

NEWS TODAY

Cruise Bharat Mission (CBM) launched

Mission has been launched by the **Ministry of Ports, Shipping and Waterways**.

About Cruise Bharat Mission

- **Aim:** To excel in India's vision to become a **global hub for cruise tourism** and promote the country as the leading global cruise destination. It also aims to:
 - ⊕ **double cruise passenger traffic** within five years; i.e. by 2029.
 - ◆ In 2024 passengers traffic is 4.6 lakh.
 - ⊕ **double volume of cruise** calls from 254 in 2024 to 500 by 2030.
- **Phasewise implementation:**
 - ⊕ **Phase 1 (2024 to 2025):** Focus will be on forming cruise alliances with neighbouring countries, etc.
 - ⊕ **Phase 2 (2025 to 2027):** Developing new cruise terminals, destinations etc.
 - ⊕ **Phase 3 (2027 to 2029):** Integrating all cruise circuits across the Indian Subcontinent.
- **Three key cruise segments:**
 - ⊕ **Ocean & Harbour Cruise segment:** Encompasses ocean cruises, including deep-sea and coastal cruises, along with harbour-based yachting and sailing cruises.
 - ⊕ **River & Inland Cruise segment:** Focuses on river and inland cruises on canals, backwaters, creeks, and lakes.
 - ⊕ **Island Cruise segment:** Highlights inter-island cruises, lighthouse tours, etc.



Significance of Mission

- **Employment generation**, creation of **4 lakh jobs** in the revamped Cruise Sector.
- **Promote the** cultural, historical, and natural circuits of the Indian Subcontinent.
- Developing world class infrastructure which can be also leveraged for maritime trade, etc.

Ministry of Housing and Urban Affairs (MoHUA) launches "Jal Hi AMRIT" program

Program launched under AMRUT 2.0 seeks to **improve quality of treated effluent discharge** and promote recycling of treated water in urban areas.

About Jal Hi Amrit Program:

- **Key Purpose:** To incentivize States & UTs to manage used water (sewage) treatment plants (STPs) for ensuring recyclable good quality treated water.
- **Key Aspects of Initiative:**
 - ⊕ **Clean Water Credit System** to build competition among cities, develop capacities and incentivise them to attain good quality used treated water.
 - ◆ Clean water credits will be **awarded to STPs** in terms of **Star-rating (between 3 stars to 5 stars) certificate** which will be valid for six months.
 - ⊕ **Performance Based Incentives:** Provided to STPs based on **star ratings/Clean Water Credit**.
 - ⊕ **Encouraging water circularity**

About AMRUT 2.0

- **Ministry:** MoHUA
- **Tenure:** Launched in 2021 for 05 years.
- **Purpose:** To provide **universal coverage of water supply** through functional taps to all households in all statutory towns.
 - ⊕ Also, coverage of **septage management** in 500 cities covered in 1st phase of AMRUT scheme.
 - ◆ **AMRUT 1.0** was launched in **2015** to **provide basic civic amenities** (E.g. water supply; Septage management; storm water drainage etc.) in the **selected cities and towns**.

India BioEconomy Report 2024 unveiled at 4th Global Bio India Summit

Report brought out by **Department of Biotechnology and BIRAC** captures phenomenal progress made by Indian Bio-Economy Sector.

➤ Bio-economy is **knowledge-based production** and use of **biological resources** to provide **products, processes and services** within frame of a **sustainable economic system**.

Key Findings:

- India's BioEconomy reached **\$151 billion (2023)** accounting for **4.25% of India's GDP** & employing **over 3.3 million people**.
 - ⊕ Expected to reach **\$300 billion by 2030**.
- **Key Sub Sector Contributing to India's BioEconomy**
 - ⊕ **BioIndustrial (~48%)**: Comprises biofuels, chemicals, bioplastics, etc,
 - ⊕ **BioAgri (~8%)**: E.g. Genetically modified crops like Bt Cotton.
 - ⊕ **BioPharma (~36%)**: Focuses on pharmaceuticals, medical devices, diagnostics, etc.
 - ⊕ **BioIT/Research Services (~8%)**: Includes contract research, clinical trials, bioinformatics, etc.
- **Major achievements Made:**
 - ⊕ **Leading Global Vaccine Manufacturer**: India supplied 25% of WHO purchased vaccines and 20% of exports were to Africa.
 - ⊕ **Boost to Energy Independence**: India is world's third-largest producer and consumer of ethanol.
 - ⊕ **Breakthroughs in Precision Healthcare**: E.g. approval of country's first gene therapy clinical trial for Hemophilia A.
 - ⊕ **Rapid growth in Biotech Startups**: Between 2021 and 2023, number of biotech startups surged to **approx 8,500** (59% increase).

Government Initiatives to boost BioEconomy

- **Bio-manufacturing Initiative**: Department of Biotechnology (DBT) launched BioE3 Policy.
- **Intellectual Property (IP) Guidelines**: In 2023, new IP guidelines to improve commercialization of public-funded research.
- **Governance and Structural Reforms**: Restructuring of 14 autonomous institutes into Biotechnology Research and Innovation Council.
- **Regulatory Streamlining with BioRRAP**: Biological Research Regulatory Approval Portal (BioRRAP) simplifies approval process for biological research.

Annual Survey of Industries (ASI) released by Ministry of Statistics and Programme Implementation (MoSPI) for FY 2022-23

ASI provides insight into dynamics of change in composition, **growth and structure of manufacturing industries in terms of key economic indicators**.

Key Highlights

- **Manufacturing Gross Value Added (GVA)**: Grew by **7.3% in current prices in 2022-23** over 2021-22.
 - ⊕ **Maharashtra** topped followed by Gujarat in terms of **Manufacturing GVA**.
- **Growth in economic parameters**: Surpassed pre-pandemic level in absolute value terms e.g. in invested capital, GVA, employment and wages etc.
- **Growth drivers of Manufacturing-Sector**: Manufacture of Basic metal, Coke & Refined Petroleum Products, Food Products, etc.
- **Employment**: 7.4% increase in manufacturing employment in **2022-23 over previous year**.
 - ⊕ **Highest Employing States**: **Tamil Nadu** followed by Maharashtra.

About GVA:

- It is defined as **value of output minus value of intermediate consumption** and is a measure of the contribution to GDP made by an individual producer, industry or sector.
- **GVA = Gross Output - Intermediate consumption**.
 - ⊕ Unlike the **Net Value Added** (GVA- Depreciation), it includes **depreciation of capital**.

About ASI:

- Conducted by Collection of Statistics Act, 2008 except in Jammu & Kashmir (**Conducted under J&K Collection of Statistics Act, 2010**).
- **Industries covered:**
 - ⊕ Factories registered under Sections 2m(i & ii) of **Factories Act, 1948**
 - ⊕ **Bidi and cigar manufacturing** establishments under the Bidi & Cigar Workers (Conditions of Employment) Act, 1966
 - ⊕ **Electricity undertakings** not registered with Central Electricity Authority (CEA)
 - ⊕ **Units with 100 or more employees** registered in the **Business Register of Establishments (BRE)** maintained by the States.

India launches BharatGen, World's First Government-funded Multimodal Large Language Model (MLLM)

BharatGen has been launched by the **Ministry of Science & Technology**.

- It is aligned with the goal of **Making AI in India** and **Making AI for India**.

About BharatGen

- Aim:** Creation of **Generative AI systems** that can generate **high-quality text** (including **speech**) and **multimodal content** in various **Indian languages**.
- Implementing Agency:** **IIT Bombay** under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**.
- Features:**
 - Building and training based on Bhartiya data set:** Collect and curate India-centric data, reducing dependence on foreign models.
 - Multilingual and multimodal nature:** Ensuring representation to the country's diverse languages, dialects, and cultural contexts.
 - Open-source platform: Accessible to all citizens:** Ensuring Industrial, Commercial, Cultural, and Inclusive technological development.

About MLLM and Generative AI

- MLLM are Large Language Models (LLM)** trained on **large datasets** including **both text and non-textual data** (image, audio, video, etc.)
 - LLM uses **machine learning** and is **capable of recognizing and interpreting human languages** or other complex data.
 - Generative AI is the most well-known application of LLM.
- Generative AI** includes **algorithms/deep-learning models** that can be used to **create new content**, including audio, code, images, text, etc.

National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS), 2018

- Objective:** Brings together **academia, industry, government and international organizations** to foster entrepreneurship, translational research, and commercialization of CPS technologies.
 - CPS are **networked systems** in which the **computational (cyber) part is tightly integrated with the physical components**. E.g., autonomous vehicles, etc.
- Implementing Agency:** Department of Science and Technology (DST).

Establishment of Thematic Hubs under National Quantum Mission (NQM)

Ministry of Science & Technology announced establishment of four **Thematic Hubs (T-Hubs)** comprising 14 Technical Groups across 17 states and 2 Union Territories under NQM.

About T-Hubs

- Thematic areas and their respective institutions:**
 - Quantum Computing** (Indian Institute of Science, Bengaluru);
 - Quantum Communication** (IIT, Madras);
 - Quantum Sensing & Metrology** (IIT, Bombay);
 - Quantum Materials & Devices** (IIT, Delhi)
- Significance of the T-Hubs:** Brings together experts from diverse fields like physics, computer science, etc; bridges the gap between research and industry, etc.
- Mode of operation:** based on **Hub-Spoke-Spike model**, creates a collaborative network, connecting central hubs with research projects (Spokes) and individual research groups (Spikes).

About National Quantum Mission (NQM)

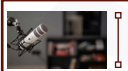
- Aim:** To seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT).
- Implementing agency:** Department of Science & Technology (DST) under the Ministry of Science & Technology.
 - NQM is one of the nine missions under the **Prime Minister's Science Technology Innovation Advisory Council (PMSTIAC)**.
- Mission duration:** 2023 to 2031.
- Targets:** Developing intermediate-scale quantum computers, **Satellite-based** secure **quantum communications**, etc.

Related News

Quantum Key Distribution technology (QKD)

- Indian Army signed a contract for **Quantum Key Distribution technology** through the **iDEX initiative**.
 - iDEX initiative:** It fosters innovation in the Defence and Aerospace Sector by engaging Industries including MSMEs, startups, individual innovators, etc.
- About QKD**
 - Utilizes properties of **quantum mechanics** that enables **two parties to share random secret keys** that are known only to them and can be used to encrypt or decrypt messages.
 - Mechanism:** Works by sending **photons**, which are "quantum particles" of light, across **optical links**.

Also in News



Digital Radio Broadcasting

TRAI released consultation paper on "Formulating a Digital Radio Broadcast Policy for Private Radio Broadcasters"

- Presently** Private sector radio broadcasters are licensed to transmit programs in **FM frequency band (88-108 MHz) only**.

About Digital radio broadcasting

- It uses a process called modulation to convert audio and video signals into a digital format that can be transmitted over airwaves.

Advantage over analogue Broadcasting:

- Capability of **broadcasting 3 to 4 channels** on a single frequency carrier with **better audio quality**.
 - Whereas in **analogue mode** only 1 channel broadcasting is possible **on a frequency carrier**.
- No need to **manually tune** or **search for channels**.



Cyber Slavery

Amid reports of 'cyber slavery', telecom ministry to disconnect 2.17 crore mobile connections.

About Cyber slavery

- Cyber slavery is a **form of modern exploitation** that begins with **online deception** and evolves into **physical human trafficking**.
 - It's emerging as a **form of organized crime** of unprecedented severity and scale.
- Offenders target **lure individuals by giving fake promises** to offer them employment.
- Recently over **5,000 Indians were reported to be trapped in Southeast Asia** (Laos, Cambodia), where they are allegedly being **coerced into carrying out cyber fraud**.



Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme

Government approved changes to the RoDTEP scheme.

Key Changes

- **For Domestic Tariff Area (DTA) units:** Extended by 1 year till 30th September, 2025.
- **For Authorisation holders (except Deemed exports), export-oriented units and special economic zone units:** Applicable till the end of this year.
- **Applicability of New rates:** From October 10th, 2024 based on the recommendations of RoDTEP Committee.

About RoDTEP Scheme

- **Introduced in** 2021 by **Ministry of Commerce and Industry**
- **Aim:** Refunding taxes, duties, and levies at the **central, state and local** levels on the **exported products**.
- It **replaced the Merchandise Exports from India scheme** which was challenged at World Trade Organization.



Post-tropical Cyclone

Hurricane Helene in USA downgraded to **post-tropical cyclone**.

- A **hurricane** is a **tropical cyclone** that has maximum sustained surface winds of **74 mph or greater (64 knots or greater)**.

What is Post-Tropical Cyclone?

- A cyclone that no longer possesses **sufficient tropical characteristics** to be considered a tropical cyclone.
 - ⊕ It can continue to carry heavy rains and high winds.
- **Two specific classes:**
 - ⊕ Former tropical cyclones that have become fully **extra-tropical** cyclone.
 - ⊕ **Remnant lows**, no longer possesses the convective organization required of a tropical cyclone.



Exercise KAZIND-2024

8th edition of India-Kazakhstan Annual Joint Military Exercise KAZIND-2024 commenced in Auli (Uttarakhand).

- **Aim:** Enhance joint military capability of both sides to undertake counter terrorism operations in a sub conventional scenario.

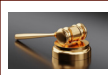


Mudumalai Tiger Reserve

Two critically endangered species of amphibians, **Micrixalus spelunca**, commonly known as **cave dancing frog**, and **Nyctibatrachus indraneili**, (**Indraneil's Night Frog**) were found in Mudumalai Tiger Reserve.

About Mudumalai Tiger Reserve (MTR):

- Located in **Nilgiris District of Tamil Nadu**
- It's part of **Nilgiri Biosphere Reserve** along with **Wayanad Wildlife Sanctuary (Kerala)**, **Bandipur National Park (Karnataka)**, **Mukurthi National Park** and **Silent Valley**.
- **River:** Moyar River flows through MTR.
- **Forest Type:** Tropical evergreen forest, moist deciduous forest, moist teak forest, etc.
- **Important flora & fauna:** Elephant Grass, Tiger, Elephant, Indian Gaur etc.



SARTHIE 1.0

The **Department of Social Justice and Empowerment (DoSJE)** and **National Legal Services Authority (NALSA)** launched **SARTHIE 1.0**.

- They also signed an MoU for enhancing public awareness towards social welfare schemes for vulnerable communities.

About SARTHIE 1.0

- **Aim:** Empower disadvantaged communities (like Scheduled Castes, Transgenders, Denotified and Nomadic Tribes, etc.) through **awareness generation**, **legal support** promoting effective access to welfare schemes.
 - ⊕ Offers synergy between executive and judiciary to further social justice.

About NALSA

- Constituted under the **Legal Services Authorities Act, 1987**.
- **Functions:** Provide **free Legal Services** to the eligible persons, organize **Lok Adalats** etc.



White Dwarf Star

First rocky planet has been spotted orbiting a burned-out star called a **white dwarf**.

About White dwarf Star

- It is **stellar core left behind** after a **dying star has exhausted its nuclear fuel** and expelled its outer layers to form a **planetary nebula**.
- **Chandrasekhar limit (1.44 times mass of Sun)** is maximum mass theoretically possible for a stable white dwarf star.
- A star that ends its nuclear-burning lifetime with a mass **greater than Chandrasekhar limit** must become **either a neutron star or a black hole**.

Place in News



Albania (Capital: Tirana)

India opened new mission in **Albania** to boost its **diplomatic footprint**.

Political Features

- **Location:** **Southern Europe** (western part of the **Balkan Peninsula**).
 - ⊕ Balkan Peninsula is located between the **Adriatic Sea, Mediterranean Sea, Aegean and Black sea**.
- **Bordering Areas:** **Montenegro** (Northwest), **Kosovo** (Northeast), **North Macedonia** (East), **Greece** (Southeast and south).
- **Maritime Boundaries:** **Adriatic Sea** (West) and **Ionian Sea** (Southwest).

Geographical Features

- **Mountains:** **North Albanian Alps** (extension of Dinaric Alps)
- **Highest Point:** Mount Korab
- **Strait:** **Otranto** (connecting Adriatic Sea with Ionian Sea).
- **Rivers:** Drin, Seman, etc.

