocking nature-positive investment are outlined in the report:
 - i. **Integrate wetland value in decision-making**—treating wetlands as essential infrastructure in land-use, water, and economic planning.
 - ii. **Recognize wetlands as key to the global water cycle**—for their role in storing, filtering, and regulating water.
 - iii. **Embed wetlands in innovative financing mechanisms**—including carbon markets, resilience bonds, and blended finance.
 - iV. **Mobilize public and private resources for wetland restoration**—through partnerships that fund action on the ground and support local communities.

Swachh Survekshan 2024-25 Awards

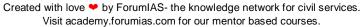
News: The Swachh Survekshan 2024-25 Awards was hosted by the Ministry of Housing and Urban Affairs (MoHUA).

About Swachh Survekshan 2024-25 Awards



Figure 20. Source: PIB

- A total of **43 national awards** were announced, recognizing excellence in urban cleanliness and sanitation across India.
- Indore, Surat, and Navi Mumbai were felicitated for entering the premier Super Swachh League.
- Ahmedabad, Bhopal, and Lucknow were declared as India's new clean cities.
- A total of **34 cities** from various States and Union Territories were honoured as **Promising Swachh Shehars**, based on the **'One City, One Award' principle**.
- The city of **Prayagraj** was awarded the title of **Best Ganga Town**.
- The Secunderabad Cantonment Board received the award for Best Cantonment Board for its exemplary sanitation and waste management practices.





- Visakhapatnam (GVMC), Jabalpur, and Gorakhpur were declared as Best SaifaiMitra Surakshit Shehar for ensuring the safety and dignity of sanitation workers.
- The survey framework for Swachh Survekshan 2024-25 was refined to accommodate **five population** categories and included ten new assessment parameters.
- The framework was also **simplified for small cities**, creating a **level playing field** and encouraging competitive participation.
- The **Swachh City Partnership initiative** was also launched, under which **78 top-performing cities** will mentor one underperforming city each from their respective States.
- The **Accelerated Dumpsite Remediation Program** was also announced aiming to remediate legacy waste and increase scientific processing capacity within a year.
- The **Swachh Survekshan 2024-25 Results Dashboard** was digitally launched, providing an interactive view of city rankings, performance, and cleanliness achievements.

Consumer Price Index (CPI) for AL/RL

News: Union Ministry of Labour and Employment has updated the base year for calculating the Consumer Price Index (CPI) for agricultural and rural labourers to 2019.

About Consumer Price Index (CPI) for AL/RL

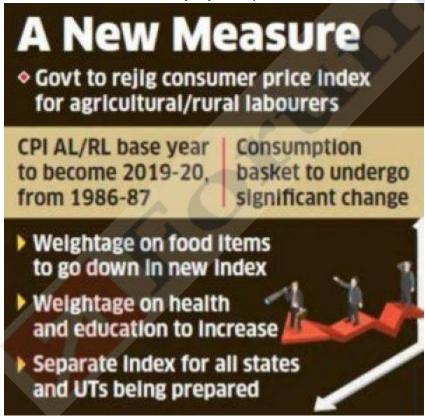


Figure 21. Source – ET

- The Consumer Price Index for Agricultural Labourers (CPI-AL) and Consumer Price Index for Rural Labourers (CPI-RL) are vital economic indicators published monthly by the Labour Bureau, Ministry of Labour & Employment.
- They reflect the movement in the retail prices of goods and services consumed by rural and agricultural labor households in India.
- The New Series
- O The newly constructed CPI AL & RL series (Base: 2019=100) replaces the CPI AL/RL (Base: 1986-87=100) series.
- O The move is aimed at improving accuracy and reflecting contemporary consumption patterns.
- **Significance:** The

revised series has significantly **enhanced the scope and coverage and incorporated many methodological changes** in order to make the indices more robust.

O Changes: These are -



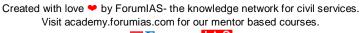
- The **weighting diagrams** (share of expenditure to total expenditure) have been **revised** due to changes in consumption patterns;
- Use of the Geometric Mean (GM) in place of the Arithmetic Mean (AM), as GM moderates the volatility in prices;
- Use of the latest classification of individual consumption according to purpose, in line with the Classification of Individual Consumption by Purpose (COICOP)-2018;
- Calculation of prices of PDS items using the admissibility concept instead of availability as in the old series;
- The revised series covers **34 States/UTs as against 20 States** in the old series;
- Prices are collected from 787 sample villages as against 600 villages in the old series;
- Around **150–200 items are covered as against ~65–106 items** in the old series.

About Consumer Price Index (CPI)

- It is an index measuring **retail inflation in the economy** by collecting the **change in prices of most common goods and services used by consumers**.
- It is calculated for a **fixed list of items** including food, housing, apparel, transportation, electronics, medical care, education etc.
- In **2014**, RBI has adopted CPI as the key measure for **determining the inflation**.

Different types of Consumer Price Index(CPI)

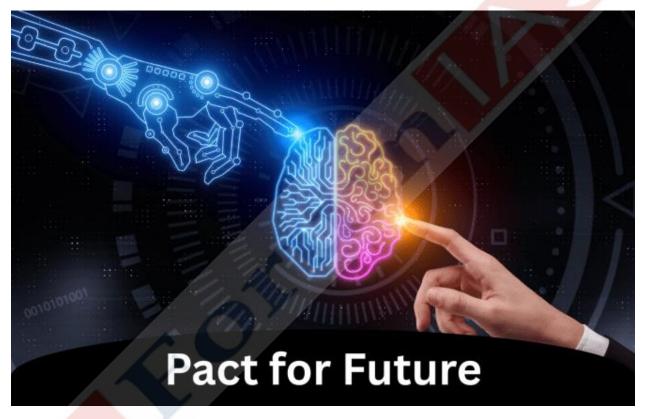
Index	CPI for Industrial Workers (IW)	CPI for Agricultural Labourer (AL)	CPI for Rural Labourer (RL)	CPI (Rural/Urban/Combined)
Released by	Labour Bureau (Ministry of Labour and Employment)	Labour Bureau	Labour Bureau	National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI)
Base Year	2016	2019	2019	2012
Purpose	Measures the relative changes in retail prices of fixed basket of goods and services consumed by industrial workers over a period of time.	confined to households of the agricultural labourers	covers the households of rural labourers which includes agricultural labourers households also.	_





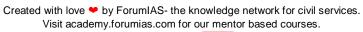
Used for	Utilized for regulation of wages & dearness allowance of workers & employees in the country.	MGNREGA wage rates are fixed according to changes in the CPI-AL.	-	Used by RBI to determine inflation rates and its monetary policy.
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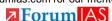
'Pact for Future'



News: India has reiterated its firm support for the Pact for the Future and its key annexes- the Global Digital Compact and the Declaration on Future Generations- during the third informal dialogue to review the agreement.

About 'Pact for Future'







Source - UN

- It is a landmark outcome document adopted at the United Nations Summit of the Future in September 2024.
- **Aim:** Its primary aim is to **invigorate multilateralism, strengthen global cooperation**, and better equip international institutions to address contemporary and emerging global challenges.
- The pact was **developed through an inclusive, multi-year negotiation process** involving Member States, civil society, and international organizations.
- Annexes: The Pact has two annexes -
 - The Global Digital Compact and the Declaration on Future Generations aim to enhance multilateralism for international peace and security, strengthen inclusive innovation and cooperation to bridge the digital divide, and enhance the global system for current and future generations.
- Its adoption demonstrates that **countries are committed to an international system** with the United Nations at its centre.

Exercise Prachand Shakti

News: The Ram Division of the India Army conducted a high-impact demonstration titled 'Prachand Shakti' at the Kharga Corps Field Training Area, in Uttar Pradesh's Meerut. **Exercise Prachand Shakti**

About Exercise Prachand Shakti





Source - Indian Army

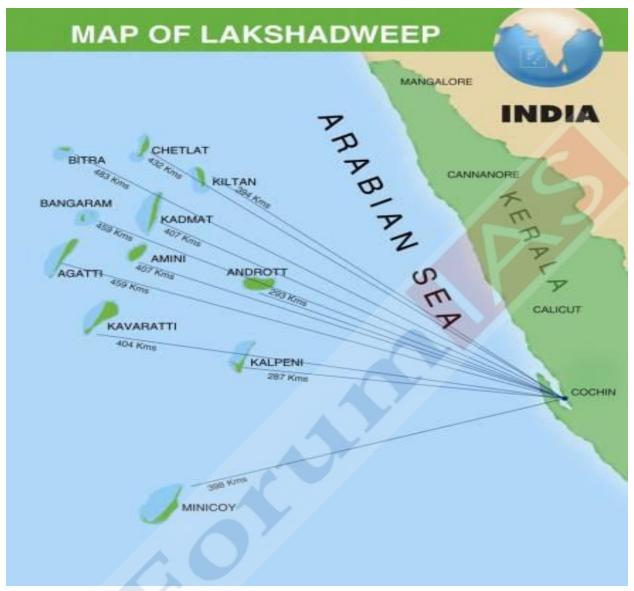
- The exercise highlighted the changing dynamics of warfare, where Unmanned Aerial Vehicles (UAVs), AI-enabled systems, loitering munitions, and autonomous platforms are playing a pivotal role in redefining operational capabilities.
- **Conducted by:** The Ram Division of the India Army
- Conducted at: Kharga Corps Field Training Area, in Uttar Pradesh's Meerut
- Focus of exercise: The exercise focused on the employment of disruptive technologies by infantry
 units in Strike Corps operations, showcasing the Army's technological transformation in real-time
 combat
- **Objective:** The core objective of the event was to demonstrate how such disruptive technologies can significantly enhance the agility, lethality, and survivability of infantry formations engaged in deep offensive missions conducted by Strike Corps.
- This demonstration was part of the Indian Army's broader initiative under the 'Year of Tech
 Absorption', aimed at integrating indigenous and advanced technological solutions from civilian
 innovators into military operations.

Bitra Island

News: The Lakshadweep administration is exploring the possibility of acquiring Bitra, one of the inhabited islands in the archipelago, for defense-related purposes.

About Bitra Island





Source: lakshadweep.gov.in

- Bitra is the smallest inhabited island in the Lakshadweep archipelago
- It has a length of 0.57km and a width of 0.28km at the broadest point.
- It is uniquely located on the **northeastern tip** of a large **coral ring reef**, offering natural protection.
- The island's most striking feature is its lagoon, which spans 45.61 sq km, making it the largest lagoon in Lakshadweep.
- A notable feature of the island is a **small shrine dedicated to Malik Mulla**, an old Arab saint believed to be buried here. This shrine remains a revered pilgrimage site for people from neighboring islands.
- Bitra has a **tropical climate** ranges from 32oC (Max.) to 28oC (Min.)

Strategic importance of Bitra Island

- Bitra Island holds strategic importance for India due to its position in the Arabian Sea, close to major international shipping lanes.
- Its location makes Bitra ideal for enhancing India's maritime surveillance and defence capabilities.



Bitra is set to become the third island in the Lakshadweep archipelago to host a defence
establishment. The other two Indian naval bases in the region are INS Dweeprakshak, located in
Kavaratti—the Union Territory's capital—and INS Jatayu, situated in Minicoy.

SASCI Scheme

News: Recently, the Ministry of Tourism has rolled out operational guidelines for the 'Special Assistance to States for Capital Investment – Development of Iconic Tourist Centres to Global Scale' (SASCI) scheme. **SASCI Scheme Explained**

About SASCI Scheme



Source - ET

- Full Name: Special Assistance to States for Capital Investment Development of Iconic Tourist Centres to Global Scale.
- **Objective:** To develop **select iconic tourist destinations** across India to global standards, making them **world-class attractions** for both domestic and international tourists.
- Nodal Ministry: Ministry of Tourism
- The Ministry will assist in promoting the developed destinations through its ongoing **domestic and international tourism campaigns**.
- This includes the use of digital platforms, participation in global tourism events, and active promotion through social media channels.

Key Features

- Financial assistance: The Central Government will provide financial assistance to State Governments for capital investment until March 31, 2026.
- **Focus:** The scheme focuses on the **comprehensive development of iconic sites**, which includes improving infrastructure, branding, sustainability, visitor experience, and efficient management.
- **Timeframe:** Each project sanctioned under the scheme must be completed **within a two-year timeframe**.



Meri Panchayat" mobile application

News: Recently, Meri Panchayat App wins WSIS Champion Award 2025 for Excellence in Digital Governance held in Geneva, Switzerland.

About "Meri Panchayat" mobile application



Figure 22. Source - NIC

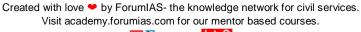
- The "Meri Panchayat" mobile application is a transformative digital governance initiative launched by the Ministry of Panchayati Raj (MoPR) in collaboration with the National Informatics Centre (NIC).
- Aim: To promote transparency, citizen participation, and efficient service delivery at the grassroots level by leveraging digital technology.
- The Meri Panchayat app has been honored with the WSIS Prizes 2025 Champion Award under the Action Line Category for Cultural Diversity and Identity, Linguistic Diversity, and Local Content.
- The application directly benefits
 over 25 lakh elected
 representatives and approximately
 950 million rural citizens across
 2.65 lakh Gram Panchayats in India.
- It is designed to empower grassroots governance and bridge the information divide in rural areas.

Key Features

• The app provides **real-time access** to critical information such as **panchayat budgets, receipts, and payments,** along with details of

elected representatives, public infrastructure, and available civic services.

- It also offers access to **Gram Panchayat Development Plans (GPDPs)**, enabling citizens and representatives to monitor development projects and their status.
- Users can track projects, view timelines, and assess fund utilization efficiently.
- Citizens can actively participate in governance by proposing new projects, reviewing and rating completed works, and accessing Gram Sabha agendas and decisions, fostering accountability and participatory democracy.
- The app includes a grievance redressal mechanism that allows users to submit complaints and feedback.





- These features are geo-tagged and geo-fenced to ensure location-specific transparency and responsiveness.
- It supports over 12 Indian languages, making it accessible to diverse linguistic communities across the country.
- Its multilingual interface promotes cultural inclusion and ensures that rural citizens from various regions can use the app with ease.
- The application also provides **weather forecasts** at the **Gram Panchayat level**, which is especially useful for farmers and rural planning.
- It also includes **social audit tools**, enabling citizens to evaluate the functioning of panchayats and hold them accountable. It ensures transparency in fund allocation and usage, contributing to good governance.

Winter Fog Experiment (WiFEX)

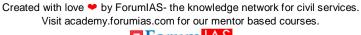
News: The Winter Fog Experiment (WiFEX) has completed ten successful years of dedicated research into North India's dense winter fog and its impact on daily life and aviation safety.

About Winter Fog Experiment (WiFEX)



Source - IITM

- It is one of the world's few long-term open-field experiments focused solely on fog as an elusive winter hazard.
- Objective: The main scientific objective of this project is to study the characteristics and variability of fog events and associated dynamics, thermodynamics and fog microphysics, with the aim to achieve a better understanding of fog life cycle and ultimately improve capability in fog prediction.
- Launch: The Experiment was launched in the winter of 2015 at Indira Gandhi International Airport (IGIA), New Delhi.
- **Executed by:** It is led by the Indian Institute of Tropical Meteorology (IITM) under the Ministry of Earth Sciences (MoES), with support from the India Meteorological Department (IMD) and the National Centre for Medium Range Weather Forecasting (NCMRWF).
- Airports covered: IGIA, New Delhi along with Jewar Airport, Noida, and Hisar, Haryana





- Techniques involved: Under the experiment, the scientists have deployed advanced instruments, micrometeorology towers, ceilometers, and high-frequency sensors to collect detailed data on temperature layers, humidity, wind, turbulence, soil heat, and aerosols.
- Outcomes: The experiment has resulted into development of a high-resolution (3 km) probabilistic fog prediction model for operational forecasting.
 - This model can **reliably predict** when fog will begin, how dense it will be, how long it will last, and when it will clear achieving more than 85% accuracy for very dense fog (visibility below 200 meters).
- **Significance:** For airlines, pilots, air traffic controllers, and passengers, this means fewer costly diversions, fewer delays, safer runways, and more informed travel during the challenging winter fog season.
- Next phase: WiFEX-II— which will extend localized, runway-specific fog predictions to more airports in North India.

Multi-Stage Malaria Vaccine - AdFalciVax

News: India is developing a Multi-Stage Malaria Vaccine Candidate named AdFalciVax.

About Multi-Stage Malaria Vaccine - AdFalciVax



Eol No. ICMR/Eol/PM/05/Malaria vaccine (AdFalciVax)/2025

Invitation for Expression of Interest (EoI)

For

Transfer of Technology

A recombinant multi-stage malaria vaccine
(Vaccine Candidate)

ICMR-HQ

Indian Council of Medical Research (Department of Health Research, Gol) V. Ramalingaswami Bhawan, P.O. Box No. 4911, Ansari Nagar, New Delhi - 110029, India

Source - AIR News

• It is a Multi-Stage Malaria Vaccine



- **Developed by:** Indian Council of Medical Research **ICMR**, in partnership with the Department of Biotechnology-National Institute of Immunology (**DBT-NII**)
- **Aim:** The vaccine aims to **provide protection against human infection** while also **reducing vector-borne community transmission** of the parasite.
- Recombinant chimeric malaria vaccine: It is the first indigenous recombinant chimeric malaria vaccine specifically designed to target two critical stages of Plasmodium falciparum, the parasite responsible for the most lethal form of malaria.
- **Significance:** AdFalciVax holds the potential to **contribute** substantially toward **malaria eradication** by preventing infection and minimizing community transmission.
- **Licencing:** ICMR intends to license the technology for AdFalciVax to eligible organizations and manufacturers for further development, manufacture, and commercialization under **non-exclusive agreements.**
 - This approach aims to enable wider outreach and maximize public health benefits.

About Malaria

- It is caused by the bite of the **female Anopheles mosquito (vector)** if the mosquito itself is infected with a malarial parasite.
- Parasites: There are five kinds of malarial parasites Plasmodium falciparum, Plasmodium vivax (the commonest one), Plasmodium malariae, Plasmodium ovale, and Plasmodium knowlesi.
- After entering the human body, parasites initially **multiply** within the liver cells and then attack the **Red Blood Cells (RBCs) resulting in their rupture**.
- **Symptoms:** Symptoms of malaria include **fever** and **flu-like illness**, including shaking chills, headache, muscle aches, and tiredness.
 - But, it is **preventable and curable**.

International Seabed Authority (ISA)

News: The International Seabed Authority (ISA) is still far from finalising rules for extracting coveted metals on the high seas even after two weeks of negotiations.

About International Seabed Authority (ISA)



Figure 23. Source – ISA

- It is an autonomous international organization established under the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea.
- It is the organization through which States Parties to UNCLOS organize and control all mineral-resources-related activities in the *Area* for the benefit of humankind as a whole.



- The **international seabed area** the part which is under ISA jurisdiction is the **seabed and ocean floor and the subsoil**, beyond the limits of national jurisdiction.
- The **international seabed area** represents around **50** % of the total area of the world's oceans.
- **Mandate:** ISA has the mandate to **ensure the effective protection of the marine environment** from harmful effects that may arise from deep-seabed-related activities.
 - It works to **promote and encourage the conduct of marine scientific research** in the seabed area and coordinate and disseminate the results of such research and analysis.
- **Governance:** Two principal organs of ISA are
 - Assembly– Where all the members are represented and establishes the policies and govern the work of ISA.
 - Council A 37-member Council elected by the Assembly. It has two advisory bodies -
 - Legal and Technical Commission (30 members), which advises the Council on all
 matters relating to the exploration and exploitation of non-living marine resources,
 such as polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese
 crusts.
 - Finance Committee (15 members) that deals with budgetary and related matters.
- **Headquarters:** It has its headquarters in **Kingston**, **Jamaica**.
- Members: All the States Parties to UNCLOS are ipso facto members of ISA.
 - As of 2 September 2024, ISA has 170 Members, including 169 Member States and the European Union.
 - India is a founding and active member of ISA.

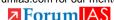
Mid-Term Resignation of Vice-President of India

News: The Vice-President has resigned under Article 67(a), creating a rare mid-term vacancy in the country's second-highest constitutional office."

Article 67(a)

- Article 67(a) of the Constitution of India deals with the resignation of the Vice-President.
- It states: "A Vice-President may, by writing under his hand addressed to the President, resign his office."
- This provision allows the Vice-President to resign at any time.
- The resignation must be submitted in writing and addressed to the President.
- Once accepted, the resignation takes immediate effect.

Mid-Term Resignation of Vice-President of India





Source - ToI

- Performance of Duties of Vice-President after resignation
 - The **Constitution does not provide** for an **acting Vice-President**.
 - However, since the Vice-President is also the ex-officio Chairman of the Rajya Sabha, the **Deputy Chairman will preside over the House in his absence**.

• Election after resignation

- In the case of the **President**, the Constitution requires that a **vacancy be filled within six months**. But for a **Vice-Presidential vacancy**, there is **no such fixed deadline**.
- The **only requirement** is that the **election be held "as soon as possible"** after the post falls vacant.
- The **Election Commission** will announce the **schedule** and the **poll** is conducted under the **Presidential and Vice-Presidential Elections Act, 1952.**
- As per convention, the **Secretary General of either House of Parliament** is appointed as the **Returning Officer**, in rotation.

Election process

- Electoral College: The Vice-President is elected by an electoral college made up of members from both Houses of Parliament, including nominated members.
- The state legislatures do not participate.
- **Voting:** Voting is held by **secret ballot**, using the system of **proportional representation** with a **single transferable vote**.
 - Each MP casts a vote by ranking candidates in order of preference.
 - All votes carry **equal value**.

Winning quota and its calculation

- Quota: A candidate must reach a required minimum number of votes, called the quota, to be declared elected.
- Calculation: This is calculated by dividing the total number of valid votes by two and adding one (fractions, if any, are ignored).
 - If no candidate crosses the quota in the first round, the one with the fewest first-preference votes is eliminated, and their votes are transferred to the remaining candidates based on second preferences. The process continues until one candidate crosses the quota.
- Tenure of new Vice-President



- The elected candidate will **serve a full five-year term** from the date of assuming office, not just the remainder of ex-VP's tenure.
- **Eligibility criteria for candidates of Vice President:** A person contesting for the post of Vice-President
 - o must be a **citizen** of India
 - o at least 35 years old
 - o qualified to be elected to the Rajya Sabha
 - registered as an **elector in any** parliamentary constituency
 - must **not hold any office of profit** under the central or state governments, **except** positions like President, Governor, or Minister.

Note: Vice-President Jagdeep Dhankhar is **only the third Vice-President** in India's **history to resign** before completing his term, after **V. Giri and R. Venkataraman**—both of whom stepped **down** to contest presidential elections.

Tayfun Block-4 Missile

News: Turkey has unveiled its first hypersonic ballistic missile, the Tayfun Block-4 in Istanbul.

About Tayfun Block-4 Missile

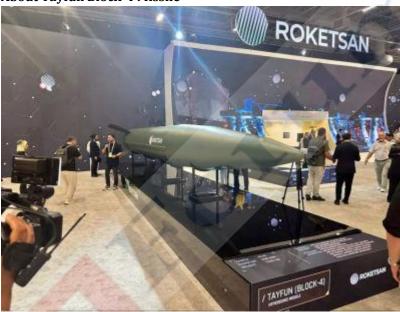


Figure 24. Source - NDTV

the **Tayfun missile**, which is Turkey's indigenously produced **longest-range ballistic missile**.

• It is the **hypersonic version** of

- The term "hypersonic" is often used to refer to hypersonic glide vehicles and hypersonic cruise missiles.
- O They are **highly advanced** weapons and can **manoeuvre midflight** at hypersonic speed inside Earth's atmosphere, which makes it very **hard to track and intercept**.
- Hypersonic missiles travel at **Mach 5, or five times the speed of sound** (about 3,800 miles per hour, 6,100 kilometres per hour).
- **Developed by:** It is developed by

the Turkish defense firm

Features

- It weighs **2,300 kg** and measures **5 meters** in length.
- Range: It has a stated range of 500 to 800 km, with future versions aiming to exceed 1,000 km.
- Warheads: It has multi-purpose warhead which will be capable of destroying numerous strategic targets, such as air defense systems, command and control centers, military hangars, and critical military facilities.



Kashi Declaration

News: The Youth Spiritual Summit was recently held in Varanasi, marking the launch of the Kashi Declaration.

About Kashi Declaration

- It was adopted during the Youth Spiritual Summit, themed 'Drug-free Youth for Developed India,' held at the Rudraksh International Convention Centre in Varanasi.
- The event was organised by the **Ministry of Youth Affairs and Sports**.
- The summit brings together over 600 youth leaders from more than 120 spiritual and socio-cultural organizations across India.
- Vision of the declaration: To create a Drug-Free India by 2047, aligning with the goal of building a Viksit Bharat (Developed India).
- The declaration advocates for a **multi-dimensional approach**, combining prevention, awareness, deaddiction, and social reintegration of affected individuals.
- It calls for **youth to take the lead** in spreading awareness, acting **as ambas**sadors of change in their communities.
- The declaration stresses the **collaborative role of civil society, government agencies, religious leaders, and educators** in curbing drug abuse.
- It proposes the development of **community-level action plans**, especially in villages and urban wards, to identify early signs of addiction and intervene through counseling and support.

Ashoka Pillars of Rampurva and Lauriya Nandangarh

News: The Ashoka pillars of Rampurva and Lauriya Nandangarh in Bihar are on UNESCO's Tentative List under the 'Serial Nomination for Ashokan Edict Sites along the Mauryan Routes'.

About Ashoka Pillars of Rampurva and Lauriya Nandangarh

Ashoka Pillar of Lauriya Nandangarh



Figure 25. Source - Bihar Govt.

- Location: Lauria Nandangarh is a small town in the West Champaran district in Bihar.
- The main **attraction** of this city is the **Ashoka Pillar** found during excavation which shows the glorious history of the Maurya period.
- **Features:** The **height** of the pillar is **32 feet**, for which **sandstone** has been used and there is a **circular abacus** at the **top of the pillar** on which the **lion statue stands**.

Ashoka Pillar of Rampurva

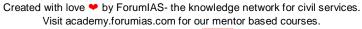






Figure 26. Source - Bihar Govt.

- Location: The archaeological site of Rampurva is located in the West Champaran district of Bihar, near border with Nepal.
- Pillars and capitals: The site is famous for the two capitals of a pair of Ashoka Pillars discovered in 1876 by C. L. Carlleyle.
- **Lion capital:** The pillar with **lion capital** is inscribed with the **Major Pillar Edicts** of Ashoka.
- Its abacus is adorned with clockwise-flying geese (hamsa), symbolizing spiritual

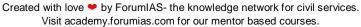
liberation.

- **Bull capital:** The Rampurva **bull capital** is noted as **one of the seven remaining animal capitals** from the Pillars of Ashoka.
 - It is composed of a **lotiform base**, with an **abacus decorated** with **floral designs**, and the realistic depiction of a **zebu bull**.
 - The **abacus** in particular displays a **strong influence of Greek art:** it is composed of honeysuckles alternated with stylized **palmettes and small rosettes**.
- The **lion capital** is now in the **Indian Museum in Kolkata**, while the **bull capital** is located at the center of the **porch of the Rashtrapati Bhavan**, the Indian Presidential Palace.

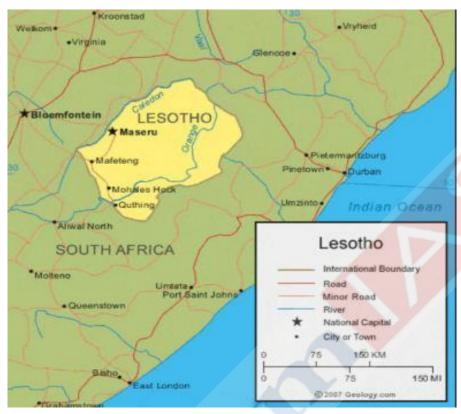
Key Facts about Lesotho

News: Minister of State for External Affairs Pabitra Margherita landed in Maseru city of Lesotho on a visit to the country.

Key Facts about Lesotho







Source - Geologydotcom

- **Location:** It is a **landlocked** country located in southern Africa.
- Largest enclave: It is entirely surrounded by South Africa, making it the largest of only three sovereign enclaves in the world, the others being San Marino and Vatican City.
- **Climate:** It has **temperate climate** with cold, dry winters and hot, wet summers.
- **Terrain:** It is mostly **highland** with plateaus, hills, and mountains with over 80% of its **land above 1,800 m**.
- Mountain range: It is situated in the Maloti Mountains, gaining the nickname 'The Mountain Kingdom'.
 - It is the only independent state in the world that lies entirely above 1,400 m in elevation.
- **Peaks:** The **Thabana Ntlenyana (3,482 m)** of Maloti Mountains is the highest peak in the country and of the southern Africa.
- Rivers: The Orange River, one of the longest rivers in Africa, rises in the Lesotho Highlands.
 - The Caledon River forms part of the western border with South Africa and is an important tributary of the Senqu River.
- Polity: The Government is a parliamentary constitutional monarchy.
- Capital: Its capital is Maseru, which is also the largest city of Lesotho.

Financial Inclusion Index (FI-Index)

News: The Reserve Bank of India (RBI) has said that the Financial Inclusion Index (FI-Index) has improved to 67 in March 2025 from 64.2 in March 2024.

About Financial Inclusion Index (FI-Index)



Improving parameters

RBI financial-inclusion index

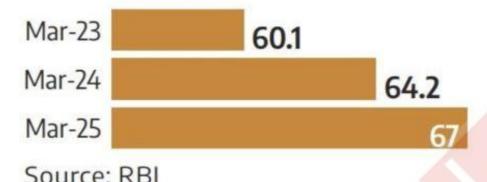


Figure 27. Source – Business Standard

- It is a composite, annual measure to objectively assess and monitor the extent of financial inclusion across India.
- It captures the penetration and usage of financial services—banking, investments, insurance, postal, and pension sectors—for all individuals and households in the country.
- Developed by: Reserve Bank of India (RBI)

- Launched on: August 17, 2021
- Parameters and weightage: The index comprises three broad parameters access, usage, and quality, having weight 35 per cent, 45 per cent and 20 per cent, respectively.
 - The **weight** of each parameter consists of **various dimensions**, which are computed based on a number of indicators.
- **Base year:** The Index has been constructed **without any base year** as it reflects cumulative efforts of all stakeholders over the years towards financial inclusion.
- Range: The index ranges from 0 (complete exclusion) to 100 (full inclusion).
- Feature: A unique feature of the index is the quality parameter which captures the quality aspect of financial inclusion as reflected by financial literacy, consumer protection, and inequalities and deficiencies in services.

Note:

- The annual FI-Index for the period ending March 2021 was 53.9 as against 43.4 for the period ending March 2017.
- Now it has improved to 67 in March 2025 from 64.2 in March 2024.

Great Ruaha River

News: The Great Ruaha River is in the news due to its alarming desiccation caused by climate change and mismanagement.

About Great Ruaha River

- It is located in **south-central Tanzania**.
- It is among the major rivers of Tanzania and serves as a significant tributary of the Rufiji River, which forms the largest river basin in the country.
- It flows eastward through the **Ruaha National Park** and **Usangu wetlands** before merging with the **Rufiji River**.



Paika Rebellion: 1817

News- Recently, Former Odisha CM Naveen Patnaik called the omission of the Paika Rebellion from NCERT's Class VIII book a "huge dishonour." NCERT said it will be included in the second volume, out by Sept-Oct.



Source-Telegraph India

About Paika Rebellion

- It was a significant armed uprising against British colonial rule that erupted in 1817 in the eastern province of Khurda (present-day Odisha).
- It was led by the Paikas, traditional warrior-militia of Odisha, under the leadership of *Bakshi Jagabandhu*.
- The rebellion predated the Revolt of 1857, making it one of the earliest indigenous revolts against the East India Company.

Who were the Paikas?

- Paikas (literally: "foot soldiers") were a hereditary warrior class under the *Gajapati rulers of Odisha* since the 16th century.
- They *rendered military service in return for rent-free land* (nish-kar jagirs), which they cultivated during peacetime.
- Their socio-economic position declined drastically under British rule.

Background: origins of discontent

- In 1803, the British East India Company annexed Odisha after defeating the Marathas.
- An agreement was signed with *Mukunda Deva II, the King of Khurda*, promising monetary compensation and return of four parganas.
- When the British reneged on the deal, Jayee Rajguru, the royal advisor, led 2,000 Paikas to protest but was captured and executed in 1806.

Causes of the rebellion



Political Causes	 Dethronement of the Khurda King and decline of Paika patronage. Destruction of forts and abolition of traditional administration.
Economic Causes	 Confiscation of rent-free lands. New land revenue settlements that impoverished the Odia peasantry. Influx of Bengali absentee landlords. Salt monopoly, increased taxation, and demand for silver currency.
Social and Cultural Causes	 Humiliation of traditional elites. Disruption of tribal and peasant economies. Paikas and tribal Kondhs shared grievances over British exploitation.

The 1817 Rebellion: Key events

- In March 1817, about 400 Kondh tribal fighters marched from Ghumusar towards Khurda.
- They joined forces with the *Paikas, led by Bakshi Jagabandhu*, the former military commander of Khurda.
- The rebels attacked the *Banpur police station*, burning it down.
- They killed British officials and looted government treasuries.

British response and suppression

- The British responded with strong military force, bombing rebel bases.
- The Paikas were scattered and defeated.
- Bakshi Jagabandhu escaped into the forests and stayed hidden until 1825.

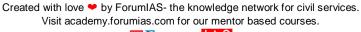
Consequences and impact

- The rebellion was eventually crushed by the British.
- Jagabandhu surrendered under amnesty and died in 1829.
- Though militarily unsuccessful, the revolt became a powerful symbol of resistance and is considered Odisha's *first* war of independence.

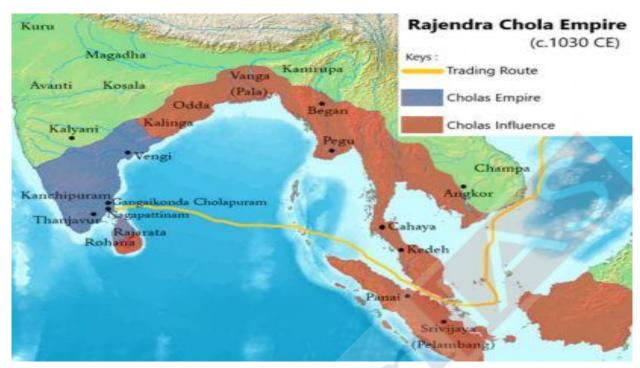
Rajendra Chola I

News: The Ministry of Culture is all set to celebrate the birth anniversary of the great Chola emperor Rajendra Chola I with the Aadi Thiruvathirai Festival, to be held from 23rd to 27th July 2025 at Gangaikonda Cholapuram, Tamil Nadu.

About Rajendra Chola I







Source – India Today

- He was a Chola Emperor who reigned from **1014 to 1044**.
- He was born in **Thanjavur to Rajaraja I** and rose to the throne in **1014** CE, after the death of Rajaraja I.
- **During his reign**, the Chola Empire **reached its zenith** in the Indian subcontinent.
- It extended its reach via trade and conquest across the Indian Ocean, making Rajendra one of only a few Indian monarchs who conquered territory beyond South Asia.
- Titles
 - Gangaikonda Cholan ("The Conqueror of the Ganges"): He earned this title after his victorious northern campaigns reaching the Ganges River.
 - Kadaram Kondan ("Conqueror of Kedah"): It was given for his conquests in Southeast Asia.
- **New capital:** He founded a new capital called **Gangaikonda Cholapuram**, an imperial city built to **commemorate his triumphs** and serve as an **administrative and cultural center**.
- **Religion**: He followed **Shaivism**.
 - O However, he also **welcomed Buddhism** and built many **stupas** (Buddhist shrines) in South-East Asia and South India.

• Temples built:

- He built the **Dharasuram temple** replicating the **Tanjavore temple built by his father**.
- He commissioned the **Gangaikonda Cholapuram temple** to celebrate his conquests reaching the Ganges River.
 - Today, the temple stands as a **UNESCO World Heritage Site**, renowned for its intricate sculptures, Chola bronzes, and ancient inscriptions.
- Rajendra Chola's conquests
 - **Conquering Sri Lanka:** In 1017 CE, the king captured the whole of Sri Lanka, of which his father, Raja Chola was able to conquer only the northern half.
 - **Victory over Pandyas and Cheras:** In 1018 CE, King Rajendra marched to Pandya and Chera regions and fighting a fierce battle, defeated their kings.



- Defeating Chaulakyas: In 1021 CE, Rajendra Chola conquered the Chaulakya territory against Jayasimha at the battle of Maski.
 - Reaching Ganga: He conquered regions around Ganga, from Palas of Bengal.

Oveseas Conquests

- He was among the first Indian kings to **conquer territories outside India**.
- His conquests included areas of present day **Thailand, Malaysia, Indonesia, Laos, Andamans, Lakshadweep and Cambodia.**
- In all these Conquests, **Krishnan Raman** served as the Commander in Chief of the Chola forces, under Rajendra Chola.

• Feared by Mohammed of Gazni

 Mohammed of Gazni while raiding the north west of India, dared not to cross into the Chola kingdom, fearing its might.

Ethanol Blended Petrol Programme (EBP Programme)

News: India has successfully achieved 20 per cent ethanol blending in petrol in 2025, five years ahead of its original target set for 2030.

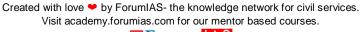
About Ethanol Blended Petrol Programme (EBP Programme)

INDIA
HITS 20%
EIHANOL
BLENDING
5 years ahead of schedule, A milestone in clean energy.

Achieved 2025

Source - AIR News

- It is a flagship initiative to **promote the use of ethanol** by blending it with **petrol**.
- Launched in: It was launched in January, 2003.
- **Nodal Ministry:** Ministry of Petroleum & Natural Gas (MoP&NG)
- Aim: It sought to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.
- Targets: As per the programme targets, India has to achieve 10% blending rate (E10) by 2021-22 and 20% blending rate (E20) by 2025-26.





- The **National Policy of Biofuels-2018**, as amended in 2022, **advanced** the target of 20% blending of ethanol in petrol to Ethanol Supply Year (ESY) 2025-26 from 2030.
- **Coverage:** It is being implemented **across the country** except Andaman and Nicobar Islands.
- Procurement of ethanol
 - The **Oil Marketing Companies (OMCs)** are to procure ethanol from domestic sources.
 - Government has notified **administered price of ethanol** since 2014.

Status

- Ethanol blending in petrol has risen from just 1.5% in 2014 to 20% in 2025, a nearly 13-fold increase over 11 years.
- Ethanol production has surged from 38 crore litres in 2014 to 661.1 crore litres by June 2025
- Savings: India has saved approximately 1.36 lakh crore rupees in foreign exchange by reducing its dependency on imported crude oil.
- About 1.96 lakh crore rupees have been paid to distilleries, fueling the growth of the domestic biofuel industry.
- Additionally, **1.18 lakh crore rupees** have been disbursed to **farmers**, thereby enhancing rural incomes and supporting the agricultural economy.
- The increased use of ethanol-blended petrol has helped reduce carbon dioxide emissions by 698 lakh tonnes, contributing to India's climate goals.

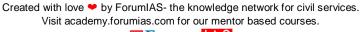
About Ethanol

- Ethanol is an **anhydrous ethyl alcohol** having chemical formula of **C2H5OH**.
- **Source:** It can be produced from **sugarcane, maize, wheat**, etc. which are having **high starch content**.
- In India, ethanol is mainly **produced from sugarcane molasses** by fermentation process.
- Ethanol can be **mixed with gasoline** to form different blends.
- As the ethanol molecule **contains oxygen**, it allows the engine to more **completely combust** the fuel, resulting in fewer emissions and thereby reducing the occurrence of environmental pollution.
- Since ethanol is **produced from plants** that harness the power of the sun, ethanol is also considered as **renewable fuel**.

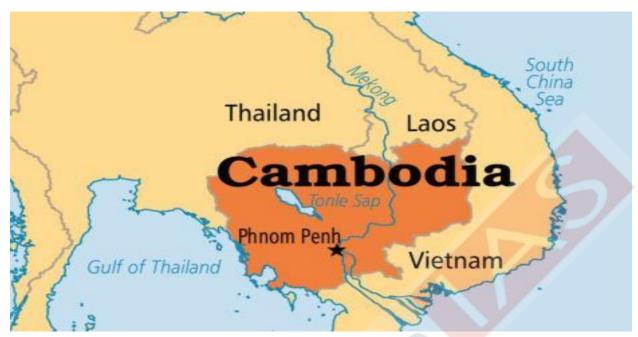
Key facts about Cambodia

News: Fresh clashes erupted again between Thailand and Cambodia along their border, marking the most violent escalation in over a decade.

Key facts about Cambodia







Source - Britannica

- **Location:** It is located in Mainland Southeast Asia.
 - It lies entirely within the tropics.
- Borders: It is bordered by Thailand to the northwest, Laos to the north, and Vietnam to the east.
 - It has a 443-kilometre coastline along the **Gulf of Thailand**.
- **Climate:** It is dominated by a **tropical climate**.
- **Terrain:** Its landscape is characterised by a **low-lying central plain** that is surrounded by **uplands** and **low mountains**.
- **Drainage:** The two dominant hydrological features of Cambodia are the **Mekong River and the Tonle Sap (Great Lake).**
 - The Mekong River rises in the **Plateau of Tibet** and empties into the **South China Sea.**
- **Capital:** Its capital and most populous city is **Phnom Penh**.
- **Polity:** It is a **constitutional monarchy** with a unitary structure and a parliamentary form of government.

Henley Passport Index 2025

News: The Henley Passport Index 2025 (July edition) was released by Henley and Partners Consultancy.

About Henley Passport Index

- The Henley Passport Index ranks the world's passports based on the number of destinations their holders can access without a prior visa.
- The index is compiled using exclusive data from the International Air Transport Association (IATA), and it is updated quarterly.
- Global 2025 Leaders:
 - o **1st: Singapore -** Access to 193 destinations
 - **2nd: Japan & South Korea -** Access to 190 destinations
 - o **3rd: Seven EU countries** (e.g., Germany, France) Access to 189 destination
- Decline in Traditional Powers:



- **U.S.passport:** 10th place (182 destinations)
- **U.K.passport:** 6th place (186 destinations)
- India's 2025 Position:
 - O Rank climbed from 85th to 77th
 - O Visa-Free Access: Increased from 57 to 59 countries
- New Additions: Philippines and Sri Lanka

National Sports Governance Bill, 2025

News– The Central Government tabled the National Sports Governance Bill, 2025 in the Lok Sabha to reform and modernize the governance structure of sports administration in India.

Key Features of the National Sports Governance Bill, 2025

1. Establishment of Statutory Sports Bodies

- **National Olympic Committee (NOC):** Designated as the sole **governing body for** Olympic sports in India.
- National Paralympic Committee (NPC): Sole authority for governing Paralympic sports in the country.
- **Other Federations**: The Bill formally recognises *National Sports Federations (NSFs)* and *Regional Sports Federations (RSFs)* to streamline sports governance at national and regional levels.

2. Creation of the National Sports Board

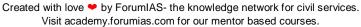
- A statutory regulatory body akin to SEBI, tasked with overseeing the functioning of all sports federations, including the BCCI.
- Empowered to grant recognition to sports bodies and enforce uniform governance standards.
- Will register all affiliated units of NSFs to improve transparency and coordination in the sports ecosystem.
- Equipped with budgetary support and capacity to hire domain experts in law, auditing, and governance.

3. Setting up of the National Sports Tribunal

- An independent dispute resolution body with *powers equivalent to a civil court*.
- Headed by a Chairperson (a sitting or retired Supreme Court judge or Chief Justice of a High Court) along with two members with expertise in sports, administration, and law.
- Responsible for adjudicating disputes related to:
 - Athlete selection
 - Federation elections
 - Governance matters
- Appeals from the Tribunal can be *made only to the Supreme Court*.
- Civil courts will have no jurisdiction over matters covered by the Tribunal.
- All expenses will be met from the *Consolidated Fund of India*.

4. National Sports Election Panel- A dedicated panel to ensure free and fair elections for the Executive and Athletes' Committees of all recognised National Sports Bodies.

5. Code of Ethics and Transparency





- Mandatory for every National Sports Body to adopt a *Code of Ethics* in line with international norms.
- Emphasis on governance through information—ensuring federations make essential data publicly accessible.

6. Safe Sport Policy and Grievance Redressal

- Requires all sports bodies to implement a Safe Sports Policy to protect vulnerable groups, especially women and minor athletes.
- Grievance redressal mechanisms must be athlete-friendly, transparent, and time-bound.

7. Age and Tenure norms for Administrators

- *Upper age limit raised to 75 years.*
- Removal of fixed tenure restrictions to help Indian administrators secure leadership roles in international sports bodies.

8. Bringing the BCCI under the regulatory framework

- Though traditionally outside the ambit of government oversight, the Bill proposes bringing the Board of Control for Cricket in India (BCCI) under its regulatory scope.
- Once the Bill is enacted, the *BCCI* will have to get official recognition from the new National Sports Board. Any disputes involving the BCCI will be handled by the National Sports Tribunal.

Art Forms (Sohra, Pattachitra, Patua)

News: The artists of Sohrai, Pattachitra and Patua art forms participated in the second edition of Kala Utsav 2025 at Rashtrapati Bhavan.

About Art Forms (Sohra, Pattachitra, Patua) About Pattachitra Paintings



Figure 28. Source - IndiaArt

- Origin: The term Pattachitra (pata = cloth, chitra = picture in Sanskrit) refers to ancient cloth-based scroll painting traditions from Odisha and, in a distinct form, West Bengal.
 In Odisha, the art flourished around Puri and is closely associated with Jagannath culture.
- Themes
- o It showcases narrative depictions of **Hindu gods**, **goddesses**, **and religious stories**, especially episodes from the life of **Jagannath**, **Krishna**, **and other deities**.
- Technique used
- They are painted on **cloth** or sometimes on **palm leaves**.
- \circ The cloth is treated with a **chalk-gum base**, polished, and then painted with natural **mineral and vegetable pigments.**
- Artists are called **Chitrakars**.

Style features

• The paintings are recognized with **bold**, **black outlines**, **rich colors** (mainly red, yellow, blue, green, and white), and elaborate **decorative borders**.



• Their figures are stylized like **almond-shaped eyes**, elaborate ornamentation, and compact composition.

About Sohra Paintings



Figure 29. Source – MeMeraki

- Origin: It is a traditional tribal mural art form originating in Jharkhand, primarily among the Santhal, Oraon, Munda, Sadan, and Ho tribes.
- It is mainly practiced in Hazaribagh district but also in parts of Bihar, Odisha, and West Bengal.
- Festive association: Traditionally, women of the household paint on the mud walls of their homes during the holiday of Sohrai, which falls just a day after the Hindu celebration of Diwali.
- Themes
- They are dominated by natural and agricultural motifs—animals (hens, buffaloes, horses, wild animals), birds, lotuses, trees, and scenes of village life. Fertility, nature,

and harmony are central themes.

• Technique used

- The art is traditionally **created by women** using their **fingers, twigs, or brushes**.
- **Colors** are naturally sourced—from **clay**, **charcoal**, **rice paste**, **and leaves**.
- Distinct clay varieties (kali matti, charak matti, dudhi matti, lal matti, pili matti) are used for hues.

Styles

- Vibrant, lively designs with **bold red and black lines**.
- Red symbolizes ancestral blood while black denotes death or Shiva.
- The paintings are **often matriarchal**, with pregnant figures and animals depicted with their young.

About Patua Painting



Source - IndianArt

- **Origin:** It is a traditional folk art form from the state of **West Bengal**.
 - It is also practised in **Bihar, Jharkhand, Odisha, and parts of Bangladesh**.



Style

• They are primarily **created on fabric scrolls**, which are subsequently utilised by itinerant **storytellers** to convey stories from **Hindu mythology**, **folklore**, **and current events**.

Themes

- They frequently **depict Hindu deities and mythical stories**.
- Some paintings depict **current events or social topics** as well.

• Technique used

- Traditional Patua paintings are distinguished by their vibrant colours, clean lines, and dynamic compositions.
- The painters produce their paintings with **natural hues like turmeric**, **indigo**, **and red**
- The scrolls are often painted on **coarse cotton cloth**, then **reinforced on the back** with fabric from ancient saris.
- Types: Patua artwork is classified into two types:
 - **Scroll paintings:** These are **traditional** Patua paintings used to **tell stories**.
 - They are often **long and narrow**, reaching lengths of **several feet**.
 - Panel paintings: These are smaller, more individual paintings that are usually hung or framed.
 - They show **various subjects**, including deities, animals, and ordinary scenes.

Preah Vihear Temple

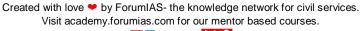
News: Fresh clashes erupted again between Thailand and Cambodia along their border for Preah Vihear Temple, marking the most violent escalation in over a decade.

About Preah Vihear Temple



Source - UNESCO

• Location: The temple is located in **Preah Vihear province**, set on top of a 1,722 feet cliff in the **Dangrek Mountains in Cambodia**.





- The mountains are a natural border between Cambodia and Thailand.
- **Chief deity:** It is a temple dedicated to **lord Shiva**.
- Name: The name means "Sacred Sanctuary" in Khmer.

Architecture

- The temple dates back to the **9th century**, built during the **reign of the Khmer Empire**.
- The temple is counted among the **most unusual among Khmer temples** because of its construction along a **long north-south axis**.
- The temple is **not built in the conventional rectangular format** which generally faces toward the east.
- The series of connected buildings, paths, and staircases along an 800-metre stretch are simply breathtaking.

• History of dispute over the ownership of the temple

- **Dispute:** The temple has been the centre of dispute **between Thailand and Cambodia** for a long time now.
- In **1962**, Cambodia and Thailand **fought for the over ownership** of the temple.
- But the International Court of Justice (ICJ) in the Hague said that the temple belongs to Cambodia.

• Recognition:

- The Temple joined the prestigious list of **UNESCO World Heritage Sites on 7 July 2008.**
- Soon after this, the dispute between Cambodia and Thailand over the temple, once again started but this time too **ICJ passed the judgement in favour of Cambodia in 2013.**

Long-Billed Bush Warbler

News: A team of five birders has recorded India's first confirmed sighting of the Long-billed Bush Warbler in 46 years, spotting it in Ladakh's Suru Valley.

About Long-Billed Bush Warbler



Source: HT

• A medium-sized songbird with a long tail and a distinctively long, slender bill.

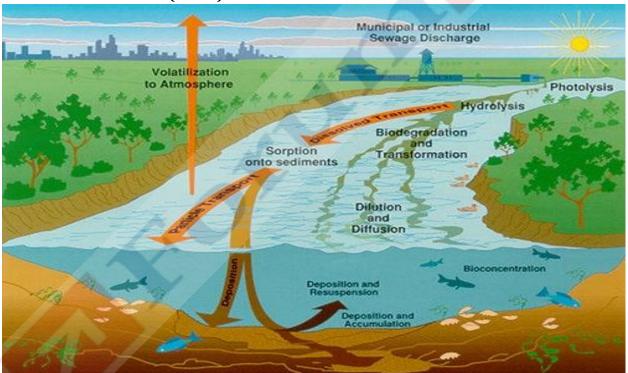


- Its scientific name is **Locustella major**.
- It is also known as **long-billed grasshopper warbler**.
- Appearance: It appears elongated, with brownish-olive plumage finely streaked on the back.
- They are found in **select mountainous regions of Central Asia**.
- Distribution: China, India, Pakistan, and Tajikistan.
- Habitat: It lives in areas with short grasses and shrubs, such as Rumex and sea buckthorn, and prefers sheltered clearings with thickets of wild gooseberry (Ribes grossularia) along the edges of spruce forests.
- They prefers grassy slopes interspersed with bushes, weeds, and grass.
- Occasionally emerges onto small bushes to sing. Song is a dull clicking sound.
- IUCN Conservation Status: Near Threatened

Environmental Flow (E-Flow)

News: The Union Jal Shakti Minister chaired a key meeting to ensure environmental flow (e-flow) in the Ganga River and its tributaries, aiming to promote sustainable river management.

About Environmental Flow (E-Flow)



Source: PIB

- **Definition**: E-flow refers to the **quantity, timing, and quality** of water flows required to sustain **freshwater ecosystems** and the **livelihoods** that depend on them.
- **Importance**: It will maintain **ecological integrity** of rivers and their estuaries.
- Human Benefit: It ensures human welfare, especially in regions with competitive and regulated water use.

Need for E-Flow



- **River Interventions**: Dams, barrages, pollution, and encroachments have disrupted river systems.
- **Impact**: Degraded aquatic biodiversity, reduced river self-cleaning capacity, and disturbed hydrological cycles.
- **Solution**: E-flow ensures **minimum water flow** to preserve river health and sustain **aquatic life**.
- Aquatic Biodiversity: E-flow protects the habitat and breeding cycles of key fish and aquatic species.
- **Economic Benefits**: Long-term **livelihood security** for communities depending on rivers (e.g., fisheries, agriculture).

Bambusa Tulda

News: Indian Institute of Technology Guwahati Researchers have developed an eco-friendly composite material made of 'Bambusa tulda', a fast-growing bamboo species in Northeast India.

About Bambusa Tulda



Source - Meserii

- It is commonly known as **Indian timber bamboo**, **sweet bamboo**, **Bengal Bamboo or Spineless Indian Bamboo**.
- Habitat and distribution: It is found in mixed deciduous forest in plains, valleys, and along streams, up to elevations of 1,500 m. The range of its distribution is from northern India to Myanmar and Thailand.
- Size: It can grow up to 20-25 meters tall, with a diameter of 10-15 centimeters (4-6 inches).
- Conditions required for cultivation
 - **Temperature:** It grows best in areas where annual daytime temperatures are within the range **22 28°c**, but can tolerate 9 32°C.
 - **Rainfall:** It prefers a mean annual rainfall in the range **1,200 2,500 mm,** but tolerates 700 **4,5**00mm.
 - **Soil:** It grows best in fertile, medium to **heavy soils**.
- Uses: The culms are generally used for construction, scaffolding, furniture, boxes, basketry, mats, household utensils, handicrafts and as raw material for paper pulp.

Gangaikonda Cholapuram

News: Prime Minister Narendra Modi offered prayers at the ancient Shiva temple of Gangaikonda Cholapuram in Tamil Nadu.

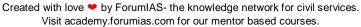
About Gangaikonda Cholapuram





Source - TH

- Location: It is located in the Udayarpalayam taluk of Ariyalur district in Tamil Nadu.
- **Built by:** Rajendra Chola I (regnal years 1012-1044 CE)
- Name: The name "Gangaikonda Cholapuram" means "the city of the Chola who conquered the Ganga", referring to Rajendra I's military expedition to northern India, during which pots of Ganga water were brought back to the south.
- **As a Chola capital: Rajendra I** shifted the Chola **capital from Thanjavur** to Gangaikonda Cholapuram, which remained the imperial capital for over 250 years.
 - It was built to **commemorate his victory** over the **Pala Dynasty** and the water from the river Ganga was brought to this place.
 - The city is referred to as Gangapuri in Kalingattuparani, composed by Jayankondar.
- Importance: It was the second largest and important city in the 11th-12th Centuries and the centre of political, commercial and cultural activities, like Madurai in Pandyanadu and Karur in Cheranadu.
- Architectural features
 - The city was **fortified** with both **inner and outer defensive walls**, as revealed by archaeological excavations.
 - The **outer fortification** was made of **burnt bricks**, measuring **six to eight feet in width** and filled with **sand** between two layers of brick walls.
- Chola Gangam Lake: According to Tiruvalangadu Copper Plates, it was dug by King Rajendra Chola I to celebrate his northern campaign.
 - It is now known as **Ponneri Lake**.
- Temple: The Gangaikonda Cholapuram Temple or the Brihadisvara Temple was built by Rajendra Chola I in his capital.
 - It rivals the **Rajarajeswaram** (also known as Brihadisvara Temple) built by his father in **Thanjavur**.
 - The temple is part of the "Great Living Chola Temples", a group of UNESCO World Heritage Sites that also includes the Brihadeeswara Temple in Thanjavur and the Airavatesvara Temple in Darasuram.
- Archeological and literary evidences
 - The **Tiruvalangadu, Esalam, and Karanthai Copper Plates**, several inscriptions, and literary works provide the **evidences of the Brihadisvara Temple**.





- An elaborate **description of the citadel** comes from **Muvar Ula of Ottakuttar**.
- Rajaraja Cholan Ula gives an account of almost all the important places of the city.

E3 Countries

News: Iranian diplomats are meeting counterparts from E3 countries for renewed nuclear talks amid warnings of sanctions.

About E3 Countries



Source - Tehran Times

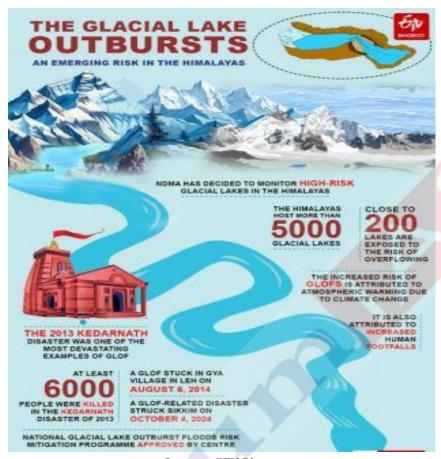
- It is an **informal foreign and security cooperation** arrangement between the **UK**, **Germany and France**.
- It was established in 2003, when the UK was still a member of the EU.
- **Reason for establishment:** The E3 met for the **first time** after the **US attacked Iraq in 2003** to identify a trilateral strategy towards Iraq, and **manage nuclear risks coming from Iran.**
- Main task: The E3's main task is to negotiate with Iran due to growing security concerns.
- Feature: It could be described as an informal kind of 'minilateralism', i.e. a small group of likeminded parties working together, either outside or inside international organisations.

Glacial Lake Outburst Floods (GLOF)

News: Recently, Nepal experienced a catastrophic Glacial Lake Outburst Floods (GLOF) event which caused a flash flood, and washed away a China-built friendship bridge.

About Glacial Lake Outburst Floods (GLOF)





Source - ETV Bharat

- The GLOFs are **flash floods of extreme magnitude** that occur when the **natural dams**, made up of ice, rock debris, or moraine, hold back glacial lakes **rupture or are breached**.
- These glacial lakes typically form as a result of the melting of glaciers in high-altitude areas.
- **Causes:** The primary **causes** of GLOFs include:
 - Global warming and glacial melting
 - Ice or snow avalanches
 - Earthquakes
 - Landslides
 - Volcanic eruptions
 - Internal water dynamics
- Vulnerability of India to GLOFs
 - There exist **over 54,000 glaciers in the Hindukush-Himalayan ranges** which are **retreating** at alarming rates due to temperature surges in the wake of Climate Change.
 - The **average temperature** in the region has **increased by 0.28°C per decade** between 1951 and 2020 which has **hastened the glacial lake formation** as well as the glacial retreat.
 - Scientific assessments and studies indicate the higher vulnerability of the Eastern Himalayas to GFOFs as compared to the Western Himalayan region, with the former facing twice the risks than the latter.
 - It is contended that the threats would triple by 2050 with more hotspots emerging farther west.



Steps taken by India

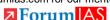
- The National Disaster Management Authority (NDMA) has initiated a proactive shift from mere post-disaster response to risk reduction through its Committee on Disaster Risk Reduction (CoDRR).
- Wadia Institute of Himalayan Geology (WIHG) monitors the glaciers and provides comprehensive analysis of factors that trigger hazards and its associated downstream risks.
 - It has prepared **glacial lake inventories** for Uttarakhand (2015) and Himachal Pradesh (2018), identifying **1,266 lakes (7.6 km²) in Uttarakhand** and **958 lakes (9.6 km²)** in Himachal Pradesh.
- Central Water Commission (CWC) monitors 902 Glacial lakes and water bodies, to enable the detection of relative change in water spread areas of Glacial lakes and water bodies.
- National Programme: The National Glacial Lake Outburst Flood (GLOF) Risk Mitigation
 Project (NGRMP) is implemented in four states namely, Arunachal Pradesh, Himachal
 Pradesh, Sikkim and Uttarakhand at a financial outlay of Rs. 150.00 crore.
 - It has one of its components as GLOF monitoring and Early Warning Systems (EWS) including remote sensing data, community involvement for monitoring, alerting / dissemination.
- Two Automatic Weather Stations (AWS) have been installed in Sikkim with further deployments of EWS planned in collaboration with C-DAC, ISRO and Space Applications Centre, Ahmedabad to provide early warning to local communities in case of any GLOF event.
- Risk Indexing of Glacial Lakes: It will be done by the CWC which will involve identifying
 and ranking lakes based on their likelihood of failure and potential damage they could
 cause in the event of GLOF.
- Past Examples of GLOFs in India
 - O The South Lhonak GLOF in 2023 in Sikkim
 - Chamoli floods, Uttarakhand (2021)- caused by melting of Nanda Devi glacier
 - Chorabari GLOF in 2013, known as the Kedarnath catastrophe

Atal Pension Yojana (APY)

News- Atal Pension Yojana (APY) has reached a major milestone with total gross enrollments crossing 8 crore.

About Atal Pension Yojana (APY)

- **Purpose**: Provides pension coverage for workers in the unorganised sector.
- **Nodal Ministry**: Ministry of Finance
- Launched in: 2015
- Type: Central Sector Scheme
- Implementing agency: Pension Fund Regulatory and Development Authority (PFRDA) under the National Pension System (NPS).
- Eligibility:
 - Individuals aged 18–40 years
 - Must hold a bank account
 - Must not be income tax payers
- Benefits:
 - Guaranteed monthly pension of Rs. 1,000 to Rs. 5,000 after the age of 60
 - In case of the **subscriber's death**, the **spouse continues to receive the pension**



- o After both spouse and subscriber pass away, the accumulated corpus is paid to the nominee
- In case of premature death, the spouse can choose to continue contributions until the subscriber would have turned 60
- Payment Frequency: Monthly / Quarterly / Half-yearly

First-ever "grassland bird census" in Kaziranga National Park

News: Recently, the first ever grassland birds census was conducted in Kaziranga National Park and Tiger Reserve (KNPTR) in Assam.

First-ever "grassland bird census" in Kaziranga National Park



Source - IE

- It was a survey to **record the grassland bird population in Kaziranga** National Park.
- It was **conducted** Between March 18 and May 25, 2025.
- **Project:** The survey was a brainchild of a **INSPIRE fellow Chiranjib Bora**, who is studying the threatened grassland bird **Black-breasted parrotbill**.
 - The survey was jointly conducted by a team of forest officials, scientists, and conservationists.

Features of census

- The survey **prioritised 10 species** that are either globally **threatened or endemic** to the Brahmaputra floodplains. These species are-
 - Bengal Florican, Swamp Francolin, Finn's Weaver (Endangered), Swamp Grass Babbler, Jerdon's Babbler, Slender-billed Babbler, Black-breasted Parrotbill, Marsh Babbler, Bristled Grassbird, and Indian Grassbird.
- It recorded a total of 43 grassland bird species, including 1 Critically Endangered, 2 Endangered, and 6 Vulnerable species.

Methodology used

- Traditional methods like visual counting are insufficient in surveying small, shy, and highly camouflaged birds.
- Passive acoustic recording: The use of passive acoustic recording monitoring method was used for the survey.
 - The acoustic **recorders were placed in tall trees** near grasslands during the breeding season of the birds.
 - The instruments recorded all the **birds singing** in the landscape.



- Spectrogram: The surveyors used **software to create a spectrogram**, which is a graphical representation of the sound.
- **Birdnet:** A tool called **Birdnet** was used to survey, which **uses machine learning to try and identify species by bird song.**
- Importance: The grassland birds are considered as "an indicator of good health" of an ecosystem.
- Threats: Habitat loss and its fragmentation are threatening the future of these bird species.

Amrit Bharat Station Scheme (ABSS)

News: During his recent visit to Tamil Nadu, Prime Minister Narendra Modi stated that the country's railway infrastructure has entered a new era of modernization under the Amrit Bharat Station Scheme.

About Amrit Bharat Station Scheme (ABSS)

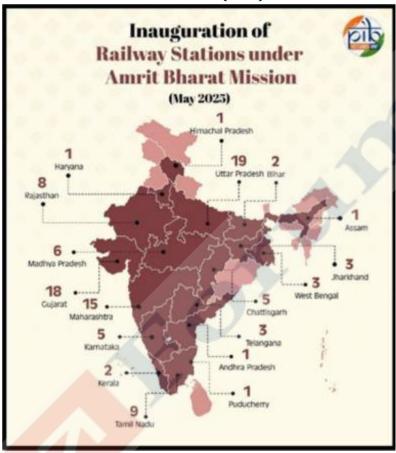
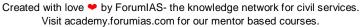


Figure 30. Source - PIB

This Scheme is a long-term plan to redevelop and modernize railway stations across India in a phased manner in order to elevate the travel experience for millions of passengers.

- Under this scheme, detailed plans are made for each station and the work is done in phases, based on what each station needs.
- **Nodal Ministry:** Ministry of Railways
- Started in: The origin of the scheme can be traced back to 2021, when Gandhinagar became the first Railway station to undergo modernization.
- Goal: The goal of the scheme is to make stations cleaner, more comfortable, and easier to use.
- O The scheme focuses on upgrading the station buildings, connecting both sides of the city through the station, and linking stations with other transport options like buses and metros.
- **Objective:** Objectives of the scheme are:
- **Preparation of Master Plans** of the Railway stations and implementation in phases to enhance the facilities including and beyond the Minimum Essential Amenities (MEA)
- Cater for the introduction of new amenities as well as upgradation and replacement of existing amenities
- **Relocate redundant/old buildings** in a cost-efficient manner.
- 'One Station One Product' scheme: Local products will be sold at kiosks under the 'One Station One Product' scheme.





Features

- The **designs** of redeveloped station buildings are **inspired by local culture**, **heritage and architecture**. Some examples are-
 - The **Ahmedabad station** draws inspiration from the **Modhera Sun Temple**
 - O Dwarka station is inspired by the Dwarkadheesh Temple
 - Gurugram station will carry the IT theme
 - Baleshwar station in Odisha will be designed on theme of Bhagwan Jagannath Temple
 - Kumbhakonam Station in Tamil Nadu is influenced by the Chola architecture.
- Divyang friendly: The stations are made friendly for Divyangs as part of "Sugamya Bharat Mission" or 'Accessible India Campaign'.
- Other key features of these stations include enhanced passenger information systems, free Wi-Fi, wider roads, well-constructed underpasses, foot overbridges, modern waiting areas, executive lounges, spacious circulating areas, grand porches, enhanced parking facilities, alongside improved lighting arrangements, modern restrooms, and lifts, all designed to be disability-friendly.
- **Progress: Over 1,300 stations are being redeveloped** with modern facilities, under the Scheme.

Exercise Bold Kurukshetra

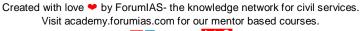
News: The 14th edition of the India-Singapore Joint Military Exercise 'Bold Kurukshetra 2025' Begins in Jodhpur.

About Exercise Bold Kurukshetra



Source - AIR News

- It is a joint military exercise between the Indian Army and the Singapore Armed Forces.
- First edition: The Exercise was first conducted in 2005.
- **2025 edition:** The **14th edition** of year 2025 will be conducted at **Jodhpur, Rajasthan**.
- **Objective:** The objective of the exercise is to **enhance interoperability** and **joint training capabilities** of both armies under a United Nations mandate, thereby strengthening bilateral defence cooperation.
- **Key focus:** The exercise will be conducted as a **tabletop exercise** and **computer-based wargame** aimed at validating operational procedures for **mechanised warfare**.
- **Contingents:** The exercise will witness the participation of the **42 Singapore Armoured Regiment of the 4 Singapore Armoured Brigade** and the Indian Army's **Mechanised Infantry Regiment**.





New Wasps Species

News: Four new species of parasitoid wasps have been identified: **Idris bianor**, **Idris furvus**, **Idris hyllus**, and **Idris longiscapus**.

About New Wasps

- These belong to the genus Idris (Hymenoptera: Scelionidae).
- They are found in agroecosystems and semi-natural habitats across West Bengal, India.
- They are extremely **small and microscopic** in size.
- They are known to lay eggs inside spider egg sacs.
- These are **primary egg parasitoids** of **jumping spiders (Salticidae family)**.
- They display a phenomenon called **gregarious parasitism**, where **multiple wasps** develop from a **single spider egg sac**, rather than just one.
- They act as **natural biocontrol agents** by regulating **spider populations and co**ntribute to **maintaining balance in arthropod communities**.

About Parasitism

- Parasitism is a long-term symbiotic relationship where one organism, known as the parasite, lives
 in or on another organism, the host.
- The parasite depends on the host for food, protection, or reproduction.
- Examples: Tapeworms, roundworms, and fleas, etc

Types of Parasitism

- **Ectoparasitism** Parasite lives **on** the outer surface of the host.
- **Endoparasitism** Parasite lives **inside** the host's body or cells.
- Mesoparasitism Parasite lives partly inside and partly outside the host.
- **Obligate Parasitism** Parasite **cannot survive** without a host.
- Facultative Parasitism Parasite can survive independently, but may become parasitic under certain conditions.

Paithani sarees

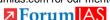
News: Prime Minister Narendra Modi in the monthly radio programme 'Mann Ki Baat' praised the traditional craftsmanship of Paithani sarees.

About Paithani sarees



Figure 31. Source: sahapedia.org

- Paithani sarees originated from the town of **Paithan in Maharashtra**, **India**
- **Distinctive Style**: These sarees are famous for their **square motifs, vibrant colors, and intricate peacock designs on the pallu**, symbolizing elegance and heritage.
- The *Narali* is one of the most common borders seen on the *Paithani*.
- Material & Technique: Made from fine silk and zari (gold thread) available in the country
- Paithanis are entirely handwoven using traditional methods, making them one of the **most luxurious and expensive sarees in India**.



- Cultural Significance: Paithani sarees, once called "Dev Vastra", were worn by royals and revered in
 ancient Hindu and Buddhist texts. Today, they are a cherished part of Maharashtrian weddings and
 festive traditions.
- Paithani sarees are considered a **symbol of Maharashtrian pride and artistry**.
- **GI Tag**: Paithani sarees were granted the **Geographical Indication (GI) tag in 2010**, recognizing their unique origin and traditional craftsmanship from Paithan, Maharashtra.

Kamchatka Peninsula

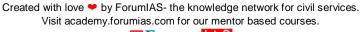
News: A powerful 8.7-magnitude earthquake struck off Russia's Far East Kamchatka Peninsula, triggering tsunami warnings across the Pacific region.

About Kamchatka Peninsula



Source - Sciencedirect

- Location: It is a peninsula located in far eastern Russia and lying between the Sea of Okhotsk on the west and the Pacific Ocean and Bering Sea on the east.
- Topography: Its topography is dominated by two mountain chains the Sredinny and Vostocny Mountains which are separated by the Central Kamchatka Depression a deep and 150 km wide valley.
- Rivers: The Kamchatka River (falls into Pacific Ocean) and the Bystraja River (falls into Sea of Okhotsk) are the main rivers of the Peninsula.
- Peak: The highest peak is the Klyuchevskaya Sopka (4750 m) which is also the highest active volcano in Eurasia.
- Volcanic arcs: Kamchatka is one of the world's most volcanically active regions with the Pacific Plate is actively subducting beneath the Kamchatka Peninsula at about 80–100 mm per year resulting in three distinct volcanic arcs.
 - The Peninsula contains the "*volcanoes of Kamchatka*", a **UNESCO World Heritage Site**, that form part of the Ring of Fire.





- Geysers: It is home to the Valley of Geysers, located at the junction of the Shumnaya and Geysernaya rivers.
 - The Valley of Geysers has the **second-largest concentration of geysers** in the world (after Icelandic geyser fields).
- **Oceanic trench:** The **10,500-metre-deep Kuril-Kamchatka Trench** runs immediately offshore along the Pacific coast of the peninsula.
- **Climate:** It is generally considered to have a **sub-arctic climate** and is wetter and milder than inland parts of east Siberia.
- Ocean currents: Cold currents in the Sea of Okhotsk and the cold East Kamchatka Current (also called the Oyashio or Kurile current) have an important impact on the coastal margins of The Peninsula resulting in a cool and maritime climate.
- **Vegetation:** It lies in the **boreal zone** of Eurasia and about a third of the area is forested and another one-third is covered with shrub.
- Fauna: Brown bear (Ursus arctos beringianus), snow ram, northern deer, sable and wolverine, Stellar's sea eagle (50% of the world's population), white-tailed eagle, golden eagle, gyrfalcon and peregrine falcon.
- Inhabitants: Most of the inhabitants are Russian, with indigenous Koryak, Chukchi, and Kamchadal tribes.

Kaziranga Tiger Reserve (KTR)

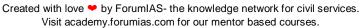
News: The first large-scale assessment of the tigers' population has revealed that the Kaziranga Tiger Reserve has the third-highest density of tigers in the world.

About Kaziranga Tiger Reserve (KTR)



Figure 32. Source - TH

- Location: It is located in the flood plain of the Brahmaputra River, on the foothills of Karbi-Anglong district. It is spread across the districts of Golaghat, Nagaon and Sonitpur of Assam.
- O Biogeographically, Kaziranga belongs to the North East Brahmaputra Valley Province.
- Terrain
- The terrain of the reserve
 is flat with gentle slope from
 east to west.
- The habitat comprises of alluvial deposits from the Brahmaputra River system.
- **Rivers:** The **river Diffalu**, a **tributary of the Brahmaputra**, flows through the National Park area (core tiger habitat), while another **tributary Moradifalu** flows along its southern boundary.
- Corridor
 - The reserve has corridor connectivity through the **island systems** of Brahmaputra with the **Rajiv Gandhi Orang National Park and the Nameri Tiger Reserve.**





Vegetation

- The reserve supports mainly four types of vegetations alluvial inundated grasslands, alluvial savanna woodlands, tropical moist mixed deciduous forests, and tropical semievergreen forests.
- **Flora:** Bombax ceiba, Albizzia procera, Albizzia odorotissima, Albizzia lucida, Careya arborea, Premna latifolia, Lagerstroemia parviflora, Dillenia pentagyna and, Zizyphus jujuba.

Fauna

 Many endangered and threatened species like Rhino, Tiger, Eastern swamp deer, Elephant, Buffalo, Hoolock gibbon, Capped langur and Gangetic river dolphin are commonly found in the habitat.

• Latest tiger survey

- The survey documented **148 tigers in the reserve,** up from 104 recorded in 2022, 99 in 2018 and 96 in 2014.
- It has the **third-highest density of tigers in the world**, after Corbett Tiger Reserve in Uttarakhand and Bandipur Tiger Reserve in Karnataka.

New Rules for Contaminated Site Management Notified

News: The Union environment ministry has notified the Environment Protection (Management of Contaminated Sites) Rules, 2025 for remediation of contaminated sites by those responsible for contamination.

New Rules for Contaminated Site Management Notified



Figure 33. Source – NH

- The Environment (Protection) Rules for Management of Contaminated Sites, 2025 are framed by the Ministry of Environment, forest and climate change (MoEFCC) under the Environment (Protection) Act, 1986.
- The rules create the country's first dedicated legal framework for identifying, remediating and monitoring contaminated sites that

- pose serious risks to human health and ecosystems.
- Aim: They aim to tackle contamination in soil, sediment, and water caused by industrial discharge, hazardous waste dumping, and past neglect.
- Objective: The objective is to prevent further environmental degradation while ensuring
 polluters are held accountable through a structured process involving scientific investigation, risk
 assessment and mandatory clean-up actions.

Key features



- Identification of sites: The framework mandates the identification and classification of sites as
 either suspected, potentially contaminated or confirmed based on evidence from industrial
 activity, community complaints or historical waste records.
- Tracking of sites: Once a site is flagged, a centralised online portal, to be developed by the central
 pollution control board (CPCB), will track its status, enabling transparent public access to
 information and regulatory oversight.
- Public participation: State boards must seek comments from affected stakeholders within 60 days of listing a site as contaminated and must publish the final list in regional newspapers.
- Responsibility: The Rules create a 'responsible person' mechanism, holding individuals, companies, or entities accountable for environmental damage.
 - Such responsible parties must bear the full cost of remediation and are barred from transferring ownership or altering land use without prior approval during or after the cleanup.
 - If the polluter is found, these costs must be repaid within 3 months.
 - 'Orphan sites': Where a responsible party cannot be identified, commonly referred to as
 'orphan sites', the government may step in with financial support drawn from multiple
 sources, including the environment relief fund, penalties from environmental violations and
 central or state allocations.
- Voluntary clean-ups: The rules also introduce provisions for voluntary clean-up, allowing private
 entities to remediate sites if they demonstrate technical expertise, financial capability and consent
 from landowners.

Monitoring

- The Rules call for the formation of **monitoring committees at both state and central levels**, comprising experts, ministry officials and regulators.
 - These committees are tasked with supervising implementation, recommending additional actions where necessary, and submitting annual compliance reports to the central government.

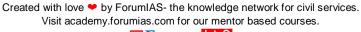
Funding

- The Rules adopt a tiered model for financial set-up
 - **Himalayan and Northeastern states**, the Union government will bear 90% of the clean-up costs, with the states contributing 10%.
 - Other states, the Union government-state ratio will be 60:40.
 - **Union Territories (UTs),** the entire cost will be borne by the Union government.
- **Exceptions:** The Rules **e**xclude sites contaminated by:
 - Radioactive waste (covered under Atomic Energy Act)
 - Mining-related pollution
 - Marine oil pollution
 - Municipal solid waste dump sites (covered by separate legislation).

UN Nelson Mandela Prize 2025

News: Recently, Dr. Kennedy Odede, Founder and CEO of Shining Hope for Communities (SHOFCO) has been awarded the 2025 Nelson Rolihlahla Mandela Prize by the United Nations.

About Nelson Mandela Prize 2025





- The United Nations Nelson Mandela Prize was established by General Assembly Resolution on 6 June 2014.
- The Prize is awarded **once every five years**, beginning in 2015, with subsequent awards in 2020 and 2025.
- The Prize recognises **two individuals—one female and one male**, who must be selected from **different geographic regions to ensure global representation**.
- The Prize honours individuals who have dedicated their lives to advancing reconciliation, social cohesion, and community development in line with UN principles.
- Winners receive a plaque with a citation and Mandela quote—no cash award.
- Current staff members of any UN organisation are not eligible to receive the Prize.
- The Prize is formally presented by the UN Secretary-General during the General Assembly's commemoration of Nelson Mandela International Day on 18 July at UN Headquarters.
- No Indian has received the award yet.

FIDE Women's World Cup 2025

News: Divya Deshmukh becomes third Women's World Cup Winner, defeats Humpy Koneru in FIDE Women's World Cup 2025 at Batumi, Georgia.

With this victory, she becomes eligible to be India's fourth woman to earn the Grandmaster title, following Koneru Humpy, Harika Dronavalli, and Vaishali Rameshbabu

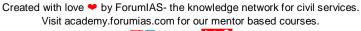
About FIDE Women's World Cup 2025

- It is a premier international tournament organized by the **International Chess Federation (FIDE)**.
- This tournament is distinct from the **Women's World Chess Championship**, although both are conducted under the aegis of FIDE.
 - FIDE serves as the global governing body for the sport of chess and is responsible for regulating all international chess competitions. While it was originally founded in 1924 in Paris, FIDE currently has its headquarters in Lausanne, Switzerland.
- The tournament holds significant importance in the women's championship cycle. The top three finishers of the FIDE Women's World Cup 2025 will earn a place in the 2026 Women's Candidates Tournament.

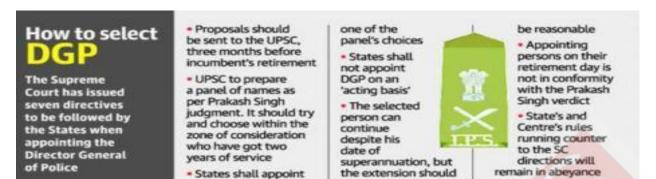
Appointment of State DGPs

News: The Union Government has notified a Single Window System for appointing State Director-General of Police/Head of Police Force.

About Appointment of State DGPs







OLD RULE (AS PER PRAKASH SINGH JUDGMENT OF 2006)

- DGP shall be selected by the State government from among three senior-most officers of the department empanelled for promotion
- * The promotion should be based on their length of service, very good record and range of experience for heading the police force
- Once the officer is selected for the job, he or she should have a minimum tenure of at least two years irrespective of their date of superannuation

Source - TH

• **Director-General of Police (DGP):** In India, the DGP is the **highest-ranking police officer in a state** or union territory, and is also known as the State Police Chief.

Procedure followed in the appointment of State DGPs

- **UPSC** had framed **guidelines** for the appointment to the post of State DGPs in 2009 (amended in 2023).
 - 1. These guidelines were made on the basis of the Supreme Court judgment on police reforms in **Prakash Singh vs Union of India (2006).**
- According to these guidelines:
 - 1. States must provide the UPSC with a **list of officers eligible for consideration**.
 - A **single-window system** launched recently by the government for this purpose.
 - It comprises a detailed check list and standard easy- to-use formats for the States to send proposals, facilitating smooth and expeditious empanelment by the Union Public Service Commission (UPSC).
 - 2. Officers must have a **minimum of 30 years of service**. Information required to be sent to UPSC include service records, performance appraisals and vigilance clearance.
 - 3. Eligible officers should hold the rank of Additional Director General (ADG) or the rank of police chief or one rank below, as specified by the state.
 - **4.** This list must **reach the UPSC six months** before the incumbent Director General of Police (DGP) is set to retire.
 - 5. The committee, **chaired by the UPSC Chairman** and consisting of the Union Home Secretary, State Chief Secretary, State DGP, and a Central Police Organization Chief will select three officers based on merit.
 - 6. After this, the state has to immediately appoint one of the persons from the panel prepared by the UPSC.
- Amendments made by the UPSC in 2023 to its 2009 guidelines

Specification	Details
Minimum Service Left	Only police officers with at least six months of service left before retirement will be considered for appointment as the DGPs.



Central Deputation	If an Indian Police Service (IPS) officer is serving on a central deputation and the Union Ministry of Home Affairs (MHA) informs the respective State government that it cannot relieve the officer, that individual will not be considered for the position of DGP.
Experience required	The previous requirement of 30 years of service for DGP eligibility has been reduced to 25 years.
Shortlisted officers	The number of shortlisted officers cannot exceed three, but may consist of less than three officers in "exceptional circumstances".
Willingness of officers	Officers will not be included in the shortlisted list unless they themselves are willing.

Harappan Site of Ratadiya Ri Dheri

News: A Harappan site has surfaced at Ratadiya Ri Dheri in Jaisalmer district, marking the first known Indus Valley settlement in Rajasthan's arid region.

About Harappan Site of Ratadiya Ri Dheri



Figure 34.Source – Tol

- Location: It is located 60 km from Ramgarh tehsil and just 17 km northwest of Pakistan's Sadewala in Jaisalmer district of Rajasthan.
- **Dating of site:** Archaeologists date the settlement to the **mature urban phase** of the Indus Valley civilization i.e. **2600 to 1900 BCE.**
- Importance of site:
- This is **first-of-its-kind Harappan site** in the remote **sands of the Thar Desert**.
- Until now, Pilibanga in northern
 Rajasthan was the state's most prominent
 Harappan site, discovered by Italian Indologist
 Luigi Pio Tessitori in the early 20th century.
- This spot connects the dots between older Harappan sites in northern Rajasthan and Gujarat, filling a big gap on the archeological map.
- It **backs up theories** that changing **rivers**—and disappearing water sources—shaped where people could live back then.
- Findings
- A large quantity of **fragmented pottery** is scattered across the site, including **red ware**, **slipped red ware**, **bowls**, **jars**, **and perforated vessels**.



- Stone blades (8–10 cm) likely made from chert sourced from Rohri, Pakistan
- Terracotta cakes, grinding stones, clay and shell bangles, and other urban artifacts
- A kiln structure is discovered on the site's southern slope, featuring a central column similar to kilns found at Kanmer (Gujarat) and Mohenjo-daro.
- The wedge-shaped bricks are also unearthed, which likely served in constructing circular walls and kilns, along with typical Harappan-style bricks.

Setubandha Scholar Scheme

News: The Ministry of Education, in partnership with the Central Sanskrit University, has launched the Setubandha Scholar Scheme.

About Setubandha Scholar Scheme

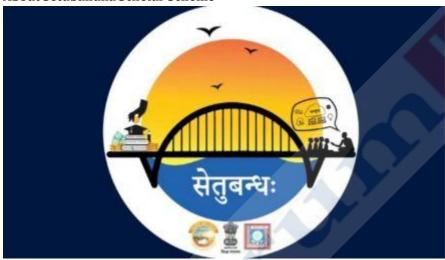


Figure 35. Source - MoE

- The scheme empowers scholars traditional of Gurukul education to join top academic institutes like IITs without formal degrees.
- Aim: It aims to bridge India's age-old gurukul tradition with modern scientific and academic inquiry.
- Nodal **Ministry:** Ministry of Education
- Implementing agency: Indian Knowledge System

(IKS) Division at Central Sanskrit University

Beneficiaries

The Gurukul scholars who've completed at least 5 years at recognised institutions and showcase expertise in Sanskrit, Ayurveda, philosophy, mathematics or classical studies are eligible.

Eligibility criteria

- Maximum age: 32 years
- Minimum 5 years of study under a traditional Guru or in a Gurukul
- No formal degree required
- Must demonstrate excellence in traditional or classical knowledge
- Applications open until August 15, 2025

Features of scheme

- It aligns with the National Education Policy 2020 that promotes integrating India's civilisational wisdom into the formal education system.
- **Fellowships:** The scheme offers **two fellowship categories**:
 - **Category 1** (Postgraduate level): ₹40,000/month + ₹1 lakh annual grant
 - **Category 2** (Doctoral level): ₹65,000/month + ₹2 lakh annual grant



Domains covered

 The programme encourages exploration in areas like Anvikshiki Vidya (philosophy and cognitive sciences), Ganit-Bhaut-Jyotish Vidya (mathematics, physics, astronomy), and Bhaishajya Vidya (Ayurveda).

Skill Impact Bond (SIB)

News: Women are leading the way in India's first outcome-based Skill Impact Bond (SIB) initiative.

About Skill Impact Bond (SIB)

- The Skill Impact Bond (SIB) is **India's first outcome-based skilling initiative.**
- **Launched:** 2021 by the Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC).
- The initiative is a collaborative effort between the public, private, and philanthropic sectors and supported by a consortium that includes the British Asian Trust, Children's Investment Fund Foundation (CIFF), JSW Foundation, HSBC India, and Dubai Cares.
- **Aim:** To train 50,000 youth across India, with a target of at least 30,150 individuals being retained in jobs for a minimum duration of three months.
- The initiative places a strong emphasis on inclusion, particularly in creating economic opportunities for women and marginalized communities.
- **Feature:** One of the most notable features of the SIB is its **outcome-based financing model, where** instead of funding being tied to enrolment or certification, it is linked to job placement and retention outcomes.
 - Training providers are incentivized to ensure long-term success by offering onboarding support, counselling, and continued engagement with alumni.
 - This model shifts the focus from inputs and outputs to actual, measurable impact.
- **Significance**: The Skill Impact Bond is transforming lives by **instilling confidence**, **fostering identity**, **and giving young people**, especially women.
- Status: As of now, over 23,700 youth have been trained through the SIB, with women accounting for approximately 72% of the beneficiaries.
 - Training has been provided in **30 job roles across 13 sectors,** involving more than **700** employers.
 - 75% of trained individuals have secured employment, and 60% have remained in their jobs beyond three months, surpassing national retention averages.

How Earthquake Causes a Tsunami

News: Recently, a massive magnitude 8.8 earthquake struck off the coast of Russia's Far Eastern Kamchatka Peninsula, triggering tsunami waves as high as 16 feet.

About Tsunami

- A tsunami is a series of big waves caused by something that suddenly moves a large amount of water in the ocean—like an earthquake.
- Most tsunamis happen when an earthquake occurs under the ocean, or very close to the coast.
- When the sea floor shakes, it can push a lot of water up or down very suddenly. This movement starts the tsunami waves.

What Kind of Earthquake Causes a Tsunami?



• Depth of the Earthquake:

- If the earthquake is **shallow** (close to the surface, between 0 and 70 km deep), it is more likely to cause a tsunami.
- Shallow quakes keep more of their energy and can move the sea floor a lot.
- **Deep earthquakes** (below 70 km) lose energy before reaching the sea floor, so they don't usually cause tsunamis.

• Type of Movement:

- Earthquakes caused by **reverse faulting** (where one part of the Earth's crust moves up over another) can push the sea floor **up or down**.
- This vertical movement moves a **huge amount of water**, starting tsunami waves.
- This usually happens in **subduction zones**, where one tectonic plate slides under another.

• Magnitude (Strength):

- Tsunamis are mostly caused by **strong earthquakes** magnitude **7.0 or higher**.
- The **biggest and most dangerous tsunamis** come from earthquakes above **8.0**.
- Stronger earthquakes release more energy, so they move the sea floor more and create larger waves.

Where do these earthquakes happen often?

- Tsunami-causing earthquakes mostly happen at **tectonic plate boundaries**, especially at **convergent boundaries** (where one plate goes under another).
- Example: The **Kuril-Kamchatka Trench** near **Russia** is a dangerous area. There, the **Pacific Plate** is being pushed under the **Okhotsk Plate**, making it prone to big earthquakes and tsunamis.



