

## DAILY CURRENT AFFAIRS (DCA)

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### Table of Content

India-Israel Bilateral Investment Agreement (BIA)  
BRICS Virtual Summit  
Need of Underwater Domain Awareness Amid Red Sea Cable Disruption  
Special Bulletin on Maternal Mortality in India 2021-23  
Aadhaar Should Be Treated as Valid Proof for SIR Exercise: Supreme Court  
Submarine Cables

### News in Short

GI Tag Push in Bodoland Territorial Region (BTR)  
International Earth Sciences Olympiad (IESO-2025)  
Universal Postal Union (UPU)  
Himachal Pradesh Becomes Fully Literate State  
Engineering Export Promotion Council (EEPC)  
Two-Factor Authentication (2FA)  
Ghost Bat Drone  
Hilsa Fish (*Tenualosa ilisha*)  
Great Indian Bustard (*Ardeotis Nigriceps*)

## INDIA-ISRAEL BILATERAL INVESTMENT AGREEMENT (BIA)

### Context

- India and Israel signed a **Bilateral Investment Agreement (BIA)**.

### About

- Israel has become the first OECD (Organisation for Economic Co-operation and Development) member state** to sign an investment pact under India's new model treaty framework.
  - The **BIA replaces** the earlier investment treaty signed in **1996**, which was terminated in **2017** as part of India's policy overhaul on such agreements.
  - The Agreement will increase **bilateral investments**, which presently stands at a total of **USD 800 million**.
- The new agreement provides protection for investors while promoting **cross-border investments in key sectors**: innovation, infrastructure development, financial regulation, and digital services.
- The signing of the Agreement **reflects both nations' shared commitment** towards **enhancing economic cooperation**.

### Organisation for Economic Co-operation and Development (OECD)

- It is an international organisation of **38 countries** committed to democracy and the market economy.
- Founded:** In 1961 (evolved from the OEEC – Organisation for European Economic Co-operation, 1948, which was created to administer the Marshall Plan after WWII).
- Headquarters:** Paris, France.
- Motto:** "Better Policies for Better Lives".
- Official Languages:** English and French.

### India and Israel Bilateral Relations & Evolving Ties

- Bilateral Relations:** India announced its recognition of Israel in **1950**. Regular embassies opened in **1992** when full diplomatic relations were established between the **two countries**.
  - In **2022-23**, the two countries jointly celebrated **30 years of the elevation of bilateral ties to full diplomatic ties**.
- Defense & Security:** Israel has been a **key supplier of advanced technology** from **AWACS (Airborne Warning and Control System)**

radars and drones to missile and surveillance systems making it one of **India's largest defense suppliers**.

- Bilateral Trade: India is Israel's 2nd trading partner in Asia** and the **7th largest** globally.
  - In FY 2023-24 and FY 2024-25 the bilateral trade (excluding defense) was US\$ 6.53 billion and US\$3.75 billion respectively.
- Investment:** During April 2000 – March 2024, Israel's direct FDI into India was U.S. \$334.2 million.
  - There are over 300 investments from Israel in India mainly in the **high-tech domain, agriculture and water**.
- Agriculture & Water Management:** In 1993, the first Agreement on Cooperation in Agriculture was signed.
  - 2006:** Comprehensive Work Plan on Agriculture launched (3-year cycles) – implemented through MASHAV (Israel's Agency for International Development Cooperation).
  - 2025:** Revised Agriculture Cooperation Agreement signed, expanding areas of partnership.
  - The **Indo-Israeli Centers of Excellence (CoE)** demonstrate Israeli expertise, technologies and innovation in the horticultural field.
- Science, Technology, Counter-Terrorism & Innovation:** India-Israel cooperation in Science & Technology (S&T) is overseen by the **Joint Committee on S&T**, established under the Agreement of Science & Technology cooperation signed in **1993**.
  - A **US\$ 40 million India-Israel Industrial R&D and Technological Innovation Fund (I4F)** for joint projects was also set up.
- Multilateral Cooperation:** Both are active members of the **I2U2 group** (India, Israel, USA, UAE), focusing on economic and space collaboration with projects like food parks and space-based environmental tools.

### Significance for India

- Defence & security:** Israel is a **reliable partner** for **critical technologies** for India and can be instrumental in India's Self Reliance and Make in India.
- Agriculture & water:** Israel is known for its **model of innovation, water conservation, and high-yield farming**, India can adopt these technologies with collaboration.
- Geopolitics:** It is an important strategic partner for India in West Asia that complements **India's Act West policy**.

### Way Ahead

- India–Israel ties are a **strategic partnership** spanning defence, agriculture, water, innovation, and trade.
- **Defence and agriculture** remain the strongest pillars, while cooperation is expanding into new domains like **food security, startups, and I2U2 multilateralism**.
- The Agreement marks a historic milestone in the relation of two countries.
  - ♦ The agreement is expected to **boost investments, provide greater certainty and protection for investors**.

Source: PIB

## BRICS VIRTUAL SUMMIT

### Context

- Recently, a **virtual BRICS Summit** was held against the backdrop of **increasing global concerns over U.S tariff tussle**.
  - ♦ The summit was called by **Brazil amid the 50% tariffs** imposed by the U.S on **both India and Brazil**.

### India's Stand During the Summit

- **India** strongly believes that the international trading system's **foundational principles of non-discriminatory and rules-based norms** must be protected and that there is a need to **create more resilient and reliable supply chains**.
- **Constructive and cooperative approaches** are needed by the world to promote sustainable trade.

### About BRICS

- **BRICS** is an acronym that refers to a group of **five major emerging national economies: Brazil, Russia, India, China, and South Africa**.
  - ♦ **Egypt, Ethiopia, Iran, Indonesia, Saudi Arabia, and the United Arab Emirates** have joined BRICS as new full members.
- The **term BRIC** was originally coined by economist **Jim O'Neill in 2001**.
- **Origin:** As a formal grouping, BRIC started after the meeting of the Leaders of Russia, India and China in St. Petersburg on the margins of the **G8 Outreach Summit in 2006**.
  - ♦ The grouping was formalized during the 1st meeting of BRIC Foreign Ministers on the margins of **UNGA in New York in 2006**.
  - ♦ Initially, the grouping was termed BRIC as **South Africa was inducted in 2010** and from there on it has been referred to as **BRICS**.

- **Summits:** The grouping have met annually at formal summits **since 2009**.
  - ♦ Each country takes a **one-year chairmanship** to set priorities and host a summit. The bloc relies on **consensus-based decision-making**.
- **BRICS** brings around **49.5 % of the global population**, around **40% of the global GDP** and **around 26% of global trade**.
- BRICS countries have come together to deliberate on important issues under the **three pillars of:**
  - ♦ political and security,
  - ♦ economic and financial and
  - ♦ cultural and people-to-people exchanges.
- **New Development Bank:** Formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the BRICS states.
  - ♦ The Bank shall support public or private projects through loans, guarantees, equity participation and other financial instruments.

### Increasing Relevance of BRICS

- **Alternative to Western Blocs:** BRICS countries seek to build an alternative to the dominance of the Western viewpoint in major multilateral groupings, such as the World Bank, the Group of Seven (G7), and the UN Security Council.
- **Represents growing economic and demographic heft:** The eleven BRICS countries now comprise more than a quarter of the global economy and almost half of the world's population.
  - ♦ The group is poised to exert influence over the wars in the Gaza Strip and Ukraine.
- **Advocate for Greater Global Representation:** BRICS seeks to establish a united front of emerging economy perspectives in multilateral institutions.
  - ♦ The group aims both to push for reform of existing institutions, such as expanding the UN Security Council, and to form negotiating blocs within those institutions.
- **Coordinate Economic Policy:** The 2008 global recession hit the BRICS countries hard, leading the group to emphasize economic coordination on issues such as tariff policy, export restrictions of critical resources, and investment.
- **Reduce reliance on the U.S. dollar:** BRICS leaders have long advocated for de-dollarization in favor of increased trade in local currencies or even a potential common BRICS currency.
- **Create an Alternative Finance System:** The group's New Development Bank (NDB) and Contingent Reserve Arrangement (CRA) are



meant to be an alternative lending institution that can strengthen South-South cooperation and reduce dependence on traditional funding sources.

### Significance of BRICS for India

- **Platform for Strategic Autonomy:** BRICS offers India a non-Western multilateral platform to engage with global powers without aligning exclusively with any bloc.
- **Enhanced Global Influence through a Larger Bloc:** With BRICS now representing almost half the world's population and including key oil producers, India benefits from being part of a more influential economic and political grouping.
- **Championing Global South:** India positions itself as a leading voice of the Global South within BRICS.
  - ♦ BRICS' claim as a representative of developing countries, aligning with India's push for a more equitable world order.
- **Strategic Engagement with the Middle East:** Inclusion of Saudi Arabia, Iran, UAE, and Egypt provides India with new diplomatic and economic avenues in the Middle East, a region vital for: Energy security, Diaspora welfare and Maritime security and investment cooperation.
- **Push for Multilateral Reform:** A larger BRICS enhances the push for UNSC reform, where India seeks a permanent seat.
- **Counterbalance to China's Dominance:** A broader membership may dilute China's dominance within BRICS.
  - ♦ India can build coalitions with new members to promote balanced agendas and prevent unilateralism.

### Challenges

- **Internal Geopolitical Tensions:** India-China border disputes strain bilateral trust.
- **Asymmetry in Power and Influence:** China's economic dominance creates imbalance in decision-making.
- **Lack of Cohesive Vision:** BRICS lacks a unified ideology or strategic coherence beyond broad themes like multilateralism and development.
  - ♦ Members pursue divergent national interests, limiting collective action.
- **Institutional Limitations:** BRICS has no permanent secretariat, making coordination ad hoc and dependent on rotating presidencies.
  - ♦ Limited enforcement mechanisms reduce implementation of summit declarations and commitments.

- **Economic Disparities:** Members are at different stages of economic development and face unique challenges, it creates difficulty in setting common economic goals or trade policies.
- **Expansion-related Challenges:** The inclusion of new members adds diversity but also increases coordination complexity and risks diluting the original focus.

### Way Ahead

- **Deepen Intra-BRICS Economic Integration:** Simplify trade logistics among member states to offset disruptions from external protectionism.
- **Explore regional payment mechanisms** as alternatives to SWIFT ((Society for Worldwide Interbank Financial Telecommunication), as advocated in earlier summits.
- **Diversify Trade Partnerships:** Develop alternate markets and supply chains—particularly within the Global South—to reduce economic dependency on the U.S.
  - ♦ Prioritize South-South cooperation across sectors like energy, technology, and agriculture.

Source: IE

## NEED OF UNDERWATER DOMAIN AWARENESS AMID RED SEA CABLE DISRUPTION

### Context

- Recent **disruptions in submarine communication cables in the Red Sea**, highlights India's urgent need to **strengthen its Underwater Domain Awareness (UDA)**, the ability to monitor, detect, and assess activities beneath oceans and seas.

### Why is UDA Critical for India?

- **National Security and Regional Stability:** China's "**Underwater Great Wall**" project, involving seabed sensors and unmanned vehicles, has enhanced surveillance in the Indo-Pacific.
  - ♦ The growing Chinese submarine presence in the Indian Ocean threatens India's security calculus.
- **Protection of Critical Infrastructure:** Submarine fibre-optic cables carry most of India's international data, including financial transactions, cloud services, and defence communications.
  - ♦ These cables are vulnerable to sabotage, accidents, and natural disasters.

- **Maritime Strategy:** India's **11098.81 km coastline, 1,382 islands, and 2.37 million sq. km EEZ** demand advanced underwater surveillance.
  - ♦ UDA is vital to securing sea lanes, chokepoints, and littoral zones.
- **Economic Security:** India's **Blue Economy targets**, offshore energy, seabed mining, undersea pipelines, require protection against both natural and man-made disruptions.

#### India's Undersea Cable Technological Deficiencies

- **India lacks defined legal mechanisms to safeguard undersea cables** within its territorial waters and Exclusive Economic Zone (EEZ).
  - ♦ Unlike countries like **Australia**, which has "**Cable Protection Zones**" regulated under UNCLOS, India has yet to designate similar zones, leaving its cables vulnerable to both accidental and malicious damage.
- **Operational Readiness:** India lacks indigenous cable repair ships and relies on foreign vessels for maintenance. This absence significantly delays restoration following cable damage.
- **Monitoring Shortfall:** There is minimal undersea infrastructure for **real-time surveillance** of subsea cable networks, which further risks timely detection and response to disruptions.

#### Initiatives taken by India

- **Advancing Deep Ocean Mission (DOM):** India's **₹4,077-crore DOM** is fast progressing with the Samudrayaan Project.
  - ♦ The indigenously built **Matsya-6000 submersible**, capable of reaching **6,000 metres**, is slated for a 2027 crewed mission.
  - ♦ Recent trials of underwater hydrophones enabling communication up to **5.5 km depth** mark a leap in deep-sea engineering.
- **Leveraging Strategic Partnerships:** Collaboration with **Australia** on advanced towed-array acoustic systems and with the US under **Autonomous Systems Industry Alliance (ASIA)** on autonomous underwater technologies reflects India's focus on building robust undersea surveillance in the Indo-Pacific.
- **Indigenous Maritime Infrastructure:** The commissioning of **INS Nistar**, with 80% indigenous content, demonstrates how research, exploration, and defence needs are being met through Atmanirbhar Bharat.
- **Resource Security and Energy Exploration:** The launch of the **National Deep Water Exploration Mission (Samudra Manthan)** aligns economic and security interests by targeting offshore oil and gas reserves within India's vast EEZ.

#### Way Ahead

- **Establishing Indian-owned cable repair ships** and a dedicated subsea maintenance fleet would reduce dependence on foreign vessels. Investment in real-time acoustic and sensor grids can enable timely detection of disruptions.
- **Boost Technological Capabilities:** Fast-track development of indigenous Unmanned Underwater Vehicles (UUVs), Air Independent Propulsion (AIP) systems, and advanced sonar technologies to bridge capability gaps.
- **Adoption of AI-driven sonar data analytics**, satellite-linked sensors, and predictive modelling will strengthen real-time situational awareness across the Indian Ocean Region.

Source: ORF

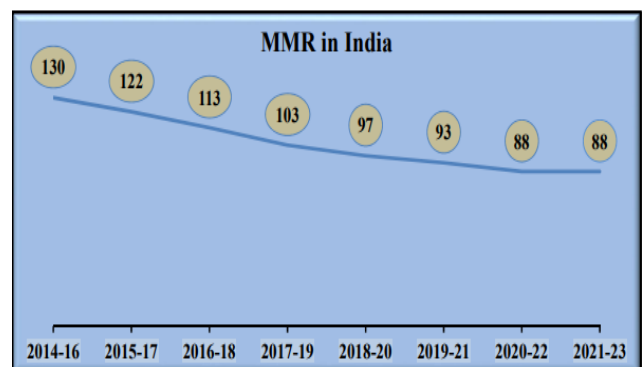
## SPECIAL BULLETIN ON MATERNAL MORTALITY IN INDIA 2021-23

#### Context

- The Government of India released the **Special Bulletin on Maternal Mortality in India 2021–23**, prepared by the Office of the Registrar General of India (ORGI), Ministry of Home Affairs under the **Sample Registration System (SRS)**.

#### About

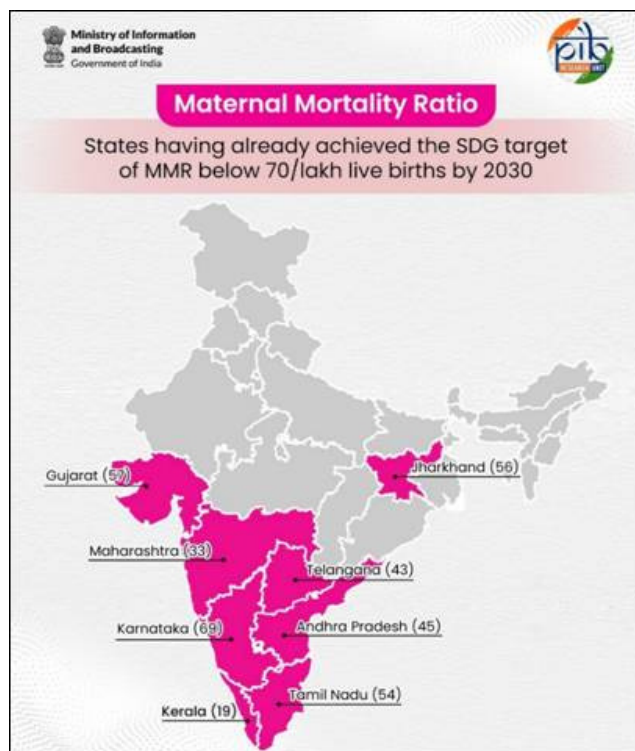
- The report shows a **Stable Maternal Mortality Ratio (MMR) of 88** per 1,00,000 live births for the period 2021–23.
- **Categorization of States:** States are categorized as "Empowered Action Group" (EAG), "Southern," and "Other" for analyzing regional trends.



#### What is Maternal Mortality?

- **Maternal death** is the death of a **woman while pregnant or within 42 days of termination of pregnancy**, irrespective of the duration and site of the pregnancy, from any cause related to or **aggravated by the pregnancy** or its management but not from accidental or incidental causes.
- **Maternal Mortality Ratio (MMR)** is the number of maternal deaths per **1,00,000** live births.

- **Maternal Mortality Rate:** This is calculated as maternal deaths to women in the ages **15-49 per lakh of women** in that age group, reported under SRS.
- The **Sustainable Development Goal (SDG) 3.1** targets reducing the global maternal mortality ratio to less than **70 per 1,00,000 live births** by **2030**.



### Government Initiatives to Reduce MMR

- **Janani Suraksha Yojana (JSY):** Launched in **2005** with the objective of reducing maternal and neonatal mortality, JSY promotes institutional delivery among pregnant women especially with weak socio-economic status.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY),** is a maternity benefit program run by the Ministry of Women and Child Development, Government of India.
  - ♦ The maternity benefit, of **Rs. 5000/-**, is available to a woman for the first living child of the family subject to fulfilment of conditionalities.
  - ♦ Further under '**Mission Shakti**', the scheme (PMMVY 2.0) provides additional cash incentive for the second child, **if that is a girl child**.
- **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA):** Launched in 2016, PMSMA provides pregnant women a fixed day, free of cost assured and quality Antenatal Care on the **9th day** of every month.

- **LaQshya:** Launched in 2017, LaQshya aims to improve the quality of care in labour room and maternity operation theatres to ensure the quality care during delivery and immediate post-partum.
- **Capacity building** is taken-up for MBBS doctors in **Anesthesia (LSAS) and Obstetric Care including C-section (EmOC)** skills to overcome the shortage of specialists in these disciplines, particularly in rural areas.
- **Maternal Death Surveillance Review (MDSR)** is implemented both at facilities and at the community level. The purpose is to take corrective action at appropriate levels and improve the quality of obstetric care.
- **Monthly Village Health, Sanitation and Nutrition Day (VHSND)** is an outreach activity for provision of maternal and child care including nutrition.
- **Reproductive and child health (RCH) portal** is a name-based web-enabled tracking of pregnant women and new-born to ensure provision of regular and complete services to them including antenatal care, institutional delivery and post-natal care.

### Innovations in Maternal Healthcare

- **Madhya Pradesh's 'Dastak Abhiyan':** A community-driven campaign that focuses on early detection of maternal health risks and ensures timely medical intervention.
- **Tamil Nadu's Emergency Obstetric Care Model:** A robust referral system that ensures pregnant women receive timely emergency care, reducing maternal complications.

### Challenges Still Faced in India

- **High Out-of-Pocket Expenses (OOPE):** Despite policy efforts, families often bear the cost of diagnostics, medicines, and private services during emergencies.
- **Sociocultural Barriers:** Gender dynamics, low education levels, restricted decision-making power among women, and stigma around maternal care all delay early care-seeking.
- **Rise in High-Risk Pregnancies:** Trends such as delayed childbirth, obesity, hypertension, diabetes, and short inter-pregnancy intervals contribute to riskier pregnancies.
- **Weak Infrastructure in Remote Areas:** Rural, tribal, and hilly regions lack emergency obstetric care, reliable transport, and blood storage facilities.

### Way Ahead

- India has made significant progress in reducing maternal mortality, successfully achieving the

National Health Policy (NHP) target of an MMR below 100 by 2020.

- However, continued efforts are required to reach the SDG target of MMR by 2030.
- Strengthening healthcare infrastructure, expanding maternal health programs, and addressing socioeconomic barriers will be critical in further reducing maternal mortality in the country.

Source: TH

## AADHAAR SHOULD BE TREATED AS VALID PROOF FOR SIR EXERCISE: SUPREME COURT

### Context

- Recently, the Supreme Court has directed the **Election Commission of India (ECI)** to accept **Aadhaar as a valid identity document** for the ongoing **Special Intensive Revision (SIR)** of electoral rolls in Bihar.

### Background: Bihar's Special Intensive Revision (SIR)

- It is a **de novo exercise** to update the electoral rolls in Bihar ahead of the upcoming Assembly elections.
- It involves house-to-house verification and requires voters to submit documentation proving their identity and citizenship.
- It is being carried out under **Section 21 of the Representation of the People Act, 1950 (RP Act)**, which authorises the EC to undertake special revisions at any time for reasons recorded in writing.

### Supreme Court's Observations

- The **Supreme Court's prima facie** view was that **Aadhaar, along with voter ID (EPIC) and ration card**, should be added to the existing list of 11 documents accepted for verification.
- It brings the **total to 12 documents**, offering greater flexibility to voters, **especially those enrolled after 2003** who need to establish their date and place of birth to confirm citizenship.
- However, it also noted that while Aadhaar has wide coverage and utility, it **does not establish citizenship**.

### About Aadhaar

- It was **launched in 2009** and later given **statutory backing** through the **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and**

**Services) Act, 2016, passed as a Money Bill in Parliament.**

- It empowered the **Unique Identification Authority of India (UIDAI)** under the Ministry of Electronics and Information Technology (MeitY) to issue **12-digit Aadhaar numbers** and regulate its use for authentication and service delivery.
  - It captures **biometric (fingerprints and iris scans)** and **demographic data** to create a **unique identity for each resident**.
- Aadhaar has been issued to **over 1.3 billion residents**, making it the world's largest biometric ID system, as of 2025.

### Supreme Court on Aadhaar

- **Right to Privacy Judgment (2017):** A **nine-judge bench** of the Supreme Court **unanimously ruled** that **privacy is a fundamental right under Article 21** of the Constitution.
  - It laid the groundwork for evaluating Aadhaar's constitutionality, especially regarding data protection and surveillance concerns, and **overturned earlier rulings** that denied privacy as a fundamental right.
- **Aadhaar Verdict (2018):** A **five-judge bench** upheld the constitutional validity of Aadhaar, but with significant caveats.
  - The Supreme Court of India **upheld**:
    - Aadhaar is valid for welfare schemes and subsidies.
    - The Aadhaar Act passed as a Money Bill was deemed constitutionally acceptable.
    - Aadhaar promotes good governance and empowers marginalized communities.
  - It struck down or limited the use of Aadhaar as a mandatory requirement for bank accounts, mobile SIM cards, and school admissions.
    - The national security exception in the Aadhaar Act was struck down.
    - **Aadhaar is not proof of citizenship or date of birth.**
  - It emphasized that Aadhaar collects minimal data, and UIDAI's architecture does not enable surveillance or profiling.

### Recent Developments and Clarifications

- The **Employees' Provident Fund Organisation (EPFO)** recently **removed Aadhaar** from its list of acceptable documents for verifying date of birth.
- The **Registrar General of India (RGI)** clarified that **Aadhaar is not mandatory for birth or death registration** under the **Registration of Births and Deaths Act, 1969**.



- Aadhaar continues to be **accepted voluntarily**, but with safeguards — such as **masking the first eight digits** when used in sensitive databases.

Source: IE

## SUBMARINE CABLES

### Context

- Undersea cable damage in the Red Sea has slowed internet access across several countries in Asia and the Middle East, including India.

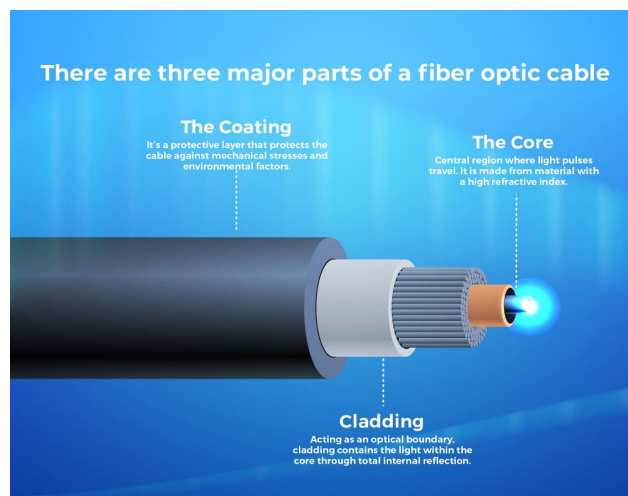
### What are Submarine Cables?

- **Definition:** Submarine cables are fiber optic cables laid on the ocean floor, connecting two or more landing points across countries and continents.
- **India's Role:** India is a significant player in the global submarine cable network, with 17 international cables and 14 landing stations in cities like Mumbai and Chennai.
  - ♦ As of the end of **2022**, the total lit capacity and activated capacity of these cables stood at **138.606 Tbps** and **111.111 Tbps**, respectively.
- **Significance:** Submarine cables form the backbone of the global digital economy, carrying over **99%** of international data exchange.
  - ♦ They support critical services like e-commerce, financial transactions, and global communications.

### What Is a Fiber Optic Cable?

- A fiber-optic cable is a type of networking cable that uses light to transmit data through thin strands of glass or plastic called optical fibers.
- Fiber-optic cables **transmit data** using pulses of light based on the **principle of total internal reflection**.
- **Main Elements of Fiber Optics:**
  - ♦ **The core:** Data signals are converted into light pulses and sent through the core, a thin glass or plastic strand at the center of the fiber.
  - ♦ **The cladding:** Surrounding the core is the cladding, another layer of glass with a lower refractive index. The **difference in refractive index causes the light to bounce repeatedly off the cladding** and stay contained within the core.
  - ♦ **Buffer Coating:** A plastic coating that protects the core and cladding from damage.
  - ♦ **The detector:** At the receiving end, a photodetector converts the light pulses back

into electrical signals that a computer or other device can understand.



### International Advisory Body for Submarine Cable Resilience

- **The International Telecommunication Union (ITU)** and the **International Cable Protection Committee (ICPC)** jointly launched the International Advisory Body for Submarine Cable Resilience.
  - ♦ This initiative aims to **strengthen the resilience of submarine cables**.
- The Advisory Body will also provide **strategic guidance** to address challenges related to **increasing traffic, aging infrastructure, and growing environmental threats** to submarine cables.

### International Cable Protection Committee (ICPC)

- ICPC, **founded in 1958**, is a global forum for governments and commercial entities involved in the submarine cable industry.
- **Its primary mission** is to enhance the security of undersea cables by providing a platform for exchanging technical, legal, and environmental information.

Source: D News

## NEWS IN SHORT

### GI TAG PUSH IN BODOLAND TERRITORIAL REGION (BTR)

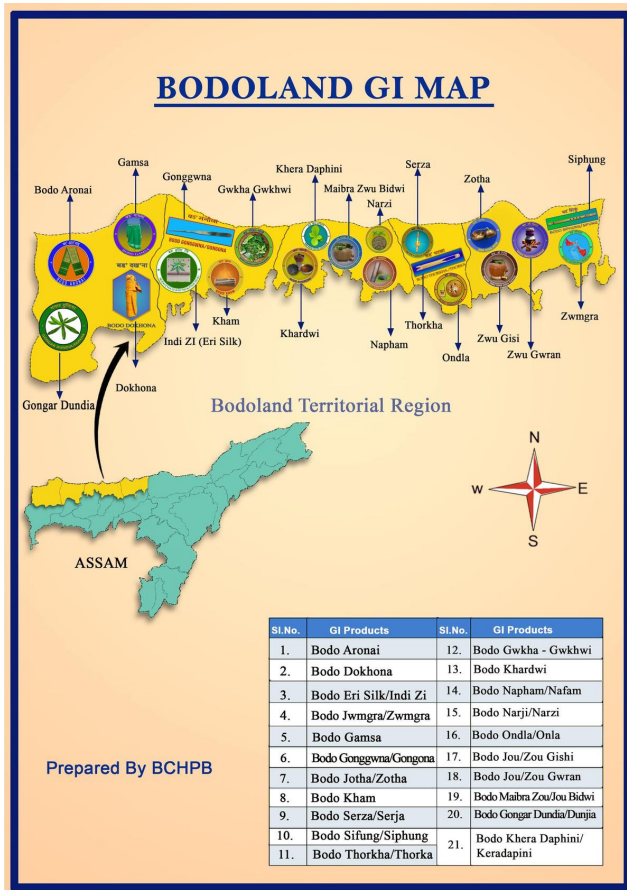
#### Context

- The Assam's Bodoland Territorial Region (BTR) government recently launched a special drive to work towards GI tag registration of cultural



artefacts belonging to all 26 communities of the region.

- This move follows the recognition of 21 Bodo indigenous items with GI tags.



### Geographical Indication (GI)

- A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- In order to function as a GI, a sign must identify a product as originating in a given place.
- Geographical indications are typically **used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.**

### GI Tags and India

- The **Geographical Indications of Goods (Registration and Protection) Act, 1999** seeks to provide for the registration and better protection of geographical indications relating to goods in India.
- The Act is administered by the **Controller General of Patents, Designs and TradeMarks**, who is the Registrar of Geographical Indications.
- The registration of a geographical indication is valid for a period of **10 years**.

Source: IE

## INTERNATIONAL EARTH SCIENCES OLYMPIAD (IESO-2025)

### Context

- The Minister for Earth Sciences felicitated student winners comprising the Indian team at **“International Earth Sciences Olympiad” (IESO-2025)** held in China.

### About

- **Team India secured a total of seven medals** – 1 Gold, 4 Silver and 2 Bronze – along with a **3rd Prize** in the International Geoscience Youth Movement (I-GYM) Reporter category.
- The Ministry supports **students for IESO every year** by conducting the **Indian National Earth Science Olympiad (INESO)** across 300 centres in India.

### International Earth Sciences Olympiad

- It was established in **2003** by the **International Geoscience Education Organization (IGEO)**.
  - ♦ It is one of the **twelve International Science Olympiads**.
- It is an **annual competition** for **secondary school students (Class IX–XII)** worldwide.
- **India** has been participating since **2007** and hosted the **10th edition at Mysore in 2013**.
- **Aim:** To enhance the level of **geoscience education worldwide and increase public awareness of Earth Sciences**.

### International Geoscience Education Organization (IGEO)

- **Nature:** A non-governmental, non-profit international organization established in **2000**.
- **Purpose:** Promotes geoscience education at all levels (schools, universities, and public education).
- **Membership:** Open to individual geoscience educators, institutions, and organizations worldwide.

Source: PIB

## UNIVERSAL POSTAL UNION (UPU)

### In News

- The 28th Universal Postal Congress, the supreme decision-making body of the Universal Postal Union (UPU), opened in Dubai.

### About Universal Postal Union (UPU)

- **Established:** 9 October 1874 (Treaty of Bern).
- **UN Agency:** Became a specialized UN agency in 1948.

- **Purpose:**
  - ♦ Coordinates international postal policies and operations.
  - ♦ Created a “single postal territory” for uniform international mail rates and equal treatment for domestic and foreign mail.
  - ♦ Sets technical standards and rules for cross-border mail, parcels, and financial services.
- **Members:** 192 member countries, making it one of the oldest and largest global organizations.
  - ♦ India joined UPU in 1876.

Source: AIR

## HIMACHAL PRADESH BECOMES FULLY LITERATE STATE

### In News

- On **International Literacy Day**, Himachal Pradesh Chief Minister declared the state fully literate, achieving a **99.30% literacy rate which is higher than the national benchmark of 95%**.

#### Definition of literacy

- According to the **2011 Census**, literacy is defined as the ability to both read and write with understanding in any language for individuals aged seven and above.
- Merely being able to read does not qualify as literacy. The 2011 data shows a notable rise in literacy levels across India.

### International Literacy Day (ILD)

- International Literacy Day (ILD) is observed annually on September 8 and was proclaimed by UNESCO during the 14th General Conference in October 1966, following the landmark World Conference of Ministers of Education on the Eradication of Illiteracy held in Tehran in 1965.
- It has become a global occasion recognised by nearly every country, serving as a moment to reflect on the importance of literacy, assess progress, and confront ongoing challenges.
- **2025, International Literacy Day's theme**: “Promoting Literacy in the Digital Era,” emphasizing the need to integrate digital skills with traditional literacy to bridge the digital divide.

### India's progress in literacy

- India has made **significant progress** in literacy, with Himachal Pradesh becoming the fourth state—after Tripura, Mizoram, and Goa—to achieve full functional literacy. Ladakh is the first fully literate Union Territory.

- The national literacy rate rose from **74% in 2011 to 80.9% in 2023–24**.
- The **ULLAS Nav Bharat Saaksharta Karyakram** enrolled over 3 crore learners with a 90% success rate.
- **India's digital public infrastructure** has played a key role, setting an example for the Global South in advancing education and inclusion.

Source :IE

## ENGINEERING EXPORT PROMOTION COUNCIL (EEPC)

### In News

- Recently, the platinum jubilee of the Engineering Export Promotion Council (EEPC) was held.

### About Engineering Export Promotion Council (EEPC)

- **Established:** 1955, Ministry of Commerce & Industry.
- **Objectives:** Boost India's global competitiveness and raise engineering export targets.
- Acts as the interface between government and exporters, advocating policy reforms and providing technical, financial, and strategic support.
- **Members:** Over 12,000 companies, with around 60% SMEs (Small and Medium Enterprises).
- **Head & Registered Office:** Kolkata.

Source: LM

## TWO-FACTOR AUTHENTICATION (2FA)

### In News

- Many services are implementing **Two-Factor Authentication (2FA)** to improve security.

### Two-Factor Authentication (2FA)

- It is a **cybersecurity measure** that strengthens user verification by requiring two distinct forms of identity: something you know (like a password) and something you have (such as an OTP-generating app or device).
- Apps like Google Authenticator generate short, time-sensitive codes using a system called **TOTP (Time-based One-Time Password)**, which relies on a shared secret key and the current time divided into 30-second intervals.
- Both the app and the server use this key and time counter to compute the same code via a cryptographic process involving **HMAC**.

**SHA-256—a secure hash-based method** that combines the key and message using XOR operations.

- ♦ XOR (exclusive OR) is a fundamental logical operation in computer science that works on bits.

#### Benefits

- Enhances account security and ensures both authenticity and integrity which make it a cornerstone of digital trust across public and private sectors.

#### TOTP (Time-based One-Time Password)

- TOTP is a time-based variant of **HMAC**-based OTP systems, offering automatic synchronization and robust protection against password-only attacks.
  - ♦ **HMAC stands for 'hash-based message authentication code'.**
- **TOTP is secure because:**
  - ♦ Codes expire quickly (every 30 seconds)
  - ♦ Guessing the correct code is nearly impossible
  - ♦ The secret key is not transmitted or exposed

Source :TH

## GHOST BAT DRONE

#### In News

- Australia is rapidly developing its defense capabilities with the production of **MQ-28A Ghost Bat drones**.

#### Ghost Bat Drone

- They are 38-foot-long autonomous military aircraft designed as “**robot wingmen**.”
- They can be **operated remotely and can fly preprogrammed missions** with human oversight from afar.
- They are named after a fierce **native bat**, they have a range of ~2,300 miles, nearly spanning Australia.

#### Latest Developments

- Australia has invested \$650 million in partnership with Boeing to develop and manufacture the drones.
- This marks the first domestically produced aircraft in over 50 years, signaling a revival of its defense industry.
  - ♦ 70% of components will be made in Australia; each drone costs ~10% of an F-35 fighter jet.

- China and the U.S. are also developing “loyal wingman” drones, reflecting a surge in unmanned systems.

Source :IE

## HILSA FISH (TENUALOSA ILISHA)

#### Context

- Bangladesh has decided to allow the export of 1,200 tonnes of hilsa fish, to India ahead of the Durga Puja festive season as a mark of “enduring Bangladesh-India friendship”.

#### About

- **Hilsa fish**, also known as **ilish**, is a popular and culturally significant fish in South Asia, particularly in **Bangladesh** and the Indian state of **West Bengal**.
- **Habitat:** It is found in rivers and estuaries in **Bangladesh, India, Pakistan, Myanmar** and the **Persian Gulf area**.
  - ♦ It is the **national fish** of Bangladesh.
- **Appearance:** The fish has a **silvery-golden color** and a compressed, streamlined body.
  - ♦ It is also called the “**queen of fish**”.
- **Flavor and texture:** It has an oily, rich flavor and a uniquely soft, flaky texture. Hilsa is also a rich source of omega-3 fatty acids, which are beneficial for heart health.
- **Conservation status:** Least Concern



Source: TH

## GREAT INDIAN BUSTARD (ARDEOTIS NIGRICEPS)

#### Context

- The Union Environment Ministry's Expert Appraisal Committee has approved an Environmental Impact Assessment study for the proposed **400-hectare Birmania Rock Phosphate mine in Jaisalmer, Rajasthan**, which falls within the potential habitat of **Great Indian Bustard (GIB)**.

#### Great Indian Bustard

- The GIB is one of the **heaviest flying birds** in the world.



- **Diet:** The great Indian bustard is an omnivore and feeds on insects, grass seeds, berries, rodents, and reptiles.
- **Habitat and distribution:** The Great Indian Bustard, once widespread across the Indian subcontinent and Pakistan, is now largely confined to **Rajasthan** with small populations in **Gujarat, Maharashtra, Karnataka, and Andhra Pradesh**.
  - ♦ Rajasthan's Thar Desert, particularly the **Desert National Park**, is the last stronghold for the species in India, holding over 90% of the remaining wild population.
  - ♦ It is the **state bird** of **Rajasthan**.
- **Significance:** It is a key indicator of the health of its native arid and semi-arid grassland ecosystems.
- **IUCN Status:** Critically Endangered



#### Conservation Efforts

- **Project Great Indian Bustard:** It was launched by the Rajasthan government in **2013**, the project works to construct breeding enclosures and reduce human pressure on the bustard's habitat.
- **National Bustard Recovery Plan:** It is implemented by the Indian **Ministry of Environment, Forests and Climate Change (MoEFCC)** and the **Wildlife Institute of India (WII)**, focusing on habitat improvement and conservation breeding.
- **Captive breeding:** A conservation breeding program was established in 2019, with captive breeding centers at Sam and Ramdevra in Rajasthan.
- **Mitigation of power line collisions:** Following a Supreme Court order, measures are being taken to install bird diverters on existing power lines and explore undergrounding lines in critical habitats.

Source: IE

