

Factly Weekly

Compilation

2026

**For UPSC CSE Prelims
Exam**

4th Week

July 2026

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Rome Declaration for an Unarmed and Disarming Peace

News: The Rome Declaration for an Unarmed and Disarming Peace was signed on 16 July to seek a treaty restricting AI access to nuclear launches.

About Rome Declaration for an Unarmed and Disarming Peace

- **Rome Declaration for an Unarmed and Disarming Peace** is a declaration that calls for an international treaty to prevent autonomous AI systems from accessing nuclear launches.
- **Adopted during:** It was adopted by participants of the **Global Nobel Laureates Assembly**.
- **Inspired by:** It was inspired by Pope Leo XIV's encyclical **Magnifica Humanitas**.
 - The encyclical called for **protecting human dignity against technological overreach**.
- **Five Global Pillars:** The document mandates five actionable global pillars to avert existential technological risks.
 - **Meaningful Human Control:** It prohibits AI systems from making the final decision on the use of nuclear weapons.
 - **Digital Commons Model:** It promotes greater data sharing to understand existential threats from ungoverned AI.
 - **Responsible Development:** It requires developers to publish ethical frameworks and avoid uncontrollable autonomous AI systems.
 - **Internal Arsenal Audits:** It urges nuclear states to review systems against AI-driven cyber interference.
 - **Time-bound Disarmament:** It supports verified and irreversible elimination of nuclear weapons through negotiations.
- **Six Principles of the Declaration:** To ensure long-term stability, the signatories outlined a comprehensive roadmap.
 - **Disarming the Arms Race:** It promotes restraint to prevent an AI-driven arms race.
 - **Responsible Development:** It requires AI to follow international law and human rights.
 - **Responsible Use:** It encourages AI for human welfare while preventing harmful uses.
 - **Responsible Governance:** It supports coordinated oversight and verification of advanced AI.
 - **Responsible Leadership:** It promotes youth participation through education and intergenerational partnership.
 - **Nuclear Disarmament:** It seeks verifiable elimination of nuclear weapons and lower alert levels.
- **Warning:** AI-driven nuclear systems can shorten decision time, increase false alarms, and trigger unintended nuclear retaliation before human verification.

Pickaxe Mountain and Zagros Mountains

News: U.S. President Donald Trump threatened heavy strikes on Iran's fortified Pickaxe Mountain, which is linked to the country's nuclear programme.

About Pickaxe Mountain



Source – India Today

- **Location:** Pickaxe Mountain is a mountain in the Zagros Mountain Range located in Isfahan Province, Iran.
- It is also known as “Kuh-e Kolang Gaz La” in Iran.
- **Key Aspects:**
 - **Underground Nuclear Facility:** Pickaxe Mountain contains a fortified underground facility that is believed to be located more than 100 m beneath hard granite.
 - **Purpose:** It is being built for the production and assembly of advanced centrifuges.
 - **Infrastructure:** The facility has two pairs of tunnel entrances and a completed security wall.
 - **Strategic Importance:** The mountain's hard granite structure provides strong natural protection, making the underground facility difficult for bunker buster bombs to destroy

About Zagros Mountains



Source – Britannica

- **Location:** The **Zagros Mountains** extend from the **border areas of eastern Turkey and northern Iraq across Iran to the Strait of Hormuz.**
 - The range forms the **western boundary of the Iranian Plateau.**
- **Extent:** The mountain range extends for **about 1,600 km and is more than 240 km wide.**
- **Formation:** The range was formed by the **collision of the African Plate with the Eurasian Plate, creating a belt of folded mountains.**
- **Geology:** The **oldest rocks in the range** date back to the **Precambrian Period.**
 - While **limestone and shale from the Mesozoic Era and Paleogene Period** are the **most common rock types.**
- **Highest Peak:** **Mount Dena** is the highest peak.
- **Drainage:** The **western slopes are drained by perennial rivers.**
- **Flora:** The mountains are dominated by **Persian oak forests, along with Aleppo oak, Lebanon oak, pistachio, almond, hawthorn, nettle tree, and pear.**
- **Fauna:** Important wildlife includes the **Persian leopard, Syrian brown bear, bezoar ibex, striped hyena, and Persian squirrel.**

Lipfendra

News: The FDA has approved the first once-daily oral PCSK9 inhibitor, to lower LDL cholesterol in adults with high cholesterol and certain inherited cholesterol disorders.

About Lipfendra



Position: 10
S: 1

TEST	RESULT	REF. RANGE	
ALDL	560 HI	0-99	mg/dL
CHOL	626 HI	0-200	mg/dL

Source – IE

- **Lipfendra** is a **once-daily oral tablet** and is notable as the **first oral medication to block PCSK9**, a target previously addressed primarily through injectable therapies.
 - **Note: PCSK9** is a **protein** that **reduces the liver's ability to clear LDL or bad cholesterol** from the blood.
- **Who it's for:** It is **prescribed for adults with high cholesterol**, including those with a genetic condition called **heterozygous familial hypercholesterolemia (HeFH)**.
- **How it works:** It works by **blocking the action of a specific protein in the body** called **PCSK9**.
 - Normally, the **PCSK9 protein** makes it **harder for your liver** to remove low-density lipoprotein (LDL), or "bad" cholesterol, from your blood.
 - By blocking this protein, **Lipfendra (enlicitide)** allows your liver to remove **more LDL** cholesterol from your bloodstream.
 - As a result of this process, the **medication helps to lower your overall cholesterol levels**.
- **How it's used:** It is taken **once per day by mouth** and **should be used alongside a healthy diet and regular exercise**.
- It is **indicated in patients whose LDL cholesterol cannot be reduced sufficiently by lifestyle measures** and standard drugs alone or in whom the cardiovascular risk is high
- **Common Side Effects in HeFH:** For people with genetic high cholesterol (HeFH), the most common side effects are diarrhea and dizziness.

Tenzing Norgay National Adventure Award 2025

News: The Ministry of Youth Affairs & Sports invites online nominations for the Tenzing Norgay National Adventure Award (TNNAA) 2025.

About Tenzing Norgay National Adventure Award 2025



Source: News On Air

- It is **India's highest national honour** for outstanding achievements in **the field of adventure**.
- **Aim:** It was instituted **to recognize exceptional accomplishments in the field of adventure and to inspire a spirit of endurance, courage, teamwork and leadership among the youth**.
 - The award also seeks **to encourage greater participation in adventure activities among young Indians**.
- **Nodal Ministry:** The nodal ministry for the award is **Ministry of Youth Affairs & Sports**.
- **Categories:** It is presented in **four categories: Land Adventure, Water (Sea) Adventure, Air Adventure and Lifetime Achievement**.
- **Eligible:** **Indian citizens with outstanding achievements in the field of adventure are eligible to apply**.
- **Prizes:** It carries a **bronze statuette, a certificate, a blazer with a silken tie (or saree), and an award money of ₹15 lakh**.
 - The award **enjoys a status equivalent to the Arjuna Awards**.
- **Presented by:** It is presented by the **Government of India** along with the **National Sports Awards**.

Sahibi River

News: The Central Pollution Control Board (CPCB) informed the National Green Tribunal (NGT) about expanded Sahibi River monitoring under the Delhi-Yamuna Drain Monitoring Programme.

About Sahibi River

A history of Sahibi river

It is a rain-fed river originating from Sikar district of Rajasthan, and flowing through Haryana and Delhi before eventually entering the Yamuna. The Najafgarh drain, downstream of the Jheel, is the current day channel of the Sahibi river.

- 1807:** Antique map "Environs of Delhi" shows the river through Delhi as the "Sabee Nullah"
- 1860s:** The nallah, downstream of Najagarh Jheel, is turned into a canal to channel its flow. It has been called Najafgarh drain since
- 1907:** "Environs of Delhi" map shows the Delhi stretch of the river as the "Najafgarh canal"
- 1977:** Major flooding along the Sahibi river in Delhi and Haryana leads to the formulation of the Masani Barrage, to control the flow
- 1989:** The Masani Barrage is completed in Rewari of Haryana. Smaller check dams and encroachments over the years have further reduced its flow
- 2012:** Sahibi is recognised as a tributary of the Yamuna in the "River Basin Atlas of India" published by the central water commission

Source – HT

- The **Sahibi River** is also called **the Sabi River**.
- **Origin:** It originated from the **eastern slopes of the Saiwar Protected Forest hills in Sikar district, Rajasthan**.
- **Nature:** It is an **ephemeral river** because it flows mainly during the **monsoon season** and remains dry for the rest of the year.
- **Flows through :** It flows through **Rajasthan, Haryana and Delhi** before **joining the Yamuna at Wazirabad**.
- **Major Tributaries:** It's major tributaries includes the **Sota branch, the Krishnawati stream, Dohan river and the Indori river**.
- **Tributary of:** It meets the **Najafgarh drain in Delhi** before **joining the Yamuna River**.
- **Length:** It flows for **300 km** of which **157 km is in Rajasthan, 100 km is in Haryana and 40 km in Delhi**.
- **Environmental Concern:** After **entering Delhi, the Sahibi River becomes the Najafgarh drain**, which carries pollution from Haryana and waste from Delhi's colonies and industries.
- **Historical Significance:** It is often associated with the **ancient Drishadvati river** mentioned in the **Rigveda**.
 - Archaeological sites from the **Indus Valley Civilization** have been found along the banks of the **Sahibi and its tributaries**.
- **Revival Efforts:** Following NGT directions, **Rajasthan is preparing a Detailed Project Report (DPR)**, while **Haryana has conducted surveys and is trying to reclaim existing stretches**.

Portfolio Management Service (PMS)

News: SEBI has proposed a comprehensive review of the Portfolio Managers Regulations, 2020, to modernize Portfolio Management Services amid rapid industry growth.

About Portfolio Management Service (PMS)



Source – TrueData

- **Portfolio Management Service (PMS)** is a professional investment service where a qualified portfolio manager manages a client's investment portfolio.
- **Registration:** PMS providers must be registered under the SEBI (Portfolio Managers) Regulations, 2020.
- **Minimum Investment:** SEBI requires a minimum investment of ₹50 lakh per client.
- **Eligible Candidate:** PMS is meant for high net-worth individuals and other eligible entities such as NRIs, HUFs, and partnership firms, among others, subject to applicable rules.
- **Types of Portfolio Management Services (PMS):** PMS in India is classified into three primary categories based on the degree of control and investor involvement:
 - **Discretionary PMS:** The portfolio manager makes investment decisions on behalf of the investor.
 - **Non-Discretionary PMS:** The portfolio manager gives investment advice, but the investor makes the final investment decisions.
 - **Advisory PMS:** The portfolio manager provides advice, and the investor independently executes the transactions.
- **Key Features of PMS:**
 - **Professional Management:** A qualified portfolio manager manages investments in equity, debt, and other securities.
 - **Customized Portfolio:** Investment strategies are tailored to the investor's financial goals and risk profile.

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- **Direct Ownership:** Investors directly own the securities held in their portfolio.
- **Transparency:** PMS providers regularly update investors with performance reports, fees, and risk disclosures.

SEBI's Proposals for PMS

- **Wider Investment Options:** Portfolio managers may invest in overseas securities, to-be-listed securities, and limited unlisted debt securities.
 - It has also proposed allowing discretionary portfolio managers to invest up to 10% of a client's assets under management (AUM) in investment-grade unlisted debt securities.
- **Mutual Fund-Only Category:** A separate MF-PMS category has been proposed with lower investment and net worth requirements.
 - It has proposed reducing the minimum client investment from ₹50 lakh to ₹25 lakh and the minimum net worth requirement for applicants from ₹5 crore to ₹2 crore.
- **Operational Flexibility:** SEBI has proposed greater flexibility in using derivatives for hedging and investment strategies, with exposure allowed up to 1.25 times the client's AUM.
- **Lower Compliance Burden:** Smaller firms managing assets below ₹100 crore may not need a separate dealing room.

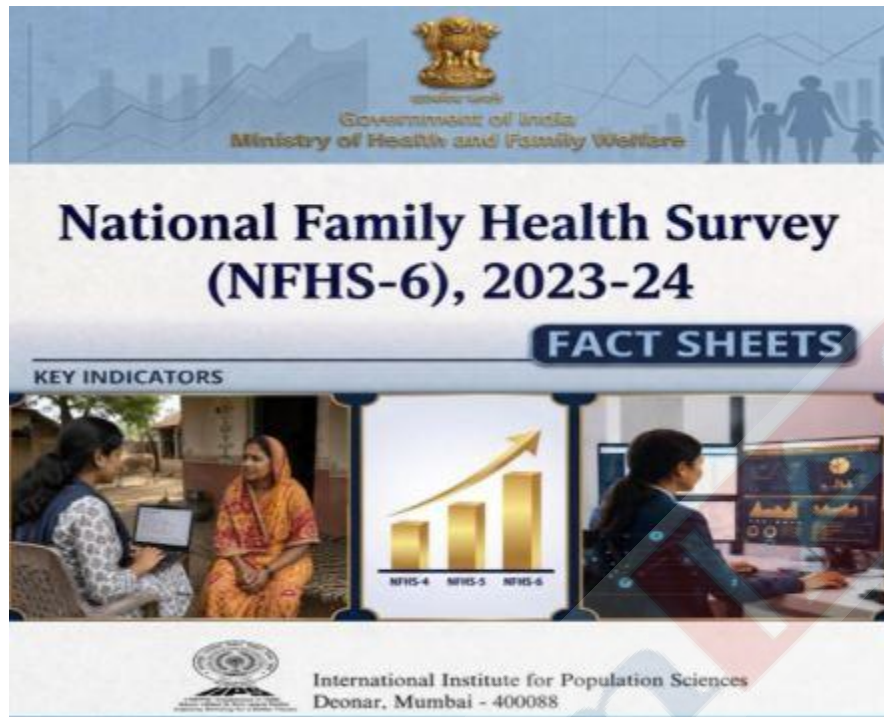
Potential Impacts on Investors

- **Greater Investment Choice:** Investors may receive broader and more diversified investment opportunities.
- **Improved Flexibility:** The proposals may provide more customized portfolio management while maintaining investor protection.

Key Highlights of National Family Health Survey (NFHS-6)

News: India recorded improvements in maternal and child health, while NFHS-6 reported a rise in lifestyle-related diseases among adults.

Key Highlights of National Family Health Survey (NFHS-6)



Source – PIB

- **Released by:** It is released by the **International Institute for Population Sciences (IIPS), Mumbai.**
 - IIPS is the **nodal agency** designated by the **Ministry of Health and Family Welfare (MoHFW)** for coordination and technical guidance.
- **Survey Period:** NFHS-6 was conducted **during 2023-24.**
- **Key features of NFHS-6:**
 - **Coverage:** The survey covered **6.79 lakh households** across **715 districts**, excluding Manipur.
 - **New Areas:** It included **Direct Benefit Transfer (DBT), Self-Help Groups (SHGs), digital literacy, digital financial transactions.**
 - It expanded **clinical, anthropometric, and biochemical (CAB) testing, including HIV testing.**
 - **Technology:** It **fully adopted Computer-Assisted Personal Interviewing (CAPI)** for real-time data validation and improved accuracy.
- **Key Findings of NFHS-6 (Comparison between NFHS-5: 2019-21 and NFHS-6: 2023-24)**
 - **Maternal Health**
 - **Institutional Deliveries:** Institutional deliveries **increased from 88.6% to 90.6%.**
 - **Antenatal Care (ANC):** ANC coverage **increased from 92.6% to 95.9%,** while **mothers receiving at least four ANC visits increased from 58.5% to 65.2%.**

- **Skilled Birth Attendance:** Births attended by skilled health personnel increased from 89.4% to 91.3%.
- **Family Planning**
 - **Contraceptive Prevalence Rate (CPR):** CPR increased from 66.7% to 69.1%.
 - **Unmet Need:** The unmet need for family planning declined from 9.4% to 8.5%.
 - **Total Fertility Rate (TFR):** TFR remained stable at 2.0, which is below the replacement level of 2.1.
- **Child Health and Nutrition**
 - **Full Immunisation:** Coverage among children aged 12–23 months increased from 83.8% to 87.1%.
 - **Vaccination:** Coverage of the second dose of the measles-containing vaccine increased from 58.6% to 71.8%,
 - while rotavirus vaccine coverage increased from 36.4% to 85.4%.
 - **Nutrition:** Stunting declined from 35.5% to 29.3%,
 - while severe wasting declined from 7.7% to 5.2% among children under five years.
- **Lifestyle Diseases**
 - **Obesity:** 30.7% of women and 27.3% of men aged 15–49 years were overweight or obese.
 - **High Blood Sugar:** The proportion of adults with high blood sugar increased from 13.5% to 17.8% among women and from 15.6% to 20.9% among men above 15 years of age.
 - **Hypertension:** The proportion of adults with hypertension declined from 21.3% to 19.4% among women and from 24.0% to 22.1% among men above 15 years of age.

About National Family Health Survey (NFHS)

- **National Family Health Survey (NFHS)** is a large-scale, multi-round survey conducted on a representative sample of households across India.
- **Origin:** It was launched in 1992–93.
- **Objective:** It provides district-level data on health and family welfare for evidence-based policymaking and programme implementation.

United Nations Commission on International Trade Law (UNCITRAL)

News: India hosted an international conference marking the 60th anniversary of UNCITRAL, where EAM S. Jaishankar highlighted the need for predictable and harmonised legal frameworks.

About United Nations Commission on International Trade Law (UNCITRAL)



Source – UNCITRAL

- **United Nations Commission on International Trade Law (UNCITRAL)** is the **legal body of the United Nations system** in the field of **international trade law**.
- **Establishment:** It was **established by the UN General Assembly in 1966** through **Resolution 2205(XXI) of 17 December 1966**.
- **Mandate:** Its mandate is to **promote the progressive harmonization and unification of the law of international trade** by reducing legal obstacles to trade.
- **Membership:**
 - **Composition:** The Commission is **composed of 70 Member States elected by the UN General Assembly**.
 - **India** is a **founding member** of this organization.
 - **Term of Members:** Members are **elected for six-year terms**, and the **terms of half of the members expire every three years**.
- **Key Aspects of UNCITRAL:**
 - **Core Legal Body:** It serves as the **main UN legal body for international trade law and commercial law reform**.
 - **Law Reform:** It **develops model laws, conventions, and legal standards to modernize and harmonize international trade law**.
 - **Sustainable Development:** It **supports the Sustainable Development Goals** by promoting coordination, cooperation, and the rule of law in international trade.
 - **Global Participation:** It follows an inclusive working process by **allowing non-member States and international organizations to participate as observers in its discussions**.
 - **Annual Sessions:** It holds its **annual sessions alternately at the United Nations Headquarters in New York and the Vienna International Centre in Vienna**.

East Asia Summit

News: External Affairs Minister S. Jaishankar, at the 21st East Asia Summit in Manila, stressed safe maritime channels and called for dialogue on regional conflicts.

About East Asia Summit (EAS)



Source – ASEAN

- **The East Asia Summit** is a **leader-led forum** where **Indo-Pacific partners** discuss **regional political, security, and economic challenges**.
- **Establishment:** It was **established in 2005** with the convening of its **first Summit in Kuala Lumpur, Malaysia**
- **Current Summit (2026):** The **21st East Asia Summit** was held in **Manila, the Philippines**.
- **Member:** It has **19 members**, comprising **11 ASEAN** (Association of Southeast Asian Nations) **countries and 8 Dialogue Partners**.
 - **ASEAN Member States:** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, and Timor-Leste.
 - **Timor-Leste became the latest member** of the EAS on 26 October 2025.

- **Dialogue Partners:** The eight Dialogue Partners are Australia, China, **India**, Japan, New Zealand, the Republic of Korea, the Russian Federation, and the United States.
- **Objective:** It aims to **promote peace, stability, and economic prosperity through dialogue and cooperation** on strategic, political, and economic issues.
- **Other features:**
 - **ASEAN Centrality:** ASEAN leads the forum, and its chair rotates annually among ASEAN member states.
 - **Annual Meetings:** The forum holds an **annual Leaders' Summit along with Foreign Ministers' and Economic Ministers' Meetings**.
 - **Area of cooperation:** It has identified **16 streams of work**, namely (1) Peace and Security; (2) Sustainable Development; (3) Climate, Environment and Energy Cooperation; (4) Education Cooperation; (5) Finance; (6) Health, including Pandemic Diseases; (7) Cooperation on Natural Disaster Management; (8) Cooperation on ASEAN Connectivity; (9) Economic Cooperation and Trade; (10) Poverty Alleviation; (11) Food Security; (12) Maritime Cooperation; (13) Strengthening EAS Institutional Capacity; (14) Tourism Cooperation; (15) Advancement and Empowerment of Women and Youth Participation; (16) Others as identified by Leaders and Ministers.

BHAVYA Rasayan Scheme

News: The Union Cabinet has approved the Bharat Audyogik Vikas Yojana Rasayan (BHAVYA Rasayan) scheme for the establishment of three dedicated chemical parks across the country.

About BHAVYA Rasayan Scheme



**CABINET APPROVES
₹3,030 CRORE
BHAVYA RASAYAN SCHEME
TO SET UP THREE CHEMICAL PARKS**

The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved the Bharat Audyogik Vikas Yojana Rasayan (BHAVYA Rasayan) scheme for establishing three dedicated chemical parks in the country.

Icon	Details
₹	TOTAL OUTLAY ₹3,030 CRORE ₹3,000 crore for infrastructure and utilities ₹30 crore for administrative expenditure
₹	CENTRAL ASSISTANCE P TO ₹1,000 CRORE PER PARK Subject to minimum contribution of ₹500 crore by the State Government
Calendar	DURATION 5 YEARS FY 2026-27 TO FY 2030-31

CHEMICAL PARK
BUILDING A STRONGER, SUSTAINABLE INDIA

KEY BENEFITS			PLUG-AND-PLAY INFRASTRUCTURE
Boost to the chemical industry value chain, lower logistics cost and better resource utilization	Enhanced global competitiveness, higher exports and import substitution	Sustainable and environment-friendly ecosystem with waste management and compliance infrastructure	More investment, employment generation and cascading growth in downstream sectors
The scheme will attract domestic and foreign investments, enhance production capacity, promote Atmanirbharta and contribute to the vision of Viksit Bharat @ 2047.			

PLUG-AND-PLAY INFRASTRUCTURE

- Common Effluent Treatment Plant (CETP)
- Treatment, Storage, and Disposal Facility (TSDF)
- Water supply and distribution systems
- Solvent recovery and distillation facilities
- Steam generation and distribution facilities
- Interconnected pipeline network
- Logistics and warehousing facilities

Source – DD News

- **Full form:** Bharat Audyogik Vikas Yojana Rasayan or BHAVYA – Rasayan Scheme
- **Aim:** The scheme is devised for the **establishment of three dedicated chemical parks** across the country, aiming to **strengthen India's chemical manufacturing ecosystem**, attract **investments** and enhance **global competitiveness**.
- It was announced in the **Union Budget of FY 2026–27**.
- **Timespan:** The scheme would run for a period of **5 years from FY 2026-27 to FY 2030-31**.
- **Financial Outlay:** The Scheme will have a **total financial outlay of Rs. 3,030 crore**, with **Rs. 3,000 crore** towards meeting the **cost of establishing the Common Infrastructure Facilities and Basic Utilities** inside the park and **Rs. 30 Crores** as **administrative expenditure**.
 - The **Centre** would provide a grant of up to **Rs.1,000 crore per park**.
 - This will be **subject to minimum contribution of Rs.500 crore** by the concerned **State Government**.
- **Other Features**
 - The **Centre will facilitate development** of **three** dedicated Chemical Parks by the **State Governments** under **Challenge Route**.
 - **Each such park** will have a **minimum contiguous area of 8 sq. km.** (minimum 2,000 acres) of **encumbrance-free land**.
 - These parks will provide **plug-and-play infrastructure**, in the form of **Common Infrastructure Facilities and Basic Utilities** for the chemical industry such as –
 - Common Effluent Treatment Plant (CETP),
 - Treatment, Storage, and Disposal Facility (TSDF),
 - Water supply and distribution systems,
 - Solvent recovery and distillation facilities,
 - Steam generation and distribution network,
 - Interconnected pipeline network,
 - Logistics and warehousing facilities
- **Future Benefits**
 - It will **promote development of the Chemical industry** along the whole **value chains**, leading to **lower logistics cost**.
 - It will lead to **enhanced cost competitiveness** and will make the Indian Industry **globally competitive**.
 - It will help the Indian Chemical industry better **integrate in Global Value Chains** leading to **greater exports** and **higher import substitution**.
 - It will ensure **better compliance management** with **environmental regulations**, thereby promoting development of industry in **eco-friendly manner**.

- Development of Chemical sector will lead to a **cascading effect** through enhanced **development of downstream sectors** of the economy as well, helping achieve the goal of **Viksit Bharat @ 2047**.

Fields Medal 2026

News: The International Mathematical Union announced the 2026 Fields Medal winners at the International Congress of Mathematicians held in Philadelphia on July 23.

About Fields Medal 2026



Figure 1. Source – IMU

- The **Fields Medal** is awarded to recognize **outstanding mathematical achievement** for existing work and for the promise of future achievement.
- **Awarded by:** The fields medals are awarded by the **International Mathematical Union (IMU)**.
- **Funded by:** It is funded by a **trust established by J.C. Fields at the University of Toronto**.
- **Origin:** The Fields Medal was **first awarded in 1936**.
- **Frequency:** It has been awarded **every four years since 1950**.
- **Nobel Prize of Mathematics:** It is regarded as the highest professional recognition in mathematics and is considered equivalent to the Nobel Prize.
- **Eligibility:** Only **mathematicians below 40 years of age are eligible**.
- **Prize:** Each winner receives a **gold medal and 15,000 Canadian dollars**.

- **Key Winners of the 2026 Fields Medal:**

- **Yu Deng (University of Chicago):**
 - Yu Deng received the Fields Medal for his **work in partial differential equations and mathematical physics**.
 - He established rigorous **mathematical foundations** for the **Boltzmann equation, wave kinetic equations, and probabilistic approaches to nonlinear Schrödinger dynamics**.
- **Hong Wang (New York University and Institute for Advanced Scientific Studies, France):**

- Hong Wang was recognized for major **breakthroughs in harmonic analysis and geometric measure theory**.
- Her work advanced the **local smoothing conjecture, Fourier restriction, the Kakeya problem, Falconer distance sets, and Furstenberg sets**.
- She is the **third woman to ever win the Fields Medal in its 90-year history**.
- **Jacob Tsimerman (University of Toronto):**
 - Jacob Tsimerman received the medal for **developing o-minimality as a fundamental method in arithmetic and complex algebraic geometry**.
 - He also contributed to the **proof of major conjectures, including the Griffiths conjecture and the André-Oort conjecture**.
- **John Pardon (Stony Brook University):**
 - John Pardon was honoured for his contributions to **symplectic geometry, geometry, and topology**.
 - He introduced **new approaches to virtual fundamental cycles** and made significant **advances in knot theory and group actions on three-manifolds**.

High-Powered Task Force for Education Sector

News: Prime Minister Narendra Modi announced a High-Powered Task Force to reform the examination system and improve the credibility of future competitive examinations.

About High-Powered Task Force for Education Sector



Source – IE

- **High-Powered Task Force for Education Sector** is a **six-member panel** constituted to **recommend technology-driven and structural reforms in India's examination system**.

- **Announced by:** Prime Minister Narendra Modi announced the constitution of the High-Powered Task Force.
- **Led by:** The task force is chaired by Nandan Nilekani.
- **Objective:**
 - **Examination Reforms:** The task force will recommend reforms to make examinations trustworthy, transparent, and credible.
 - **Technology-driven System:** It will promote maximum use of technology, including digital infrastructure, Artificial Intelligence, encryption, authentication, and monitoring.
 - **Institutional Improvements:** It will recommend structural reforms in the National Testing Agency (NTA) and improve governance, accountability, operational efficiency, and leak-proof examination processes.
- **Panel Composition:**
 - **Nandan Nilekani:** He is the Infosys co-founder and the architect of Aadhaar, and he chairs the task force.
 - **S. Somanath:** He is the former Chairman of the Indian Space Research Organisation (ISRO).
 - **Tapan Deka:** He is the former Director of the Intelligence Bureau (IB).
 - **V. Kamakoti:** He is the Director of the Indian Institute of Technology (IIT) Madras.
 - **Anita Karwal:** She is the former Education Secretary.
 - **Amrit Lal Meena:** He is a logistics expert and a former civil servant.

Parallel Legislative Action

- **Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026:** The proposed Bill seeks to strengthen the legal framework against examination fraud.
 - The Bill proposes higher punishment and enhanced monetary penalties for paper leaks and organised malpractice.
- **Fast-Track Courts:** The government has announced fast-track courts to ensure speedy prosecution of offences related to examination paper leaks.

Corporate Mitra Scheme

News: The Indian Institute of Corporate Affairs organised an awareness webinar on the Corporate Mitra Scheme in Arunachal Pradesh.

About Corporate Mitra Scheme



Source – MKPS Ass.

- **Corporate Mitra Scheme** is a flagship initiative to **create Corporate Mitras** for **supporting** Micro, India's Micro, Small and Medium Enterprises (**MSMEs**).
- **Launched by:** The **Ministry of Corporate Affairs** announced the scheme in the **Union Budget 2026-27**.
- **Implementation:** The scheme will be **implemented through the SWAYAM Plus portal**.
- **Aim:** The scheme aims **to strengthen the MSME ecosystem** through trained para-professionals, reduce compliance burden, improve ease of doing business, and create employment opportunities.
- **Key features:**
 - **Trained Support:** It will provide **affordable support in regulatory compliance, GST, accounting, financial management, cost accounting, secretarial services, and governance**.
 - **Training Structure:** Candidates will complete **6 months of academic learning followed by 6 months of on-the-job training with firms**.
 - **Wider Reach:** It will mainly **work in Tier-II and Tier-III cities** to improve access to professional services.
 - **Eligibility:** **Graduates and final-year graduation students up to 30 years of age** are eligible to apply for the scheme.
 - **Benefits:** Eligible **women candidates** and **applicants from the North Eastern Region, Himalayan Region, Andaman & Nicobar Islands, and Lakshadweep** will receive a **50 per cent course fee concession**.
 - During on-the-job training, **candidates will also receive a minimum stipend** as per the applicable norms of the Institute of Chartered Accountants of India (ICAI), the Institute of Company Secretaries of India (ICSI), or the Institute of Cost Accountants of India (ICoAI).

Unjha Jeera

News: Unjha Jeera from Gujarat has officially received the Geographical Indication (GI) tag.
About Unjha Jeera



Source: Better India

- It belongs to **Unjha region**, located in Mehsana district, Gujarat.
 - It is home to **one of Asia's largest spice markets and serves as a major trading hub for cumin.**
- **Features:**
 - It is particularly known for its **large seeds, stemless quality and higher essential oil content.**
 - It releases a **specific earthy aroma when added to tadka.**
- **Note:** India is the **world's largest producer and exporter of cumin**, while Gujarat is among the country's **leading cumin-producing states**, making Unjha a key centre in the global cumin trade.
- **Recognition:** It is given a **Geographical Indication (G.I.) tag in Gujarat.**
- **Tussle over G.I. Tag:** Rajasthan farmers argue that **Unjha is primarily a trading and aggregation centre rather than a major production hub** for cumin (jeera).
 - Farmers contend that the **GI should be linked to the place of production**, not merely the place where the crop is marketed.
 - **Price Concerns:** Rajasthan farmers fear that the **GI tag may allow traders to market Unjha Jeera as a premium product**, potentially reducing the prices received for cumin produced in Rajasthan.

Sone River

News: Bihar and Jharkhand are set to sign an agreement on the sharing of Sone River waters, resolving a long-pending dispute that has persisted since the creation of Jharkhand in 2000.

About Sone River



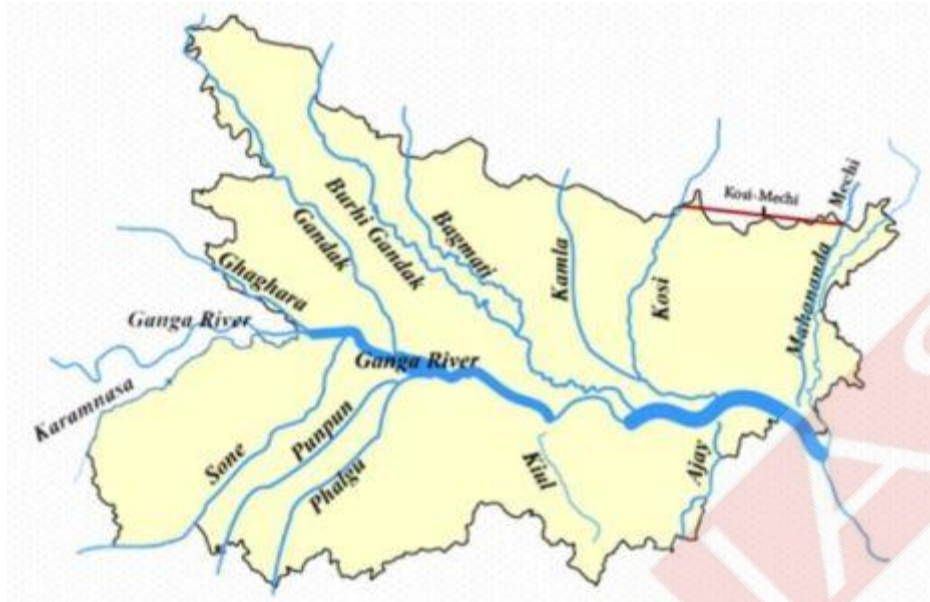
Figure 2. Source: Research Gate

- Sone River is a **perennial river**.
- It is also called “**Hiranyavaha**” because of its **golden coloured sand**.
 - It was believed that the river **carried gold dust** in its flow.
- **Origin:** It originates in the **Amarkantak hills of the Maikal Range in Madhya Pradesh**.
- **Course of river:** It flows in a north-northwest direction till **Bansagar reservoir**, after which it changes its course sharply eastwards, **flowing parallel to Kaimur Range**, and joins Ganga River 30 km upstream of Patna in Bihar.
 - It flows through the **Deccan Peninsula and Gangetic Plains biogeographic zones**.
 - The upper stretch of the Son River passes through the tiger landscape of Central India.
- **Valley:** The Sone River valley is **geologically regarded as a continuation of the Narmada River valley** towards the southwest.
 - The valley is bordered by the **Kaimur Range in the north and the Chota Nagpur Plateau in the south**.
- **Total length:** Its total length is **784 km**.
- **States through which it flows:** It flows through **Madhya Pradesh, Uttar Pradesh, Jharkhand and Bihar**.
- **Tributary of:** It is a tributary of the **river Ganga**.
- **Tributaries:** Its tributaries are **Banas, Gopad, Rihand, Kanhar and North Koel**.
- **Species associated:** It supports populations of **key indicator species such as gharial and mugger**.
 - **Seven species of turtles, Red-crowned roofed turtle, three-striped roofed turtle, crowned river turtle, Indian tent turtle, Indian narrow-headed softshell turtle, Ganges softshell turtle, and Indian flapshell turtle** have been reported from the River.
- **Dams constructed on river:** The **Bansagar Dam (Madhya Pradesh), Rihand Dam (Uttar Pradesh), and Indrapuri Barrage (Bihar)** are the major dams and water infrastructure projects built on the Sone River.

Mechi River and Kosi-Mechi Intra-State Link Project

News: The Kosi-Mechi Intra-State Link Project received PMKSY-AIBP support, with completion targeted by March 2029 and ongoing canal remodelling work.

About Mechi River



Source – DD News

- **Origins:** The Mechi River originates in the **Mahabharat Range** (Mahabharat Lekh) of **Nepal** as a **perennial river**.
- **Course:** It flows through **eastern Nepal** and the **Darjeeling district** of **West Bengal** before entering **Bihar**.
- **Confluence:** The Mechi River **joins the Mahananda River** in **Kishanganj district** of **Bihar**.
- **River System:** It is a tributary of the Mahananda River, **which ultimately drains into the Ganga**.
- **Key Features:**
 - **Braided Channel Nature:** The Mechi River **often develops braided channels because of heavy sediment load** and variable discharge during the monsoon.
 - **Alluvial Fan Formation:** The river forms **well-developed alluvial fans in the plains by depositing fertile sediments**, which **support agriculture** but also increase flood vulnerability.
 - **Flood-Prone Behaviour:** Heavy monsoon rainfall causes flooding and waterlogging in low-lying areas.

About Kosi-Mechi Intra-State Link Project

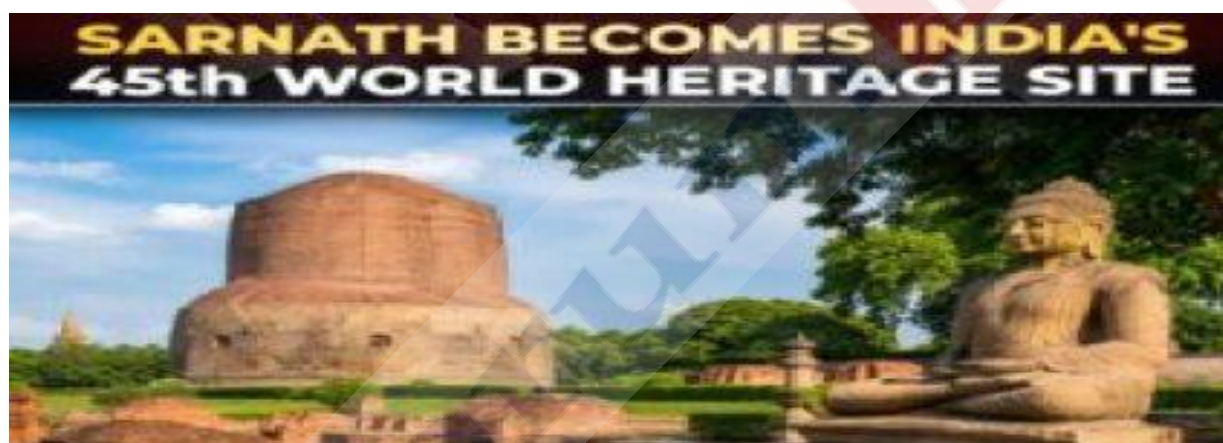
- **The Kosi-Mechi Intra-State Link Project:** It is a vital **water management initiative in Bihar** that transfers **surplus water from the Kosi River to the Mechi River**.
- **National Plan:** It forms part of the **National Perspective Plan for Interlinking of Rivers**.
- **Ministry involved:** The project operates **under the Ministry of Jal Shakti**.
- **Implemented by:** The project is **supervised by the National Water Development Agency**.

- **Objective:** It transfers surplus monsoon water from the Kosi River to the Mechi River to improve irrigation, strengthen water management, and support agriculture.
- **Key Aspects**
 - **PMKSY-AIBP Support:** The project has been included under the Pradhan Mantri Krishi Sinchayi Yojana–Accelerated Irrigation Benefit Programme (PMKSY-AIBP).
 - **Project Cost:** The project has a total estimated cost of ₹ 6,143.22 crore, out of which ₹3,652.56 crore has been sanctioned as Central assistance to Bihar.
 - **Project Progress:** The project is scheduled for completion by March 2029.

Sarnath Joins UNESCO World Heritage List

News: Sarnath, where Lord Buddha delivered his first sermon, has been inscribed on UNESCO's World Heritage List during its 48th Committee session.

About Sarnath Joins UNESCO World Heritage List



Source – ET

- Sarnath has become India's 45th and Uttar Pradesh's fourth UNESCO World Heritage Site.
- **Tentative List:** It has remained on UNESCO's Tentative List since 1998.
- **Location:** It is a sacred city located in north-east of Varanasi near the confluence of the Ganges and the Varuna rivers in Uttar Pradesh, India.
- **Discovered By:**
 - **Rediscovery:** The rediscovery of Sarnath is credited to the workers of Jagat Singh, the diwan of Raja Chait Singh of Benares, in 1799.
 - **Identification:** Jonathan Duncan reported the findings, which led to later excavations.

Alexander Cunningham identified Sarnath as the place of Lord Buddha's first sermon in 1836.
 - **Scientific Excavation:** Friedrich Oertel carried out the first systematic and scientific excavation of Sarnath during 1904–05.

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- **Historical and Religious Significance:**

- **Ancient Name:** Ancient **Buddhist scriptures** describe **Sarnath Rishipattana**, meaning the “place of sages.”
- **First Teaching of Dharma:** Sarnath is **one of the four most important Buddhist pilgrimage sites** because **Gautama Buddha taught the Dharma for the first time here.**

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

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

- **Architectural Marvels of Sarnath**

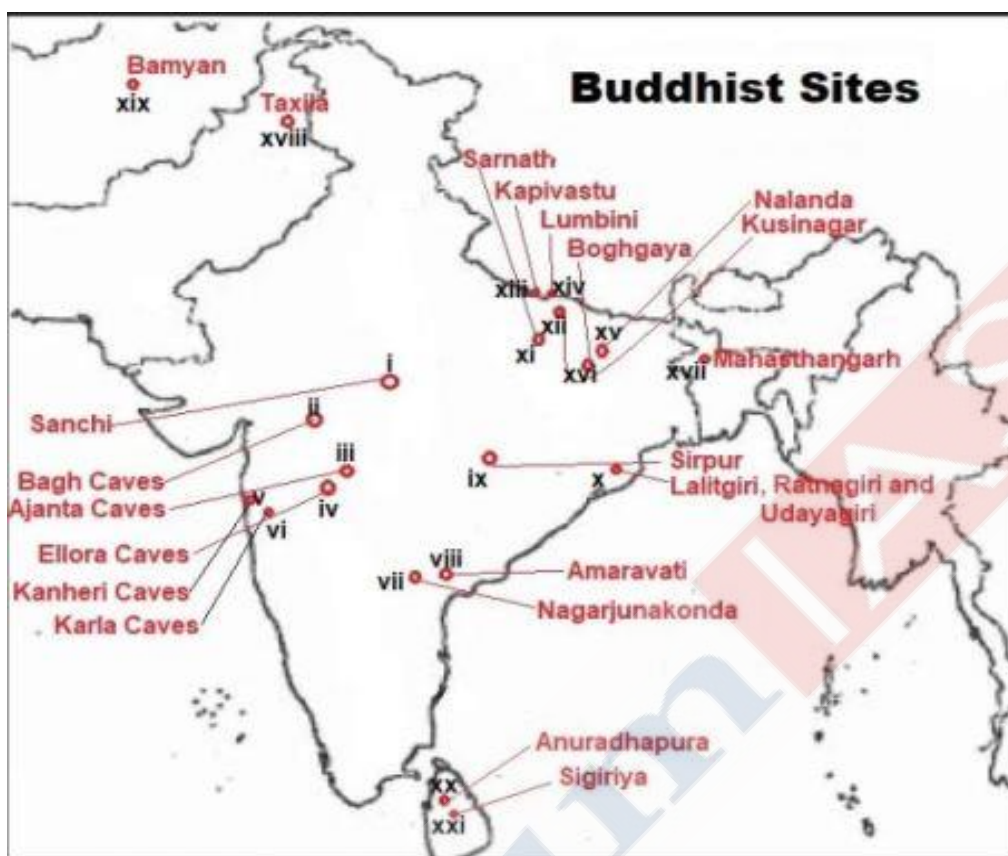
- **The Dhamekha Stupa:** A conspicuous structure believed to be the **dwelling place of Pañcavaggiya monks after leaving Lord Buddha.**

It was **constructed by Emperor Ashoka.**

It is considered the sacred ground where the voice of Buddhism first resonated.

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

Other Important Sites Related to Buddha



Source – IE

- **Lumbini (Nepal):**
 - **Birthplace of Buddha:** Lumbini is the **birthplace** of Lord Buddha and is located in the **Rupandehi district** of Nepal.
 - **Ashokan Legacy:** Emperor **Ashoka** erected a **commemorative pillar** at the site.
 - **Rediscovery:** It was **rediscovered in 1896**.
 - **UNESCO Recognition:** It was inscribed as a **UNESCO World Heritage Site** in 1997.
- **Bodh Gaya (Bihar):**
 - **Place of Enlightenment:** It marks the place where **Prince Siddhartha** attained enlightenment and became the **Buddha**.
 - **Ashokan Contribution:** Emperor **Ashoka** built a **simple shrine** at the site in the **3rd century BCE**.
 - **Present Temple:** The **present pyramidal temple** dates to the **6th century CE** during the **Gupta period**.
 - **Temple Complex:** The complex includes a **descendant of the original Bodhi tree** and an **intricately carved tower**.
 - **UNESCO Recognition:** The **Mahabodhi Temple Complex** is a **UNESCO World Heritage Site**.

- **Kushinagar (Uttar Pradesh):**
 - **Mahaparinirvana:** Kushinagar is the place where Lord Buddha attained Mahaparinirvana (ultimate salvation).
 - **Important Monuments:** The Mahaparinirvana Temple houses a **reclining statue of Buddha**.
 - **The Ramabhar Stupa** is believed to be **Buddha's cremation site**.
 - **Historical Importance:** Kushinagar was the **capital** of the ancient **Malla republic**, one of the 16 Mahajanapadas.
 - **Excavation:** **Alexander Cunningham** and **A.C.L. Carlleyle** excavated the site in **1876** and discovered the main stupa and the **6-m-long reclining Buddha statue**.
 - **Unique Feature:** It is one of the very few places in India where **Buddha** is depicted in the reclining form.

Chandipura Virus

News: Two children from Rajasthan have died in recent days after testing positive for the Chandipura virus.

About Chandipura Virus

UNDERSTANDING CHANDIPURA VIRUS

Illustration: Ashok Adelpal

HISTORY: In 1966, two doctors at Pune's Virus Research Centre (VRC) isolated a virus of the vesiculovirus family that is also behind diseases like stomatitis and causes fever, chills and muscular pain. As the patient was from Chandipura near Nagpur, it got the name Chandipura virus (CPHV). This virus has so far only been reported in India.

WHAT CAUSES IT: While mosquitoes have also been identified as possible vectors, its transmission is mainly caused by sandflies. When a female sandfly bites humans, the virus enters the patient's bloodstream. Sandflies are found in many parts of Asia, Africa, central and South America apart from India.

WHERE DO SANDFLIES LIVE AND BREED: Experts in Gujarat say that as seen in past outbreaks, sandflies proliferate in crevices of mud houses soon after the first spell of rain when there is humidity in the ambient air. Other factors such as water accumulation in the vicinity and in open spaces causes outbreaks in rural areas.

IS IT CONTAGIOUS? WHAT ARE THE TREATMENT OPTIONS: Experts say CPHV does not spread through contact with the patient. Its spread is limited to the geographic areas with sandflies or other vector populations. Treatment is symptomatic to sustain the patient's vitals and treating encephalitis. Patients are generally put on ventilator support.

SYMPTOMS: Experts in the city say that unlike in other viral infections, in CPHV, health deteriorates rapidly, in 24-48 hours

- Very high-grade fever above 102 degrees fahrenheit in the first 24 hours
- Vomiting/diarrhoea
- Severe headache
- Delirium in 24 to 48 hours
- Convulsions and fits
- Malfunction of internal organs such as liver

Doctors say that any fever that lasts over 24 hours should be taken seriously and medical help should be sought. Full-sleeved clothes should be worn to reduce the risk of insect bites

OUTBREAKS IN INDIA: The year 2003 saw a major outbreak in parts of Andhra Pradesh and Maharashtra. Gujarat saw spikes in cases in 2014, 2016 and 2019. Other states that have reported significant numbers of cases are Tamil Nadu, Karnataka, Bihar, Madhya Pradesh and Uttar Pradesh.

VIRAL ENCEPHALITIS: In general parlance, it is also called brain fever. The viral infection affects the central nervous system and parts of the brain. An MRI scan of the patient's brain often shows the infected part. This is why CPHV infection, with a mortality rate of 50-60%, is dreaded.

Source: Times of India

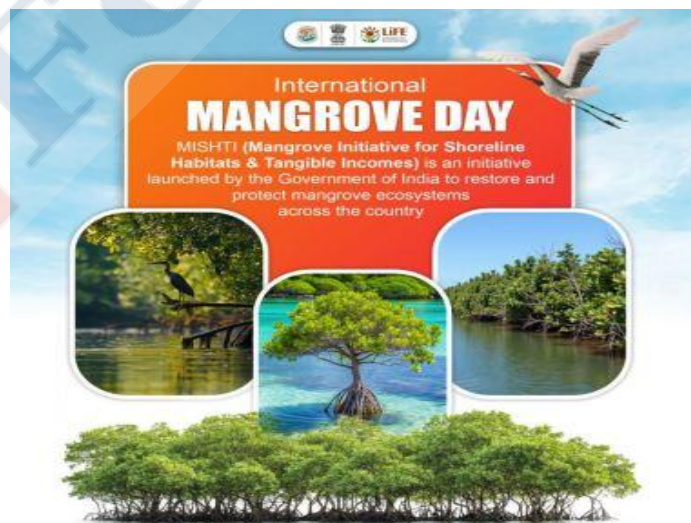
- Chandipura Virus is a virus of the **Rhabdoviridae** family.
 - It also includes **other members** such as the **lyssavirus** that causes rabies.
- **How it is caused:**

- Several species of **sandflies, like Phlebotomine sandflies and Phlebotomus papatasi, and some mosquito species**, such as *Aedes aegypti* (which is also the vector for dengue), are **considered vectors of CHPV**.
- The **virus resides in the salivary glands of these insects and can be transmitted to humans or other vertebrates**, like domestic animals, **through bites**.
- The **infection caused by the virus can then reach the central nervous system**, which can lead to encephalitis.
- **Symptoms:** The CHPV infection **presents initially with flu-like symptoms**, such as acute onset of fever, body ache, and headache.
 - It may **then progress to altered sensorium or seizures and encephalitis**.
 - Retrospective studies from India have also reported other symptoms such as respiratory distress, bleeding tendencies, or anaemia.
 - The infection often progresses **rapidly after encephalitis, which may then lead to mortality within 24-48 hours of hospitalisation**.
 - **Disease progression can be as rapid as a patient reporting high fever in the morning**, and their kidneys or liver being affected by the evening.
- **Affected age group:** It primarily affects children under 15 years.
- **Management:** The infection can only be **symptomatically managed as currently there is no specific antiretroviral therapy or vaccine available** for treatment.
 - As a result, it becomes crucial to manage brain inflammation to prevent mortality.

MISHTI Scheme and Great Green Wall of Andhra Pradesh initiative

News: Andhra Pradesh secured second place under the MISHTI scheme after restoring 2,047.70 hectares of mangroves during 2025–26.

About MISHTI Scheme



Source – PIB

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- **Full form:** Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI) Scheme
- It is a scheme **to promote, conserve and restore mangroves** for ecological protection and climate resilience.
- **Launched by:** The **Ministry of Environment, Forest and Climate Change** launched the scheme **in 2023**.
- **Aim:** It **aims to promote and conserve mangroves**, restore degraded areas, strengthen coastal ecosystems and improve **climate resilience**.
- **Funding Sources:** The scheme promotes **convergence** of resources from the **CAMPA** (Compensatory Afforestation Fund Management and Planning Authority) **fund** and **MGNREGS** (Mahatma Gandhi National Rural Employment Guarantee Scheme) .
- **Target:** The scheme aims to **restore** approximately **540 sq. km of mangrove habitats over five years (2023–2028)**.
- **Coverage Area:** The scheme is being implemented **across 11 States** – West Bengal, Gujarat, Odisha, Andhra Pradesh, Tamil Nadu, Kerala, Maharashtra, Karnataka, Goa, Uttar Pradesh and Telangana – **and 2 Union Territories**, namely Andaman & Nicobar Islands and Lakshadweep.
- **International Significance:** The MISHTI scheme **aligns** India with the **UN Sustainable Development Goals (SDGs)** and the **Mangrove Alliance for Climate (MAC)**, which India joined during COP27.

About Great Green Wall of Andhra Pradesh initiative

- It is an **ecological restoration project** that develops mangroves, shelterbelts, windbreaks, agroforestry and community plantations **along the Andhra Pradesh coastline**.
- **Aim:** It's aim is to **protect coastal communities and ecosystems from cyclones, floods and erosion**.
- **Inspiration:** It draws inspiration from **Africa's Great Green Wall and the Aravalli Green Wall Project**.
- **Funding:** It is supported **through MGNREGS, CAMPA, Green Credit Programme, District Mineral Funds and International Climate Finance**.
- **Geographical Coverage:** It covers **Andhra Pradesh's 1,053-km coastline**.
- **Target:** It aims to create a **5-km-wide living ecological shield along the coastline by 2030**.
- **Key features:**
 - **Multi-layered Green Buffer:** It includes **mangroves, shelterbelts, windbreaks, agroforestry and community plantations**.
 - **Fish Bone Technique:** It adopts the **Fish Bone Technique** to improve tidal water circulation, increase mangrove survival rates and enhance long-term ecological resilience.
 - **Climate Resilience:** It strengthens biodiversity conservation and supports sustainable coastal management.

About Fish Bone Technique

- **The Fish Bone Technique** is an **innovative mangrove restoration method** used in degraded areas with poor tidal water flow.
- **Working Mechanism:** It creates a central “backbone” channel with smaller angled feeder channels that divert tidal water into degraded mudflats and mimic natural tidal creeks.
- **Mangrove Restoration:** The improved tidal flow enhances soil salinity and aeration.
 - Once suitable conditions are created, mangrove seedlings are planted, and natural regeneration is supported.

Kutki (Picrorhiza kurroa)

News: In Himachal Pradesh’s Mandi district, sustainable cultivation of the endangered medicinal herb Kutki (*Picrorhiza kurroa*) is helping conserve the species and supporting the rural mountain economy.

About Kutki (Picrorhiza kurroa)



Figure 3. Source: MoFCC

- It is a medicinal herb, locally known as Kutki.
- **Botanical name:** Its botanical name is *Picrorhiza kurroa*.
- **Native to:** It is native to the alpine and sub-alpine regions (2,700-4,500 metres) of the Him-alayas.
- **Habitat:** It grows naturally in rock crevices and moist, sandy soil.
- **Characteristic features:**
 - It has a long, creeping rootstock that is bitter in taste.
 - The leaves are oval, flat, and serrated.
 - The flowers are pale purple or white and are borne on a tall spike.
- The plants are harvested manually from October to December.
- **Medicinal part:** The medicinal part is the stolon (a side branch that creeps on the soil and possesses nodes), not the root.
 - The roots are fibrous and contain no medicinal content.
- **Uses:** It is one of the most commonly used herbs in polyherbal preparations clinically used in India.

- It is also used in **Liver disorders, strengthening stomach function in cases of indigestion, inflammation & fever.**
- **Conservation status:**
 - **IUCN Red List:** It is currently classified as an **Endangered** due to decades of destructive wild harvesting.
 - **CITES:** It is also listed in **Appendix II, allowing international trade only under regulated conditions with export permits.**

Houbara Bustard

News: The Houbara Bustard has suffered major population declines due to habitat loss, hunting, and degradation of its breeding grounds.

About Houbara Bustard



Source: DTE

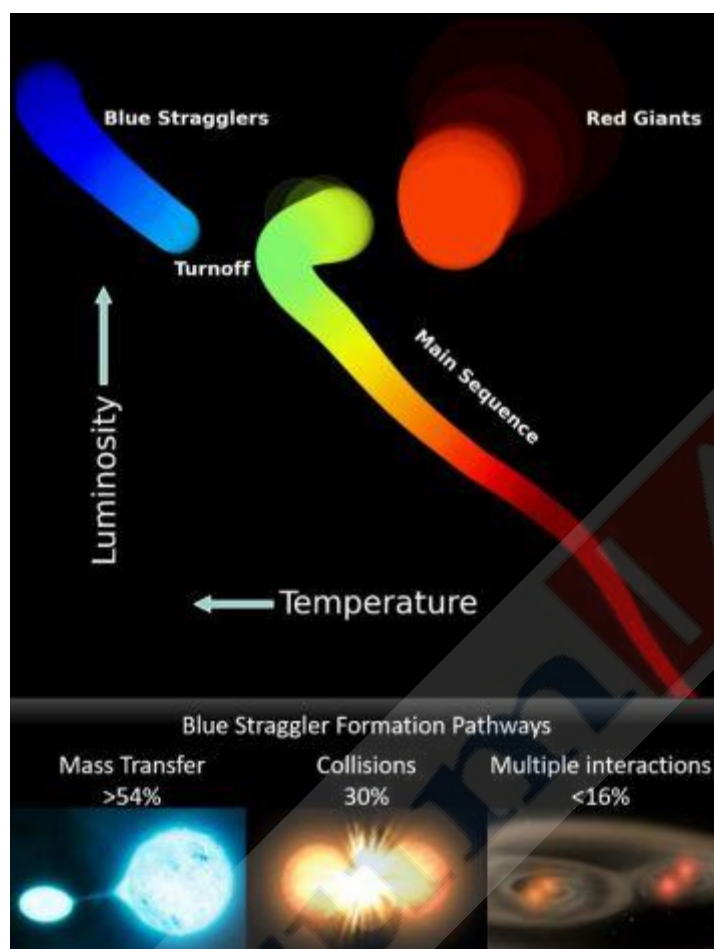
- It is a **large terrestrial bird.**
- **Scientific name:** It is **split into two distinct species** as recognized by the IUCN:
 - one residing in North Africa (***Chlamydotis undulata***) and
 - the other residing in Asia (***Chlamydotis macqueenii***).
- **Habitat:** It lives in **vast plains and semi-arid regions in pebbly, sandy deserts** with scattered vegetation cover.
- **Distribution:** It is found in **parts of Asia, the Middle East and Africa.**
- **Characteristics:**
 - **Appearance:** It is a **medium-to-large-sized bustard.**
 - Its **overall plumage is pale sandy-brown**, which helps it blend into dry habitats.

- It has a **white neck with a distinct vertical black stripe**, which is most prominent in adult males.
- **Females** are **slightly smaller and slimmer than males**.
- It closely **resembles the African Houbara**, but the two species are mainly distinguished by their geographic range.
- During the breeding season, **the male performs a unique courtship display** by dancing in long, straight lines across open hills.
- It **breeds in dry steppes and semi-desert regions** with scattered shrubs.
- Its eastern populations are **migratory and move seasonally**.
- **Diet:** It is **omnivorous** taking seeds, insects and other small creatures.
- **Behaviour:** It is normally **silent and rarely makes vocal sounds**.
- **Threat:** The main reasons for the decline in the species are:
 - **Poaching,**
 - **Unregulated hunting and the**
 - **Degradation of its natural habitat.**
- **Conservation status:**
 - **IUCN:** It is classified as **Vulnerable**.
 - **CITES:** It is listed in **Appendix I** under CITES.
 - **CMS:** It is also listed in **Appendix I** of the **Convention on Migratory Species (CMS)**.
 - It will be also **included in the forthcoming Central Asian Red Data Book**.

Blue Straggler Star

News: Indian astronomers and international collaborators have discovered a Blue Straggler Star during its formation, providing rare direct evidence of its origin.

About Blue Straggler Star



Source – DST

- **Blue Straggler Star (BSS)** is an **unusually hot, bright, blue, and massive star** found in old star clusters.
- **Location:** It is found in **old star clusters**, including **globular and open clusters**, as well as **dwarf galaxies**.
- **Discovery:** It was first discovered by Allan Sandage in 1952-53 in the globular cluster M3.
- **Formation Mechanisms:**
 - **Mass Transfer in a Binary System:** Two stars orbit each other in a binary system.
 - As one star becomes older, it expands and starts transferring its outer material to the other star.
 - This transfer of matter makes the second star hotter, brighter, and more massive, turning it into a Blue Straggler Star.
 - **Stellar Collision or Merger:** In crowded star clusters, two stars may collide or merge into a single star.

- The **combined star** becomes more massive and energetic, making it appear hotter, brighter, and younger than the other stars in the cluster.
- **Key Features**
- **Different Evolution:** These **stars follow a different evolutionary path from most other stars** in the same cluster because they are rejuvenated after gaining additional mass.
 - **X-ray Evidence:** Strong **X-ray emission** confirms that matter is currently being accreted by the **Blue Straggler Star**.

Initiatives Undertaken in Rashtrapati Bhavan

News: As President Smt. Droupadi Murmu marked four years in office, various Initiatives were undertaken in Rashtrapati Bhavan and the President's Estates.

About Initiatives Undertaken in Rashtrapati Bhavan



Figure 4. Source: PIB

Launch of e-Audio Guide for visitors to Rashtrapati Bhavan: The application-based e-Audio Guide has been launched to enhance visitors' experience.

- It will be available in **Hindi, English and 14 other Indian languages**.
- Its **sign language module** will also be available for visitors.

● **Launch of the third edition of e-Upahaar:**

- It features **300 curated Presidential gifts for public auction**.
- The auction will be open from 5 August to 5 September 2026.

● **Inauguration of Bachpan 'Bal Parisar' for the children in the President's Estate:**

- The initiative includes **'Kilkari', a play zone for children**, and **'Samarth Anganwadi-cum-Palna'**, which provides a safe and nurturing environment for their growth and development.

● **Launch of RAAHI (Rashtrapati Bhavan Access And Heritage Interconnector):**

- It is a **fare-free electric bus service** to promote green and inclusive mobility.
- This **bus service for the staff and residents of the President's Estate** is being **operated by women drivers and conductors**.
- This will **provide safe, convenient and inclusive mobility**, particularly for women, children, senior citizens and Divyang persons within the President's Estate and up to the nearest Metro station.
- The initiative also involves laying foundation stone **for the construction of service block as part of Net Zero Energy Strategy**.

- It also includes **inauguration of accommodation facilities at Rashtrapati Niketan, Dehradun and Rashtrapati Nilayam, Secunderabad** and **laying of foundation stone for the redevelopment of staff quarters in the President's Estate.**

Tigidia Singhal

News: Researchers have described a new trapdoor spider species, *Tigidia singhal*, from the semi-arid grasslands of the Deccan Plateau.

About Tigidia Singhal



Source: Mongabay

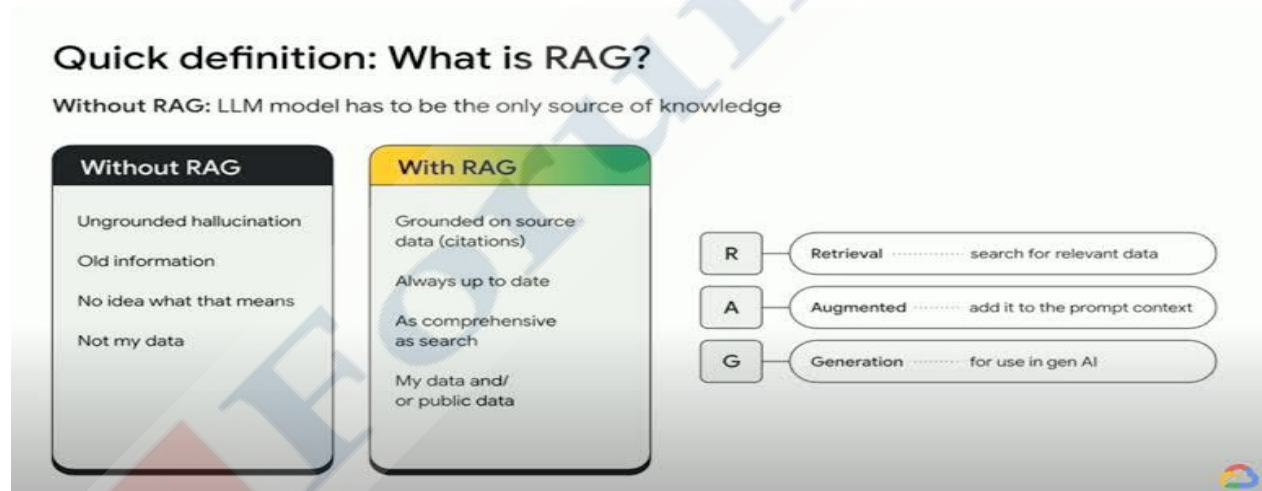
- ***Tigidia singhal*** is a newly described species of **trapdoor spider** discovered in the **semi-arid grasslands of the Deccan Plateau** in Maharashtra.
- **Genus and Family:** It belongs to the **genus *Tigidia*** and the **family Barychelidae (brush-footed spiders)**, within the **infraorder Mygalomorphae**, which also includes tarantulas and funnel-web spiders.
 - Its discovery **brings the number of *Tigidia* species in India to eight.**
- It is the **first record of the genus *Tigidia* from a semi-arid open natural ecosystem**, expanding its known range beyond tropical evergreen and deciduous forests.
- **Habitat:** It inhabits **rocky hilltop grasslands of the Deccan Plateau.**
 - **Note:** Spiders of the genus *Tigidia* occur **only in Madagascar, Mauritius and India.**
- **Characteristics:**
 - The **female spider measures about 15 mm** in length.
 - It has **black legs covered with greyish bristle-like hairs** and a **lighter abdomen with chevron-shaped markings.**

- It constructs **silk-lined burrows** that are generally **4–10 cm deep**, have **two openings**, and are usually located **at the edges of rocks where soil retains more moisture**.
 - These burrows help protect the spider from **desiccation and predators** while also enabling efficient capture of prey.
- **Behaviour:** It is **long-living, sedentary spiders** that spend most of their lives in burrows, rarely leaving except to search for a mate.
- **Threat:** The species faces threats from:
 - **land-use change**
 - **soil extraction**
 - **tourism-generated plastic waste, and**
 - **stone quarrying**, which destroy its rocky microhabitats.

Retrieval-Augmented Generation (RAG)

News: As enterprises increasingly adopt AI, **Retrieval-Augmented Generation (RAG)** has emerged as a key framework for connecting AI models with an organization's proprietary knowledge.

About Retrieval-Augmented Generation (RAG)



Source: Google Cloud

- It is a technique that **makes AI more accurate by allowing it to search your organization's own documents** before answering a question.
- **Features:**
 - Instead of relying only on what the AI learned during training, RAG:
 - **Searches relevant documents from a private knowledge base.**
 - **Uses those documents to generate an answer.**
 - **Shows the source of the information, making answers more trustworthy.**
- **How Does it Work:** It works in **two phases**:

- **Phase 1: Build the Knowledge Base (Done Once)**
 - Company documents (reports, interview transcripts, policy manuals, legal documents, support tickets, etc.) are collected.
 - These documents are divided into smaller meaningful sections called **chunks**.
 - Each chunk is converted into a numerical representation called an **embedding vector**, which captures its meaning rather than just the words used.
 - All these vectors are stored in a **vector database**.
- **Phase 2: Answer User Questions (Every Time):**
 - **When a user asks a question**, the question is also **converted into an embedding vector**.
 - The system searches the vector database for the most similar information based on **meaning**, not exact keywords.
 - The relevant document sections are sent to the AI.
 - The AI generates an answer using only those **retrieved** documents.
 - It also cites the source documents and may provide a confidence score.

- **Application:**

Field of Application	Description
Banking and Financial Services	In banking and financial services, compliance officers query internal policy libraries to find applicable rules instantly, reducing manual effort and compliance risk.
Healthcare	In healthcare, clinical teams retrieve patient notes and treatment protocols without exposing sensitive data to external AI providers.
Legal Services	In legal services, associates find relevant precedents from a firm's entire case history by describing the legal situation in plain English, not by searching case names.
Manufacturing	In manufacturing, engineers query thousands of pages of equipment manuals to diagnose failures and retrieve repair procedures in real time.

DAANVEER Initiative

News: DAANVEER initiative was launched to strengthen the digital infrastructure of Gram Panchayats across the country.

About DAANVEER Initiative



Figure 5. Source – MoPR

- **DAANVEER** is a **citizen participation initiative** launched to **strengthen the digital infrastructure of Gram Panchayats across India.**
- **Nodal Ministry:** The **Ministry of Panchayati Raj** is the nodal ministry responsible for implementing the initiative.
- **Developed by:** It has been developed in collaboration with the **National Informatics Centre ; (NIC)** and **DigiHaat.**
- **Integrated with:** It is integrated with platforms such as **e-GramSwaraj, Meri Panchayat, Sabha Saar, AuditOnline, Gram Manchitra,** and other digital governance applications.
- **Aim:** The initiative aims to **bridge the digital infrastructure gap in Gram Panchayats and create a long-term, citizen-powered ecosystem** for strengthening local institutions.
- **Tagline:** It is a completely voluntary initiative that operates under the tagline **“Give Back to Your Village.”**
- **Features:**
 - It **provides a transparent, end-to-end, and digitally verifiable platform** through which citizens and organizations can contribute to the technology and infrastructure needs of Gram Panchayats.
 - The **platform incorporates verified institutional requirements, standardized contribution options, direct delivery, and end-to-end digital tracking** to ensure accountability and transparency.
 - It **establishes a credible and standardized mechanism** that enables citizens to participate in strengthening public institutions.
 - It **enables citizens across India and the world** to contribute meaningfully to the development of their native villages.
- **Contribution Mechanism**
 - The initiative is available through the [Meri Panchayat mobile application](#).
 - It enables **individuals and organizations to contribute standardized, quality-verified computer bundles** directly to eligible Gram Panchayats.

BIMCO-ICS Seafarer Workforce Report 2026

News: India has emerged as the world's second-largest supplier of seafarers, according to the BIMCO-ICS Seafarer Workforce Report 2026.

About BIMCO-ICS Seafarer Workforce Report 2026

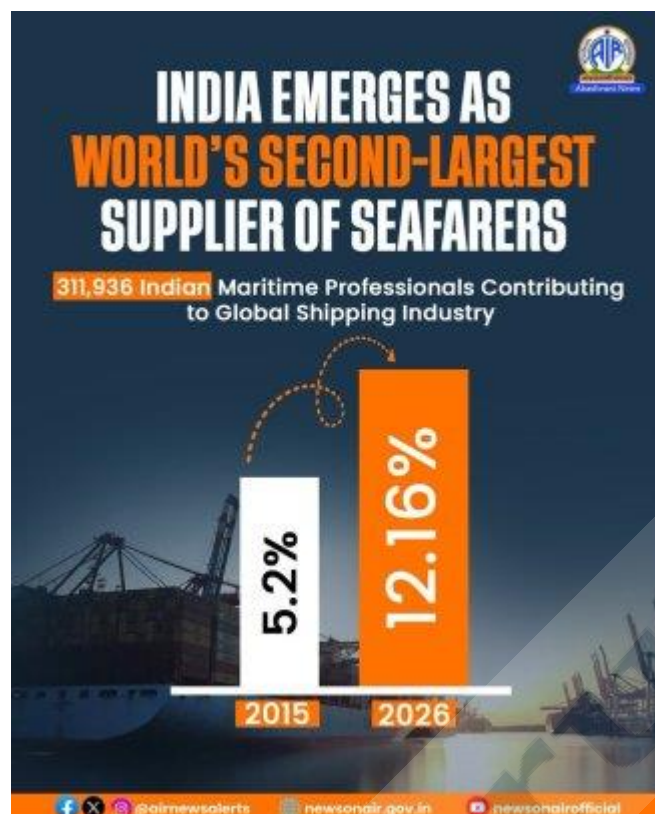


Figure 6. Source: News On Air

- **Findings of the report:**

- **Estimated Global Seafarer Supply:** The global supply of seafarers in 2026 is estimated at 2,565,580 seafarers, of which 1,048,980 are officers and 1,516,600 are ratings.
- **Seafarer Workforce Gender Diversity:** The number of female seafarers has increased, mainly in officer positions.
- **Seafarer Workforce Age Profiles:** The average age of management-level officers has slightly decreased since 2021. Most operational-level officers and support-level ratings are now in the 31–40 years age group.
- **Estimated Global Seafarer Demand:** The global demand for International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) -certified seafarers in 2026 is estimated to stand at 2,547,790. There is a demand for approximately 1,088,080 officers and 1,459,710 ratings.

- **Findings related to India:**

- It is regarded as the most comprehensive assessment of global supply of and demand for seafarers.

- **Published by:** It is jointly published by BIMCO and the International Chamber of Shipping (ICS).

- **Frequency:** It is published in every five years.

- **First edition:** The first edition of the report was published in 1990.

- The report provides:

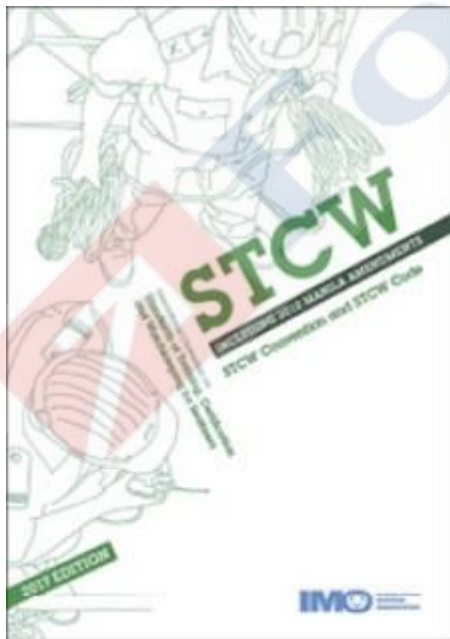
- **Assessment of global seafarer supply and demand** for the international merchant fleet.

- **Analysis of workforce demographics**, including nationality, rank, age, and gender.

- **Forecast of merchant fleet growth** and its implications for future seafarer workforce requirements.

- India has emerged as the **world's second-largest supplier of seafarers**, contributing **311,936 maritime professionals** to the global shipping industry.
- India now accounts for **12.16% of the global seafaring workforce**, ranking **second globally**, behind the **Philippines** and ahead of **China, the Russian Federation, and Indonesia**.
- India has a strong presence in the **officer cadre**:
 - **140,718 officers**, accounting for **13.41%** of the world's officer workforce.
 - **171,218 ratings**, representing **11.29%** of the global ratings serving aboard merchant vessels.
 - Overall, Indian seafarers constitute one of the **largest and most skilled maritime workforces** supporting global trade.
- The report highlights an **increasingly tight global labour market** and a **continuing shortage of qualified officers worldwide**, positioning **India as a critical partner** in meeting the shipping industry's future manpower requirements.
- **Recommendations:** It is essential that:
 - **Maritime education and training and careers at sea are promoted** with information on transitioning to shore-based roles; and
 - **Levels of seafarer recruitment and retention are regularly and closely monitored** by maritime **administrations** to inform the industry and policymakers of the global supply and demand situation of the seafarer workforce.

About International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)



- The convention was adopted in 1978 by a conference at the **International Maritime Organization(IMO)** in London and entered into force in 1984.
- The convention was the **first to establish minimum basic requirements for training, certification and watchkeeping for seafarers** on an international level.
- The Convention prescribes minimum standards relating to training, certification and watchkeeping for seafarers which countries are obliged to meet or exceed.
- One **important feature of the Convention** is that it applies to ships of non-party States when visiting ports of States which are Parties to the Convention.

- The **Manila amendments** to the STCW Convention and Code were adopted in 2010 marking a major revision of the STCW Convention and Code.

Figure 7. Source: International Maritime Organization

Kalpasar Project

News: During his Netherlands visit, PM Narendra Modi visited the Afsluitdijk dam, and India signed an LoI with the Netherlands for technical cooperation on the Kalpasar Project.

About Kalpasar Project



Figure 8. Source: TOI

- It is a **multipurpose initiative** aimed at **providing water for irrigation and industrial and domestic use in the water-stressed Saurashtra region of Gujarat.**
- It envisages the **creation of one of the world's largest coastal freshwater reservoirs** through the construction of a dam across the Gulf of Khambhat.
- **Initiative by:** It is an ambitious water resources **initiatives of the Government of Gujarat.**
 - **Assisted by:** The **Netherlands** is collaborating with India by providing **technical expertise and engineering**

support for the Kalpasar Project.

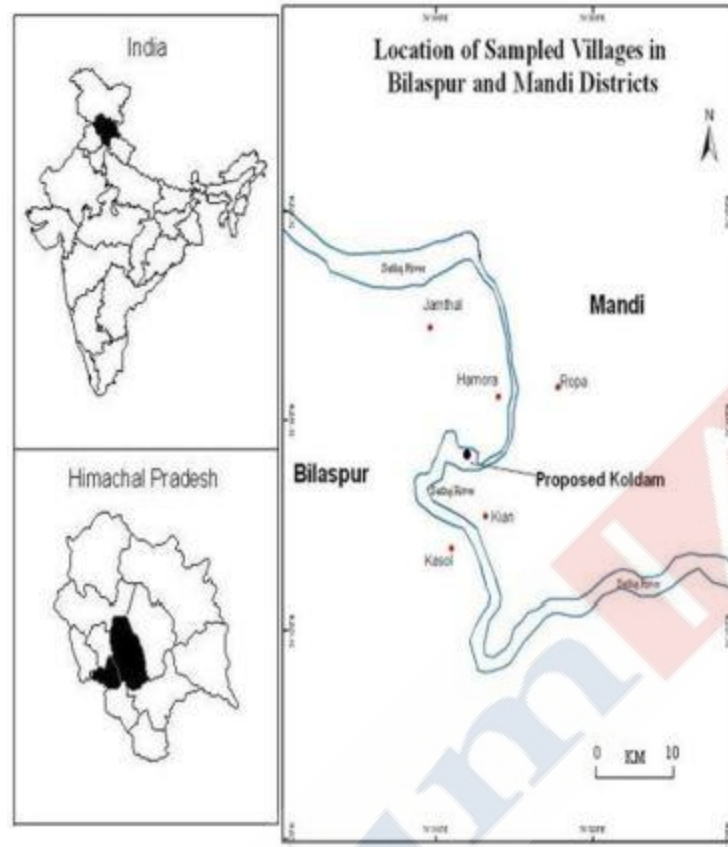
- **Features of the project:**
 - The project includes the **construction of a 60.13 km long dam across the Gulf, from Aladar (eastern side) to near Bhavnagar (western side).**
 - Out of which about **26.7 km length will be in the Gulf (sea portion), and 33.43 km length is extended on both flanks up to the nearest road across the Gulf of Khambhat.**
 - It includes a **proposed highway-cum-rail corridor** over the dam across the Gulf of Khambhat.
 - As per the present project layout, the corridor is expected **to reduce the travel distance between Bhavnagar and Surat by approximately 179 km, from about 356 km through the existing land route to about 177 km via the proposed dyke corridor, thereby improving regional connectivity and reducing travel time.**

- The project envisages **development of approximately 2,470 MW of hybrid renewable energy capacity** on reclaimed land that is presently submerged during high tide.
 - The renewable energy **generated is proposed to be utilized for pumping freshwater to meet irrigation requirements in the coastal regions of Saurashtra.**
- This reservoir will receive water from **four major rivers – Sabarmati, Mahi, Dhadhar and Narmada** – and **seven minor rivers – Wadhwan Bhogavo, Limbdi Bhogavo, Sukhbhadar, Utavli, Keri, Ghelo, and Kalubhar.**
 - For this, a **diversion canal is planned at the Bhadbhut barrage on the Narmada River** to divert its additional water into the reservoir.
- **Benefits:**
 - **Environmental benefits:** The project is expected **to improve groundwater conditions, protect tidal-affected areas,** reduce coastal salinity, and reclaim approximately **1.76 lakh hectares** of land.
 - **Renewable energy:** Kalpasar has the **potential to generate 1,000 MW of solar power and 1,500 MW of wind power,** helping meet the project's energy requirements.
 - **Livelihoods:** The freshwater reservoir is expected to **replace marine fisheries with freshwater fisheries,** increasing annual fish production from **2,000 tons** in the initial stages to **20,000 tons** at full development.
 - **Transport & connectivity:** It includes plans for a **flood regulator, a 16-lane roadway,** and a **4-lane rail corridor,** reducing the travel distance across the Gulf from **240 km to 60 km.**

Koldam Hydro Power Project

News: The Koldam NTPC Hydroelectric Project generated over 3512 million units of power in 2025-26, the highest ever since the project was commissioned.

About Koldam Hydro Power Project



Source – ResearchGate

- The **Koldam Hydro Power Project** is an **800 MW** hydroelectric station located in the **Bilaspur and Mandi districts of Himachal Pradesh, India**.
- **River associated:** It is built on the **Satluj River**.
- **Owned by:** It is developed and owned by **NTPC Limited**.
- **Dam Type:** It is a **163-meter-high rock and gravel fill dam** with a clay core.
- **Beneficiary Regions:** Supplies power to northern states including **Himachal Pradesh, Punjab, Haryana, Rajasthan, Delhi, and Uttar Pradesh**.

Rusty-spotted Cat (*Prionailurus rubiginosus*)

News: Scientists at the Wildlife Institute of India (WII) have reported two roadkill incidents of the rusty-spotted cat (*Prionailurus rubiginosus*) at the [National Chambal Sanctuary](#) in Etawah, Uttar Pradesh.

About Rusty-spotted Cat (*Prionailurus rubiginosus*)



Source: One Earth

- It is widely **recognised as the world's smallest wild cat species.**
- **Scientific name:** Its scientific name is **Prionailurus rubiginosus.**
- **Habitat:** It inhabits **moist and dry forests, tropical thorn forests, scrub forests, grasslands and rocky areas.**
- **Distribution:** It is native to **India, Nepal, and Sri Lanka.**
- **Characteristics:**
 - **Appearance:**
 - Its coat is **short and soft.** It is fawn-grey coloured with a rufous tinge and is patterned.
 - There are **horizontal bars on the legs and chest.**
 - Its **head is rounded**, and the relatively **large eyes** are marked with a **white streak along the inside edge.**
 - Each **cheek is marked with two dark streaks** and **four dark stripes extend from above the eyes backward over the head to the neck.**
 - The **back and sides are marked with red-brown blotches** which merge into lines.
 - The **belly, chest and throat are white** and **covered with large dark spots and bars.**
 - The **ears are rounded and small.**
 - Its **tail is about half the length of the head and body**, more rufous than the body and faintly marked with dark rings. The **soles of the feet are black.**

- **Size:** It is roughly half the size of a domestic cat, **measuring just 38-45 cm in body length.**
- **Weight:** It weighs **between 1 and 2 kg.**
- **Diet:** It is a **carnivore that mainly feeds on rodents and birds.** It also eats frogs, insects, and lizards.
- **Behaviour:** It is primarily **nocturnal and extremely shy.** It is also a **secretive hunter.**
- **Threat:** **Habitat loss and fragmentation** are the primary threats to the rusty-spotted cat.
- **Conservation status:**
 - **IUCN:** It is listed as **Near Threatened.**
 - **CITES:** It is listed under **Appendix I.**

Bhavani River

News: Large stretches of the Bhavani River near Kooduthurai have been overrun by water hyacinth, raising concerns over irrigation and the river's ecosystem.

About Bhavani River

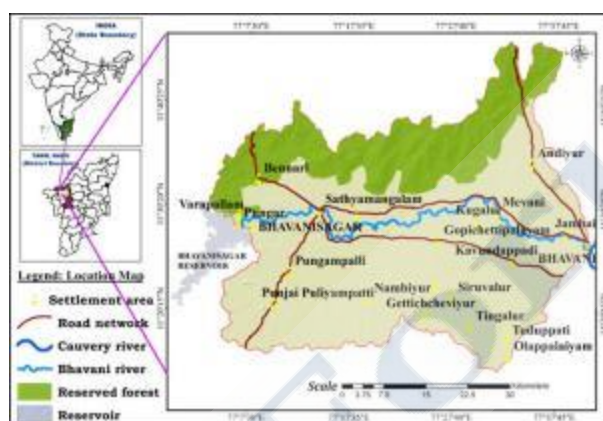


Figure 9. Source: Research Gate

- It is the **second largest and perennial river in Tamil Nadu.**
- **Origin of river:** It originates from Nilgiri hills of the Western Ghats in Tamil Nadu.
- **Course of the river:** From western ghat, it flows **through Kerala**, passing through **Silent Valley National Park.**
 - After traversing Kerala, it re-enters Tamil Nadu and **finally joins the Cauvery River at Bhavani**, near the **Bhavanisangameswarar Temple.**
- **Drainage area:** Its watershed drains an area of **6,200 sq. km** spread over **Tamil Nadu, Kerala and Karnataka.**
- **Tributaries:** Its major tributaries are the **West Varagar and East Varagar rivers**, both of which originate in the Nilgiri Hills.
- **Tributary of:** It is a tributary of **Kaveri /Cauvery River.**
- **Dams:** The two dams situated on the River are **Bhavanisagar Dam and Kodiveri Dam.**

Shaheed Udham Singh

News: The Prime Minister Shri Narendra Modi paid heartfelt tributes to the great revolutionary martyr Udham Singh on his Balidan Diwas.

About Shaheed Udham Singh

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- **Shaheed Udham Singh played a significant role in the history of the Indian freedom movement.**
- He is also known by various other names such as **Sher Singh, Ude Singh, Ram Mohammad Singh Azad and Frank Brazil, Ram Mohammad Singh Azad** symbolizing the unification of the three major religions of India: Hinduism, Islam and Sikhism.
- **Birth:** He was born on **26 December 1899** in a **Sikh family at Sunam village in Sangrur district of Punjab.**
- **Early life:** Orphaned at a young age, he was raised at the Central Khalsa Orphanage in Amritsar, where he was given the name **Udham Singh.**
 - From a young age, he worked as a labourer to earn a living, including in **Mesopotamia during World War I and on Uganda's railways**, where he came into contact with members of the Ghadar Party.
- He later travelled to the **United States**, assisted **Punjabi migrants**, and established the **Azad Party in Chicago** as an **offshoot of the Ghadar party.**
- **Revolutionary activities:**
 - He witnessed the **Jallianwala Bagh massacre in 1919.** He was **deeply impacted** by this incident and **took a revolutionary path.**
 - In **1924**, he joined the **Ghadar Party** and was also associated with the **Hindustan Socialist Republican Association (HSRA).**
 - In **1927**, he was arrested under Arms act and sentenced to **five years' imprisonment.**
 - While in prison, **he continued to spread revolutionary ideas** among fellow inmates. As punishment, the British frequently flogged him and transferred him between jails.
 - During his imprisonment at **Mianwali Jail** (now in Punjab, Pakistan), he came into contact with **Bhagat Singh**, who had a profound influence on his revolutionary outlook.
 - On **14 March 1940**, he assassinated **Michael O'Dwyer**, the former Lieutenant Governor of Punjab, at **Caxton Hall, London**, in retaliation for the Jallianwala Bagh massacre.
 - During his trial, he adopted the name **"Ram Mohammad Singh Azad"** to symbolize India's religious unity.
- **Execution and death:** He was executed by hanging at **Pentonville Prison, London**, on **31 July 1940.**
 - His ashes were repatriated to India in **1974** and are preserved at the **Jallianwala Bagh Memorial.**
- **Legacy:** He is remembered as **"Shaheed-i-Azam" (Great Martyr)** for his courage and sacrifice in India's struggle against British colonial rule.
 - **Every year on December 26, his birth anniversary is celebrated.**

India's First Protection and Indemnity (P&I) Insurance Product

News: The Department of Financial Services (DFS) has launched India's first sovereign-backed Protection and Indemnity insurance product under Bharat Maritime Insurance Pool (BMIP).

About India's First Protection and Indemnity (P&I) Insurance Product



Source – CNBC

- **India's first sovereign-backed Protection & Indemnity (P&I) insurance product** has been launched **to provide domestic P&I cover** for **Indian ships and vessels** connected with Indian trade.
- It is launched under the **Bharat Maritime Insurance Pool (BMIP)**.
- **Launched by:** Department of Financial Services (DFS), Ministry of Finance
- It is designed by the **New India Assurance Company Limited**.
- It is **third-party liability insurance** for **shipowners**.
 - Unlike **Hull & Machinery Insurance**, which covers **damage to the ship** itself, **P&I insurance covers the shipowner's legal liabilities** to third parties.
- It covers **liabilities such as –**
 - Injury, illness or death of crew, passengers and others.
 - Collision liabilities.
 - Oil pollution and environmental damage.
 - Wreck removal.
 - Cargo-related liabilities.
 - Legal expenses arising from maritime claims.

About Bharat Maritime Insurance Pool (BMIP)



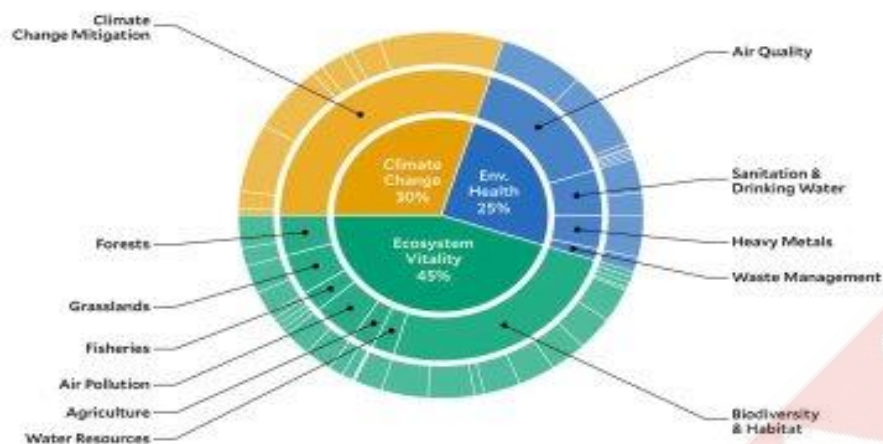
Source – Ministry of Shipping

- The **Bharat Maritime Insurance Pool (BMIP)** is India's first sovereign-backed domestic maritime insurance pool with a sovereign guarantee of Rs.12,980 crores.
- **Nodal Ministry:** It was launched by the Ministry of Ports, Shipping and Waterways (MoPSW).
- **Aim:** It aims to strengthen India's maritime insurance ecosystem and reduce dependence on foreign insurers and Protection & Indemnity (P&I) Clubs.
- It seeks to enhance the resilience of India's shipping sector, particularly during geopolitical conflicts, sanctions, or disruptions in the global insurance market.
- **Features**
 - The pool would cover all maritime risks like Hull and Machinery, Cargo, P&I and War risk.
 - The policies will be issued by insurers that are Pool members, using the combined underwriting capacity of the Pool, which would be around Rs.950 crore.
 - The Pool will help to manage liability insurance locally, tailored to Indian Shipping conditions and regulatory requirements, develop specialized Marine underwriting, claims management and legal expertise within India.

Environmental Performance Index

News: India's position in Yale University's Global Environmental Performance Index (EPI) 2026 has been labeled by experts as a stark warning that demands immediate attention.

About Environmental Performance Index



Source: Environmental Performance Index (EPI)

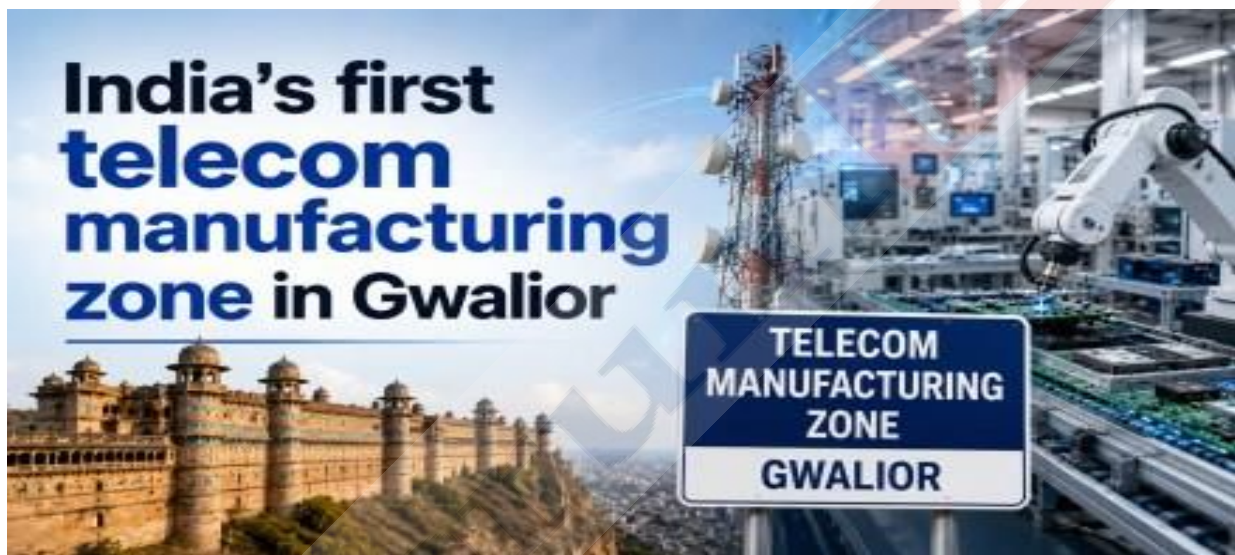
- It is a **data-driven global benchmark** which provides a comprehensive assessment of sustainability worldwide.
- **Developed by:** It is developed by the **Yale Center for Environmental Law & Policy**, **Columbia University's Center for International Earth Science Information Network (CIESIN)** and **Yale Center for Geospatial Solutions**, Yale University with support from the **McCall MacBain Foundation**.
- **First edition:** It is a **biennial index**, first started in **2002** and was earlier known as the **Environmental Sustainability Index (ESI)** which began in 2002.
- **Importance**
 - It provides policymakers with an objective scorecard to **track sustainability progress, identify ecological vulnerabilities, and refine environmental policy.**
 - It serves as a **vital analytical tool for measuring how close nations are to achieving global sustainability targets.**
- **Environmental Performance Index (EPI) 2026:**
 - The 2026 EPI ranks **177 countries** on **47 indicators** across **12 issue categories** spanning **three policy objectives**:
 - Environmental Health
 - Ecosystem Vitality
 - Climate Change
- **Global highlights of 2026 Index:**
 - **Five European countries** ranked in the **top five this year in the EPI (2026).**
 - **Estonia** claimed the top spot with an **overall score of 74.79.**
 - Following behind, **Luxembourg, United Kingdom, and Finland** were positioned at **second, third and fourth position** respectively.
 - **Netherlands** secured the **fifth position.**
 - **Germany, France, and Norway** took the **sixth, seventh and eight positions.**
 - **Sweden** ranked **ninth** and **Austria** ranked **tenth.**

- **India's status:**
 - India ranked second from the bottom, taking the **176th position** out of 177 evaluated countries.
 - India's overall EPI score came out to **22.46**, compared to a regional average of 31.81.
 - Tree cover loss in key biodiversity areas recorded a **score of -3.92**.

Telecom Manufacturing Zone

News: Department of Telecommunications Signs MoU with Government of Madhya Pradesh for Establishment of Telecom Manufacturing Zone (TMZ) in Gwalior.

About Telecom Manufacturing Zone



Source: Zee Business

- **Location:** The Department of Telecommunications (DoT) and the Government of Madhya Pradesh signed a Memorandum of Understanding (MoU) to establish India's first integrated Telecom Manufacturing Zone (TMZ) in Gwalior, Madhya Pradesh.
- **About:** It is envisaged as a 350-acre integrated plug-and-play industrial cluster that will provide world-class infrastructure for telecom and electronics manufacturing, research and development (R&D), innovation, and allied activities.
- **Objective:** The project aims to strengthen India's domestic telecom manufacturing ecosystem, promote Aatmanirbhar Bharat, and position Gwalior as a major telecom and technology hub.
 - The initiative will complement the India Semiconductor Mission (ISM), Electronics Components Manufacturing Scheme (ECMS), and Telecom Technology Development Fund (TTDF).

- **Industry Participation:** Leading companies, including **Dixon Technologies, HFCL, Tejas Networks, VVDN, and Syrma SGS**, are among the industry players expected to anchor the proposed zone.
- **Governance:** A **Special Purpose Vehicle (SPV)** will be established to implement the project, with **51% equity held by the Government of Madhya Pradesh** and **49% by the Department of Telecommunications**.
- **Budgetary allocation:**
 - **Central Government Support:** The **Central Government** will provide **100% funding for Phase-I**, with an allocation of **₹493 crore** for the development of core infrastructure.
 - **State Government Support:** The **Government of Madhya Pradesh** has provided approximately **170 acres of land free of cost**, including **100 acres in the SADA region** and **70 acres in the Gwalior IT Park**, with a combined value of around **₹596 crore**.
 - Additional land will be made available at a **nominal premium of ₹1** and an annual lease rent of **₹1 per square metre for 30 years**.
- **Features:**
 - The Telecom Manufacturing Zone will integrate the **entire telecom value chain**, covering **mobile devices, optical fibre, advanced semiconductor technologies, and next-generation 5G/6G research and development**.
 - It will also house **dedicated R&D centres, common testing laboratories, and certification facilities**.
 - **Incentives:** Units established in the Telecom Manufacturing Zone will receive **reimbursement of stamp duty and registration charges, power tariff rebates, and other fiscal incentives**.
 - The policy also provides a **50% capital subsidy on Eligible Fixed Capital Investment (EFCI)** (up to **₹200 crore**), **employment generation assistance of ₹5,000 per employee per month for five years**, and **skill development support of up to ₹13,000 per new employee**.
 - **R&D and Export Promotion:** Eligible units will be provided **50% freight subsidy** for exports, financial support for **standalone R&D units**, and **100% reimbursement** of expenses incurred for filing **patents, copyrights, and trademarks**, within prescribed limits.
- **Expected Outcome:** It is expected to **reduce import dependence, promote exports, strengthen domestic supply chains, enhance telecom security, and establish India as a global hub for telecom manufacturing and innovation**.