

World's first commercial-scale e-methanol plant began operations in Denmark

E-methanol offers a viable path for **reducing emissions in hard-to-abate sectors** such as shipping and chemical manufacturing.

What is e-methanol (or electro-methanol)?

- It is a **low-carbon energy** produced by combining **green hydrogen** with **captured carbon dioxide**.
- E-methanol production** typically involves **three key steps**:
 - Green hydrogen generation**: Renewable energy-powered water electrolysis creates the hydrogen feedstock.
 - CO2 capture**: Carbon dioxide is captured from industrial flue gases (e.g. steel mills or cement plants) or directly from the air, reducing overall emissions at the source.
 - Methanol synthesis**: The hydrogen and CO2 are combined in a catalytic reactor under pressure, yielding methanol with minimal by-products.
- Benefits**: Can be used without a change in infrastructure; Stable (can be stored at room temperature and ambient pressure); versatile (can be used as other fuels).
- Applications**: Apart from the shipping industry, its derivatives **gasoline and kerosene** provide solutions for **road and air transport**.
- Challenges**: E-methanol remains significantly more expensive than fossil-based methanol due to high renewable electricity costs and production inefficiencies.

'Methanol Economy' Programme in India (by NITI Aayog)

- Aim**: Reducing India's oil import bill, greenhouse gas (GHG) emissions, and converting coal reserves and municipal solid waste into methanol.
- Methanol** is a low carbon, hydrogen carrier fuel produced from high ash coal, agricultural residue, CO2 from thermal power plants and natural gas.
- Benefits**:
 - It will create close to **5 million jobs** through methanol production/application and distribution services.
 - Rs 6000 crore** can be saved annually by blending 20% DME (Di-methyl Ether, a derivative of methanol) in LPG.

Justice BR Gavai to take oath as the 52nd Chief Justice of India (CJI)

Article 124(1) provides for a **Supreme Court (SC) of India** consisting of **CJI** and **not more than 33 other Judges**.

About CJI

- Appointment**: **Article 124 (2)** provides for the **appointment** of CJI by the **President**.
 - Appointment of CJI follows the **dual convention** of **consultation with the outgoing CJI** and **appointing the senior-most judge of the SC as CJI**.
 - As per the **Memorandum of Procedure**, the **Union Law Minister** first seeks **recommendation of outgoing CJI**, forwards it to the **PM** who then advises the **President**.
- Tenure**: Till the age of **65 years**.
- Oath**: Administered by the **President**.
- First CJI**: Harilal J. Kania.
- Scrutiny**: Office of CJI falls under the **Right to Information Act (RTI), 2005**.

Key Roles and Duties of CJI

- Administrative Appointments**: Appoints the **Officers and Servants of the SC** as per **Article 146**.
- Statutory Appointments**: CJI as acts as the chairperson of the **Search-cum-Selection-Committee** for appointing Members of statutory authorities like National Company Law Appellate Tribunal, etc.
- Master of Roster**: It is the **exclusive power** of the CJI laid down in the **Handbook of Practice and Procedure and Office Procedure 2017**, dealing with the **allocation of cases to different benches**.
- Others**: Administers oath to the President; appoints ad hoc judges; requests retired judges to act as judges; decides on the seat of the SC, etc.

'Understanding Indian MSME Sector: Progress and Challenges' report released by SIDBI

The report covers **key challenges faced by MSMEs** such as access to finance, technology adoption, competition, compliance, market access, infrastructure, supply chain, and skilled labour availability **across 19 sectors in manufacturing, services, and trading.**

Contribution of MSMEs to Economy

- **Contribution in Gross Value Added:** 30.1% in FY2022-23.
- **Contribution in exports:** 45.79% in FY2024-25 (up to May 2024).




Major Challenges in MSME Sector

- **Inadequate access to credit:** Due to lack of formalization, insufficient credit history, lack of awareness of credit schemes, inability to tap into capital markets given required transparency and regulatory norms, etc.
- **High competition and technology adoption:** Rapidly evolving business landscape and need to adopt new technologies is a major challenge, as many MSMEs lack resources and expertise to leverage technology.
- **Others:** Complex regulatory landscape, inadequate infrastructure, unreliable and costly supply of utilities, difficulty in sourcing raw materials and skilled manpower.

Key initiatives for MSMEs

- **Union Budget 2025-26:** Revised classification of MSMEs, Credit Cards for Micro Enterprises, setting up of a new Fund of Funds, enhanced Credit Guarantee, National Manufacturing Mission to support Clean Tech manufacturing, etc.
- **MSME Developmental Schemes:** Credit Guarantee Scheme for Micro & Small Enterprises, new Credit Assessment Model for micro and small enterprises based on their digital footprints which was announced in Union Budget, July 2024, etc.

Revised Classification Criteria for MSMEs

 Category	 Investment	 Annual Turnover
Micro Enterprises	Up to 2.5 crore (Earlier up to 1 crore)	Up to 10 crore (Earlier up to 25 crore)
Small Enterprises	Up to 25 crore (Earlier up to 10 crore)	Up to 100 crore (Earlier up to 50 crore)
Medium Enterprises	Up to 125 crore (Earlier up to 50 crore)	Up to 500 crore (Earlier up to 250 crore)

India's Retail Inflation eases to Six-year low in April 2025

Recent **provisional data** released by the **Union Ministry of Statistics and Programme Implementation (MoSPI)** shows **decline of 18 basis points in headline inflation** of April, 2025 in comparison to March, 2025.

Key findings

- **All India Consumer Price Index (CPI) - Combined** for the month of April, 2025 over April, 2024 is 3.16%, **the lowest year-on-year inflation after July, 2019.**
 - ⊕ **CPI measures average change in prices paid by consumers over time** for a basket of goods and services.
 - ⊕ **CPI – Combined** aggregates both **CPI- Urban** and **CPI – Rural**.
 - ⊕ **In India, the CPI** is compiled by the **National Statistical Office (NSO)** under the **MoSPI**.
 - ◆ It is currently calculated using the base year 2012.
- **Core inflation:** Rose slightly to **4.1%** but well within the limit of RBI's inflation target.

Reasons for declined inflation

- **Easing food prices:** The fall in prices has been driven in large part by **sharply easing food prices**, especially those of vegetables and pulses.
- **Reduction in non-food item prices:** Inflation in the housing category and the pan, tobacco, and intoxicants category saw inflation easing in April, as compared to March.
- **Rural Inflation:** Significant decline in headline and food inflation in the rural sector observed as the headline inflation is 2.92% as compared to 3.25% in March.

Key Terms

- **Inflation:** Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country.
- **Headline inflation:** It reflects changes in the prices of a representative basket of goods and services that households buy, as measured by the consumer price index (CPI). The CPI includes prices for thousands of items, including **Fuel and light, Housing, Food and beverages**, etc.
- **Core inflation:** It excludes food and fuel items from headline inflation, which are relatively more volatile.

India's Major Ports demonstrated remarkable progress in FY 2024-25 over the past decade

Indian Ports handle around **90% of EXIM Cargo by volume** and **70% by value** playing a pivotal role in **driving growth** and **global competitiveness**.

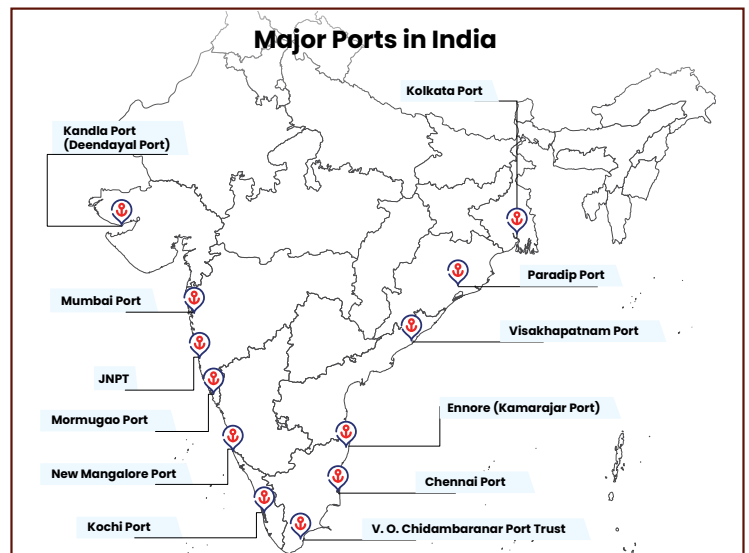
Key Achievements

- **Cargo Handling:** Major Ports registered an annual growth rate of **4.3% in cargo handling** (819 million tonnes in FY 2023-24 to ~855 million tonnes in FY 2024-25).
- **Historic Milestone:** **Paradip Port Authority (PPA)** and **Deendayal Port Authority (DPA)**, the two major ports, for the first time surpassed the **150-million-tonne cargo handling mark**.
- **Average Turnaround Time (TRT):** Improved by **48%**, (**96 hours** in FY 2014-15 to **49.5 hours** in FY 2024-25).
- **Idle Time:** Dropped by **~29%** from FY2014-15 to 2024-25.
- **Financial Performance:** Total income **more than doubled** from **₹11,760 crore in FY 2014-15** to **₹24,203 crore in FY 2024-25**, registering a **7.5% CAGR** over 10 years.
- **Private Sector Participation:** **3 fold increase** in investment in **Public Private Partnership (PPP)** projects at Major Ports.

India's Port Sector		
Type	Major Ports	Non-Major Ports
Number	12 (Vadhavan and Galathea Bay under development)	200+
Administrative Control	Ministry of Shipping	State Maritime Boards/ State Government.
Legal Framework	Major Port Authorities Act, 2021	Indian Ports Act, 1908

Key Initiatives taken for Strengthening Port Infrastructure

- **Sagarmala:** Flagship program launched in **2015** for port modernization, new port development, port connectivity, and coastal community development.
 - ⊕ Around **839 projects** (worth **5.79 lakh crores**) have been identified for implementation.
- **Maritime India Vision 2030:** Outlines **150 initiatives** for propelling India to global maritime leadership.
- **Others:** **National Logistics Portal (Marine)- SAGAR-SETU;** Real-time performance Monitoring Dashboard, **Sagar Manthan**, etc.



Also In News



Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009

Order blocking YouTube channel '4PM' under IT (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009 withdrawn by Central Government.

About IT rules, 2009

- **Rule 9** (Blocking of information in cases of emergency): Does not have provision of an opportunity of hearing to the creator.
- **Rule 16:** It says strict confidentiality shall be maintained regarding all the requests and complaints received and actions taken.
- **Curtailling fundamental rights:** It is argued that these provisions infringed upon right to freedom of speech and expression (**Article 19(1)(a)**).
 - ⊕ **However under Article 19(2)** the government can make provisions to protect the security of the country, etc.



National Bank for Financing Infrastructure and Development (NaBFID)

NaBFID recently undertook **non-deal investor meetings** in Hong-kong in preparation to issue its **first offshore bond**.

About NaBFID

- **Genesis:** 2021 by an Act of the Parliament (**The National Bank for Financing Infrastructure and Development Act, 2021**).
- **Objective:** Specialized **Development Finance Institution** for addressing the gaps in **long-term non-recourse finance** for infrastructure development, strengthening the **development of bonds and derivatives markets in India**.
- **Regulation and Supervision:** By the **RBI** as an All India Financial Institution (AIFI) under the **RBI Act, 1934**.



Inland Waterways Authority of India

Inland Waterways Authority of India (IWAI) has set up a new office in Srinagar (Jammu & Kashmir) to develop **river navigation infrastructure in three national waterways** in the Union Territory i.e. NW-26 (River Chenab), NW-49 (River Jhelum), NW-84 (River Ravi).

About IWAI

- It is a **statutory body** established under the **Inland Waterways Authority of India Act, 1986**.
- Ministry:** Union Ministry of Ports, Shipping, and Waterways.
- Function:** Primarily undertakes projects for development, maintenance, and regulation of IWT infrastructure on national waterways.



General Agreement on Tariffs and Trade (GATT) 1994 and Agreement on Safeguards (AoS)

India maintains that recent measures taken by United States related to tariffs are not consistent with **GATT 1994 and Agreement on Safeguards (AoS)**.

- GATT** is an agreement between States aiming at eliminating discrimination and reducing tariffs and other trade barriers with respect to trade in goods.

Agreement on Safeguards (AoS)

- AoS sets forth the rules for application of **safeguard measures** pursuant to **Article XIX of GATT 1994**.
 - Safeguard measures** are defined as "emergency" actions with respect to increased imports of particular products, where such imports have caused or threaten to cause serious injury to the importing Member's domestic industry.



Tidal Disruption Event (TDE)

The event "AT2024tvd" detected **600 million light-years** away marks the first **offset TDE** ever captured.

About TDE

- It is a **cataclysmic phenomenon** marked by an **intense flash of radiation** caused by a **supermassive black hole eating a star**.
- Occurs when a **star** strays close to a **black hole**.
- Gravitational forces** create intense tides that **break the star apart into a stream of gas**.
 - The **trailing part** of the stream **escapes the system**, while the **leading part swings back around**, surrounding the black hole.



Global Report on Internal Displacement (GRID)2025

GRID 2025 was released by the **Internal Displacement Monitoring Centre (IDMC)**.

- Internal Displacement (ID)** refers to the **forced movement** of people within their country while **Internally Displaced People (IDP)** are people forced to flee their homes due to conflict, violence, or disasters without crossing International borders.

Key Findings

- Internally displaced people (IDPs) at the end of 2024: 83.4million** (73.5 million due to conflict and violence and 9.8 million due to disasters).
 - 25% of all disaster displacements globally** were reported in the United States.
- India:** Internal displacements by **conflict and violence (1,700)** and **Internal displacements by disasters (5.4 millions)**.



BB84 Protocol

Centre for Development of Telematics (C-DOT), under Department of Telecommunications (DoT), has signed an MoU to develop **drone-based Quantum Key Distribution (QKD) systems using the decoy-based BB84 protocol**

- QKD technology ensures **unconditional data security** by using the principles of **quantum mechanics**, unlike the conventional cryptosystems that rely on complexity of mathematical algorithms.

About BB84 Protocol

- First quantum cryptography protocol given in **1984** by **Charles Bennett and Giles Brassard**.
- It uses **polarisation states of photon** as the physical entity to generate a **secure bit string** among two users.



Tsarap Chu

State Government of Himachal Pradesh notified **Tsarap Chu Conservation Reserve (India's largest)** in **Spiti Valley**.

About Tsarap Chu

- It is the **location on the confluence of the Unam River and Charap Nala**.
- It is bounded by the **UT of Ladakh** to the north, the **Kibber Wildlife Sanctuary** extending up to Malang Nala and Lungar Lungpa to the east, **Kabjima Nala** to the south and **Chandratul Wildlife Sanctuary** to the west.
- It is particularly known for the **snow leopard**, often called the '**ghost of the mountains**'.
- Other species:** Tibetan wolf, bharal (blue sheep), Himalayan ibex, kiang (wild ass), and the Tibetan argali, rare bird species such as Rose Finch, Tibetan Raven, etc.

Personality in News



Fakhruddin Ali Ahmed

President paid tributes to **former President, Shri Fakhruddin Ali Ahmed** on his **birth anniversary**.
About Fakhruddin Ali Ahmed (1905–1977)

- He was a distinguished **lawyer, politician**, and the **5th President of India** (From 1974 till his death in 1977).

Key Contributions

- Indian Freedom Struggle:** Joined the **Indian National Congress**, loyal follower of **Mahatma Gandhi** and participated in **Individual Satyagraha** and **Quit India Movement** for which he was arrested in 1942.
- Post-Independence:** Elected to the **Rajya Sabha** in 1952 and to **Lok Sabha** in 1967.
 - Held Portfolios like **Food and Agriculture, Cooperation, Education, Industrial Development, and Company Laws**.
- As President:** Notable for his decision to **proclaim Emergency** by the advice of the then Prime Minister in 1975.
- Key Values:** Patriotism, Leadership, Dedication, Constitutionalism, etc.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI