FORTUNE IAS ACADEMY
KERALA'S NO.1 IAS ACADEMY

31 JULY | 2026

FINDER
FORTUNE IAS NEWS DAILY EXPLAINER

Click here for daily MCQs

THE HINDU

The next DPI — how India can commoditise AI

Prelims : General Studies Paper I

Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues, etc.

Mains: General Studies 3

Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Why in Focus?

- The editorial argues that after **identity (Aadhaar)**, **payments (UPI)**, and **data (Account Aggregator)**, India should make **Artificial Intelligence (AI)** its **fourth Digital Public Infrastructure (DPI)** to ensure affordable and inclusive access to AI.

> **Digital Public Infrastructure (DPI) is a set of foundational digital systems** that forms the **backbone of modern societies.** DPI enables secure and seamless **interactions between people, businesses and governments.**
>
> **India Stack** is a **Digital Public Infrastructure (DPI)** that integrates **identity, payments, and data-sharing** services through **open APIs(Application Programming Interface)** and **public digital infrastructure**.

Key Highlights

- India has built a unique **DPI stack** integrating **Aadhaar**, **UPI**, and **Account Aggregator**.
- The editorial proposes making **AI** a **public digital utility**, similar to identity, payments, and data.
- The **IndiaAI Mission** aims to provide **low-cost compute (GPUs)** to startups and researchers through a **public-private partnership**.
  - A **graphics processing unit (GPU)** is an electronic circuit designed to speed computer graphics and image processing on various devices.
- It recommends developing **open-weight AI models** using **publicly funded computing resources** and **anonymised public datasets**.
  - These datasets include **legal**, **agricultural**, and **educational** data in **22 scheduled languages**.
- A **Unified Intelligence Interface (UII)**, similar to **UPI**, is proposed to provide **easy and seamless access** to **AI models** through a **common platform**.
- **Free or subsidised AI tokens** can be provided to **students**, **researchers**, and **startups** through an **Aadhaar-linked system**.
- **Indic Large Language Models (LLMs)** can be developed using data in **22 scheduled languages**.
  - **Large Language Models (LLMs)** are **AI models** trained on **large amounts of data** to **understand and generate human language**.

- Affordable AI can improve **education**, **healthcare**, **agriculture**, **governance**, and **small businesses** while promoting **digital sovereignty**.

Implication

- Dependence on **foreign closed-source AI models** and proprietary **APIs**.
- High cost of **AI compute infrastructure** and **foundation models**.
- Limited availability of **open-source Indic AI models**.
- Risk of continued dependence on foreign companies for **AI services** and **critical technologies**.

Way Forward

- Expand the **IndiaAI Mission** to provide affordable **compute infrastructure**.
- Promote **open-weight AI models** and **Indic LLMs** using public datasets.
- Provide subsidised AI access for **students**, **researchers**, and **startups**.
- Strengthen **AI self-reliance**, **digital sovereignty**, and **innovation** through an open AI ecosystem.

Mains Question

"Artificial Intelligence should be treated as a Digital Public Infrastructure (DPI) to promote inclusive development and technological self-reliance." Discuss. (250 Words)

Open-weight AI models allow anyone to download, inspect, modify, and run them on their own systems.

Closed proprietary AI refers to AI models whose code, training data, and model weights are kept private by the developing organization.

The Bay of Bengal as India's SHANTI anchor

Prelims : General Studies Paper I

Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues, etc.

Mains: General Studies 2

India and its neighborhood- relations.

Why in Focus?

- India has introduced **SHANTI (Securing Holistic Advancement through Norms, Trust and Integrity)** on July 13 as a new maritime security framework while launching its candidature for the **UN Security Council (2028-29)**.

Key Highlights

- **SHANTI** builds on **Security and Growth for All in the Region (SAGAR) and Mutual and Holistic Advancement for Security and Growth Across Regions (MAHASAGAR)** to promote **rules-based**, **trust-based**, and **cooperative maritime governance**.
- It aims to address **non-traditional maritime threats** such as **climate-induced disasters**, **illegal fishing**, **cyber threats**, and **supply chain disruptions**.
- The **Bay of Bengal** is proposed as the first region to implement **SHANTI** before expanding it across the **Indo-Pacific**.
- SHANTI shifts the focus from **competition** to **cooperation**, and from **crisis management** to **long-term resilience**.
- It promotes cooperation in **maritime security**, **disaster response**, **blue economy**, **environmental resilience**, and **protection of shared maritime commons**.
- **BIMSTEC** members have adopted **common principles** for **maritime law enforcement** and **Humanitarian Assistance and Disaster Relief (HADR)** and will hold their **first joint maritime security exercise** in **November 2026**.

Implications

- Lack of a **coordinated regional mechanism** for responding to natural disasters.

- **Institutional fragmentation** despite the presence of multiple regional organisations.
- Growing **geopolitical competition** in the **Bay of Bengal**.
- Increasing **non-traditional maritime threats**, including **climate change**, **illegal fishing**, **cyber vulnerabilities**, and **supply chain disruptions**.

Way Forward

- Strengthen **BIMSTEC** cooperation in **maritime security**, **HADR**, and **information sharing**.
- Promote **rules-based**, **trust-based**, and **inclusive maritime governance**.
- Enhance regional cooperation for **disaster resilience**, the **blue economy**, and protection of the **shared maritime commons**.

Mains Question

"Discuss the significance of SHANTI as India's emerging maritime security framework. How can it strengthen regional cooperation and maritime governance in the Bay of Bengal and the Indo-Pacific?" (250 Words)

How common are cloudbursts in India?

Prelims: General Studies Paper 1

Current events of national and international importance

Mains: General Studies 1

Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc

Why in Focus?

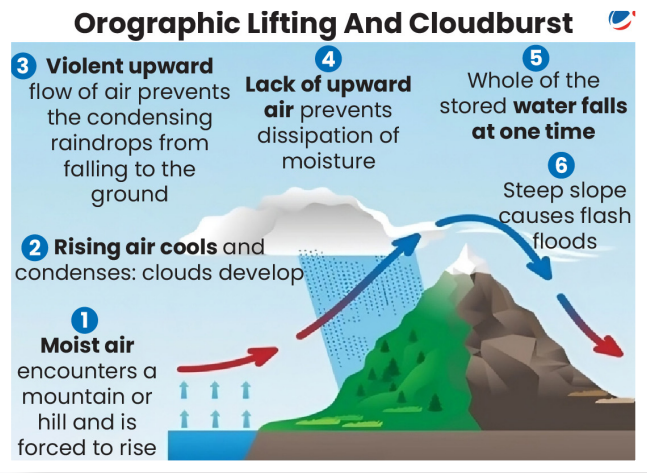
- **Recent incidents of intense rainfall in Himalayan states have highlighted the need to distinguish cloudbursts** from ordinary heavy rainfall and improve disaster preparedness.

Key Highlights

- According to the **India Meteorological Department (IMD), a cloudburst is 10 cm (100mm) or more rainfall within one hour over a small area (20–30 sq. km.).**
- Some scientists **have proposed a "mini-cloudburst" category for 5 cm rainfall in one hour** over the same area.
- Cloudbursts are **highly localized events that often trigger flash floods, landslides,** and debris flows.
- They commonly **occur in mountainous regions due to orographic lifting, where moist air is forced upward, forming cumulonimbus clouds.**

> **Orographic lifting** is the upward movement of moist air caused by mountains or other high relief, leading to cooling, condensation, and precipitation on the windward side, with a rain shadow effect on the leeward side.

- Climate change is **increasing the likelihood of extreme rainfall events, as a warmer atmosphere** can hold more moisture.
- Many cloudbursts remain unrecorded because they occur in remote areas.



Implications

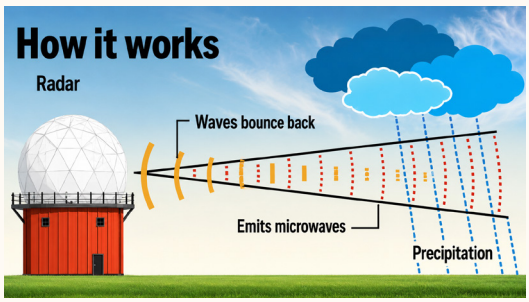
- **Highly localized and rapidly developing events** make forecasting difficult.
- **Mountainous terrain and limited weather stations** reduce forecast accuracy.
- **Cause loss of life, infrastructure damage**, and livelihood losses.
- **Misuse of the term "cloudburst" can mask poor land-use planning**, encroachment, and inadequate drainage.

Way Forward

- **Expand Doppler Weather Radars** and automatic weather stations under **Mission Mausam.**

- Strengthen **IMD's nowcasting and AI-based hyperlocal forecasting.**
- **Enforce scientific land-use planning** and climate-resilient infrastructure.

Doppler Weather Radar (DWR): A radar system that detects rainfall, wind movement, and storm intensity in real time, improving weather monitoring and forecasting.



IMD's Nowcasting System: A short-term weather forecasting system that provides location-specific alerts for severe weather events such as heavy rainfall, thunderstorms, and lightning up to a few hours in advance.

Mission Mausam: Launched by Prime Minister Narendra Modi on 14 January 2025, it is a Ministry of Earth Sciences (MoES) initiative to make India "Weather-Ready and Climate-Smart" by improving weather forecasting, early warning systems, and climate services.

Mains Question

"Cloudbursts are natural phenomena, but their impacts are often intensified by human activities. Discuss the challenges in forecasting cloudbursts and suggest measures to reduce their disaster risk." (250 Words)

Why did Cauvery panel order Karnataka to release water?

Prelims: General Studies Paper 1

Current events of national and international importance

Mains: General Studies 2

Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies. Statutory, regulatory and various quasi-judicial bodies.

Why in Focus?

- The **Cauvery Water Management Authority (CWMA) directed Karnataka to release 3,500 cubic feet per second of water to Tamil Nadu** for 15 days, upholding the recommendation of the Cauvery Water Regulation Committee (CWRC) amid deficient monsoon rainfall.

Key Highlights

- Cauvery Water Management Authority, a statutory body was **constituted by the Union Ministry of Jal Shakti in June 2018 to implement the Cauvery Water Disputes Tribunal (CWDT) Award (2007),** as modified by the Supreme Court (2018).

The **Cauvery Water Disputes Tribunal (CWDT) Award** is the final decision of the Cauvery Water Disputes Tribunal, issued in 2007, which determined how the Cauvery River's water should be shared among Karnataka, Tamil Nadu, Kerala, and Puducherry. It was modified by the Supreme Court in 2018, which slightly reduced Tamil Nadu's allocation and increased Karnataka's share.

- **Cauvery Water Regulation Committee functions under the CWMA and is responsible for regulating water releases,** monitoring reservoir levels, and ensuring implementation of CWMA directions.
- The **CWRC is headed by the Member (Water Resources) of CWMA** and includes representatives from the:
  - Central Water Commission
  - India Meteorological Department
  - Ministry of Agriculture & Farmers' Welfare
  - Chief Engineers of all Cauvery basin States.
- The **CWRC monitors eight reservoirs:**
  - Karnataka: Krishnarajasagara (KRS), Kabini, Hemavathy, Harangi

- Tamil Nadu: Mettur, Bhavanisagar, Amaravathy
- Kerala: Banasurasagar

- It **prepares seasonal (Southwest Monsoon, Northeast Monsoon, and Hot Weather) and annual water accounts, besides reviewing rainfall, inflows, outflows, reservoir storage**, and river flows at Biligundulu (Tamil Nadu–Karnataka border).

Implications

- **Deficient monsoon rainfall has reduced reservoir inflows,** intensifying interstate water disputes.
- **Lack of a distress-sharing formula results in repeated conflicts** during drought years.
- **Water shortages threaten irrigation, drinking water security**, agricultural production, and farmers' livelihoods in both States.
- **Frequent disputes test cooperative federalism** and compliance with tribunal and Supreme Court directions.

Way Forward

- **Finalise a scientific distress-sharing formula** for low-rainfall years.
- **Strengthen real-time hydrological monitoring,** forecasting, and data transparency.
- **Improve water-use efficiency, reservoir management**, and crop diversification.
- **Promote continuous Centre–State coordination** and timely implementation of CWMA decisions.

Mains Question

"Inter-State river water disputes require both legal mechanisms and cooperative federalism for sustainable resolution. Discuss the role of the Cauvery Water Management Authority (CWMA) in this context." (250 Words)

KEYWORDS

Alanine Aminotransferase (ALT)

- Alanine aminotransferase (ALT) is an **enzyme found predominantly in the liver, and its elevated level in blood is a marker of liver cell injury.**
- ALT is also known as **Serum Glutamate-Pyruvate Transaminase (SGPT).**
- Persistent **elevation of ALT may be seen in conditions such as viral hepatitis, fatty liver disease, and drug-induced liver injury.**
- ALT levels are measured through a blood test to help assess liver health and detect liver diseases.

Snijders Blok-Campeau Syndrome (SNIBCPS)

- Snijders Blok-Campeau syndrome is **a rare genetic disorder that mainly affects brain development.**
- It is **caused by mutations in the CHD3 gene.**
- CHD3 gene is a **gene that provides instructions for making a protein involved in regulating gene activity,** especially during brain development.
- Common features include **developmental delay, speech delay, and intellectual disability.**
- There is no specific cure; treatment focuses on managing symptoms through supportive therapies such as speech, occupational, and physical therapy.

CRISPR-Cas9

- CRISPR-Cas9 is a **genome-editing technology that enables precise changes to DNA sequences.**
- It **consists of guide RNA (gRNA), which identifies the target DNA, and the Cas9 enzyme, which cuts the DNA** at that specific site.
- CRISPR-Cas9 has **applications in treating genetic diseases, improving crops, and biomedical research.**

- In **2020, the Nobel Prize in Chemistry was awarded to Emmanuelle Charpentier and Jennifer A. Doudna for developing CRISPR-Cas9** gene-editing technology.

BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation)

- **BIMSTEC** is a **regional organisation** established on **6 June 1997** through the **Bangkok Declaration**.
- It was initially known as **BIST-EC (Bangladesh, India, Sri Lanka, Thailand Economic Cooperation)** and later became **BIMSTEC**.
- It comprises **7 Member States**: **Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka,** and **Thailand**.
- Its objective is to promote **rapid economic development** by implementing **regional cooperation projects** in mutually agreed sectors.
- It aims to accelerate **economic growth**, **social progress**, and **collaboration** among member states in the **economic, social, technical, and scientific** fields.

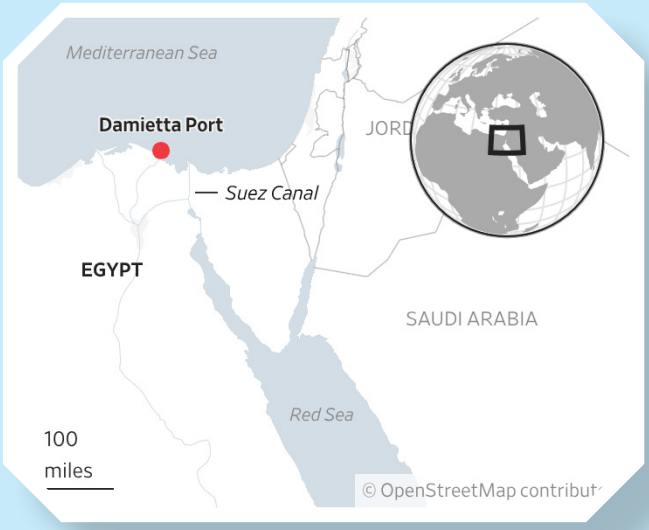
Account Aggregator (AA) Network

- The **Account Aggregator (AA) Network** is an **RBI**-introduced **financial data-sharing system**, established under the **NBFC-Account Aggregator Directions, 2016**.
- **Account Aggregators (AAs)** are **Non-Banking Financial Companies (NBFCs)** that facilitate the **secure sharing of customers' financial information** between financial institutions.
- Financial information is shared **only with the customer's explicit consent**, based on the individual's instructions.
- **Registering with an Account Aggregator** is **completely voluntary** for consumers.

Places in News

Damietta Port

- Damietta Port is a **major deep-water seaport located on Egypt's Mediterranean coast,** near the northern entrance of the Suez Canal.
- The port is an **important hub for the handling of containers, LNG** (liquefied natural gas), grain, and general cargo.
- Its **strategic location makes it a key centre for international trade and maritime connectivity** between Europe, Asia, and Africa.
- It is a **part of Egypt's efforts to strengthen its position as a regional logistics and transshipment hub.**



- Recently, a **suspected drone strike at Egypt's Damietta Port raised concerns over the security of shipping routes** near the Suez Canal, a vital global maritime trade corridor.