

### UNESCO CREATIVE CITIES NETWORK (UCCN)



Kozhikode, a city in north Kerala celebrated for its rich cultural heritage, has been officially declared as India's first UNESCO City of Literature under the UNESCO Creative Cities Network.

- It was **created in 2004** to promote cooperation with and among cities that have identified creativity as a strategic factor for **sustainable urban development**.
- Almost 300 cities around the world currently make up this network.

**Objective:** Placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level.

- UNESCO designates the creative **cities in seven fields:**craft, folk art, media arts, film design, gastronomy, literature, and music.
- Every year, UNESCO seeks applications from various cities across the globe to put them under its UCCN project.
- The applications in India are routed through the **Ministry of Culture**.
- **India's other cities in UCCN**
  - **Srinagar and Jaipur:**in the field of crafts and folk arts
  - **Mumbai:** Film category
  - **Chennai, Gwalior and Varanasi:** Music category
  - **Hyderabad:** Gastronomy category

### E-SAMRIDHI PORTAL



Recently, the Union Minister of Agriculture & Farmers' Welfare and Rural Development urged the state governments to encourage more and more farmers to register on e-Samridhi portal so that they can avail the facility of assured procurement.

e-Samridhi Portal was launched through National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) and National Cooperative Consumers' Federation of India Limited (NCCF).

- It is for registration of **farmers and the government is committed to procure pulses** at Minimum Support Prices (MSP) for farmers registered on the portal.
- Portal registration of farmers can be done directly or through **Primary Agricultural Credit Societies (PACS) and FPO**.
- The payment to the farmers will be made by NAFED directly into their mapped bank account and no agency will be involved in between.

## Key facts about National Agricultural Cooperative Marketing Federation of India Ltd

- It is an apex organization of **marketing cooperatives** for agricultural produce in India.
- It was founded on 2 October 1958 to promote the trade of agricultural produce and forest resources across the nation.
- It is registered under **Multi State Co-operative Societies Act**.
- With its headquarters in New Delhi, NAFED has four regional offices in Delhi, Mumbai, Chennai and Kolkata, apart from 28 zonal offices in capitals of states and important cities.
- **Functions**
  - It is the nodal agency to implement **price stabilization measures** under "Operation Greens" which aims to double the farmers' income by 2022.
  - Along with FCI the NAFED is involved in the procurement of oilseeds, pulses and copra under the **Price Support Scheme (PSS)**.

## SUPERHYDROPHOBIC CATALYST



A team of scientists from Assam, Odisha, China, and the United Kingdom have developed a water-repellent catalyst that can cut the cost of producing

“environmentally benign” biodiesel substantially from the current levels.

- The new catalyst is named as “**spherical superhydrophobic activated carbon catalyst**” which is developed to withstand water by-product during the production of biodiesel.
- This catalyst imitates the **anti-wetting or water-repulsing properties** of natural surfaces such as lotus leaves.
- **Advantages**
  - The catalyst is derived from **biomass** (cellulose), is ecologically benign, abundant, and highly affordable.
  - This breakthrough has the potential to significantly **reduce the cost of biodiesel** production, making sustainable energy more accessible.
  - It is highly effective and can be **reused multiple times**, making the catalytic process more efficient and cost-effective.
  - At present, the cost of biodiesel in India is about ₹100 or UD\$1.2 per litre. Using the superhydrophobic activated carbon catalyst can bring down the cost to about 37 cents per litre.
- **Biodiesel:** It is a **renewable, biodegradable fuel** manufactured domestically from vegetable oils, animal fats, or recycled restaurant grease.

**What is activated carbon?**

- It is a class of amorphous **carbonaceous material** with large porosity and internal surface area.
- Coconut shells, coal, and wood are the basic sources of **activated carbon**.

## KOLAR GOLD FIELDS (KGF)



The Karnataka government recently cleared a proposal of the Centre for reviving gold mining and auctioning of 13 tailing dumps at Kolar Gold Fields (KGF) by the Bharat Gold Mines Ltd. (BGML).

- KGF (once known as ‘Little England’) is a mining area in the Kolar District of Karnataka, 100 km from Bengaluru.
- It is estimated that **gold has been mined in KFG for over 2000 years.**
- KGF’s modern success is generally attributed to the firm John Taylor & Sons, after John Taylor III took control of the mines in 1880 and established what was at one time the deepest and most productive gold mine in the world.
- KGF was the first Indian city to be electrified in 1902.
- At its peak, KGF was home to 30000 mine workers and their families and was a multiethnic community with experienced miners recruited from around the world.
- The mines were **run by the company up until 1956**, when they were **taken over by the Government of Mysore**, who employed John Taylor & Sons as mining consultants.
- Although the annual production in some years was more than 95 percent of India’s gold output, the mines **declined and finally closed in 2001.**

## MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES)

Revised Definition of Micro, Small and Medium Enterprises			
Parameters	Micro	Small	Medium
Investment in Plant and Machinery	< 1 Crore INR	< 10 Crore INR	< 50 Crore INR
Annual Turnover	< 5 Crore INR	< 50 Crore INR	< 250 Crore INR
No. of MSMEs (Based on NSS data)	6.3 Crore	3.3 Lakh	5 thousand
No. of MSMEs (Based on Udyam data as on 31st March 2023)	1.5 Crore	4.6 Lakh	41 thousand

overall economic growth.

- MSMEs are often called the **powerhouse of the Indian economy** as they contribute significantly to employment generation, exports, and overall economic growth.
- They reportedly account for **more than 11 crore jobs and contribute around 27.0% of India's GDP.**
- The sector consists of **around 6.4 crore MSMEs**, with 1.5 crore of them registered on the Udyam portal and employs around 23.0% of the Indian labour force, making it the **2nd-largest employer in India after agriculture.**
- They account for 38.4% of the total manufacturing output and **contribute 45.03% of the country's total exports.**

## Significance of MSMEs and Problems Faced by Them:

- **Significance of MSMEs for Indian economy:**
  - Labour intensive sector, promotes inclusive growth, leads to financial inclusion and promotes innovation. The 64 million-strong MSMEs are the backbone of the Indian economy.
- **Problems faced by MSMEs:**
  - **Problem of dwarfism:** While dwarfs (firms that continued to remain small despite ageing) consume vital resources (could possibly be given to infant firms), they contribute less to job creation and economic growth as compared to infant firms.
  - **Lack of funding:** Most (90%) of the MSME funding comes from informal sources.
  - **Poor integration of digital technologies:** Integration of technologies such as big data, AI and virtual reality (Industry 4.0) into manufacturing operations in the sector is still in its infancy.
  - **Environmental impact:** The sector lacks cleantech innovation and entrepreneurship, which produce environment friendly products, promotes energy efficiency and has the potential to accelerate the transition to a circular and low carbon economy.

## New bank to bridge credit gap for MSMEs

- Government is planning to set up a separate bank for direct lending to MSMEs.
- Among the details to be worked out is the ownership structure of the bank, which might include a hybrid (public-private partnership) model.
- **Need for new bank**
  - According to a report, MSME credit penetration is still 14% in India compared with 50% in the US and 37% in China.
    - There is a credit gap of Rs 25 trillion for the Indian MSME sector, reflecting the large untapped credit market.

## WHAT IS THE INDUS WATER TREATY (IWT)?



A Pakistani delegation recently arrived in Jammu as part of ongoing discussions concerning the 1960 Indus Water Treaty (IWT).

- It is a treaty signed between India and Pakistan regulating the **use and distribution of the Indus River system**.
- It was signed by then-Prime Minister Jawaharlal Nehru and former Pakistan President Ayub Khan in **1960**.
- The treaty was **brokered by the World Bank**, which too is a signatory to the treaty.
- The pact sought to divide the water of the Indus River and its tributaries (Sutlej, Beas, Ravi, Jhelum, and Chenab) equitably among the two countries.
- Under the treaty, water from three eastern rivers, **Beas, Ravi and Sutlej**, was allocated to India, and water from the three western rivers – **Chenab, Indus and Jhelum** were allocated to Pakistan.
  - **Pakistan roughly got 80%** of the water in the Indus drainage system.
- The treaty also permits both countries to use the other's rivers for certain purposes, such as small hydroelectric projects that require little or no water storage.
- The treaty is **overseen by the Permanent Indus Commission (PIC)**, a bilateral body with commissioners from both countries tasked with implementing and managing treaty provisions, and resolving any questions, differences, or disputes that may arise.
- The World Bank's role is to appoint a neutral expert in case of 'technical' differences, failing which the differences escalate to a dispute for international arbitration.

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## 18TH LOK SABHA SESSION - OATH TAKING IN LOK SABHA

Bhartruhari Mahtab, elected for the seventh consecutive time from Cuttack, Odisha, will be the first to take the oath as a Lok Sabha MP at Rashtrapati Bhavan in front of President Droupadi Murmu.



The President has appointed him as the Speaker (pro tem) under Article 95(1) of the Constitution until the new Speaker is elected. Mahtab will preside over the House during the oath-taking ceremony of his colleagues.

## Parliamentary oath

- The third schedule of the Constitution contains the parliamentary oath.
- Through this, members swear or affirm to bear true faith and allegiance to the Constitution of India, uphold India's sovereignty and integrity, and faithfully discharge their duties.
- **Process**
  - Before taking the oath or affirmation, MPs must submit their election certificate to the Lok Sabha staff.
  - This requirement was introduced after a 1957 incident where a mentally unsound individual posed as an MP and took the oath.
  - MPs can then take their oath or affirmation in English or any of the 22 languages specified in the Constitution.
  - About half of the MPs take their oath in Hindi or English, with Sanskrit also becoming popular in recent years.
  - Deviations, such as adding suffixes or phrases, are not recorded, and MPs may be asked to retake the oath.
  - While oaths and affirmations are a personal choice, 87% of MPs swore in the name of God in the last Lok Sabha, with the remaining 13% affirming allegiance to the Constitution.
  - Some MPs alternate between swearing by God and affirming across different terms.

## Can MPs in jail take the oath?

- The Constitution specifies that if an MP does not attend Parliament for 60 days, their seat can be declared vacant.
- Courts have used this ground to allow MPs in jail to take an oath in Parliament.

## ISRO'S REUSABLE LAUNCH VEHICLE 'PUSHPAK'

### Why in News?

ISRO completed the third Reusable Launch Vehicle (RLV) Landing Experiment (LEX) of its winged vehicle 'Pushpak', at the Aeronautical Test Range (ATR) in Chitradurga, Karnataka.

### What is a RLV and How is it Different from Other Launch Vehicles?

- **Primarily, launch vehicles comprise three or four stages apart from the payload,** which needs to be launched into a polar or a geosynchronous orbit, depending on a mission's requirements.
- **The RLV that ISRO is building has only two stages** to propel the vehicle into orbit.
  - **Once the fuel in the first stage has been expended, the vehicle will shed it** and carry on with the second stage.
  - **The first stage will re-enter the atmosphere** and land in an autonomous fashion at a predetermined location.
  - **After some maintenance, it will be available for reuse.**

### What is the Significance of RLVs?

- **Low lift-to-drag (L/D) ratio:** In aerodynamics, the L/D ratio is the lift generated by an aircraft, divided by the aerodynamic drag caused by moving through air.
- **Cost-effective:** The use of two staged RLVs can reduce the cost of a launch by nearly 80% of the current cost.
  - **Foundation for advanced technologies:** It has the potential to serve as the foundation for advanced technologies such as Hypersonic flight, Autonomous landing, Return flight experimentation, Powered cruise flight, and Air-breathing propulsion systems.
- **Scientific, strategic and commercial advantages for India:** The building of RLVs will ensure that the country does not lag in important scientific and strategic areas and will also commercially help ISRO.



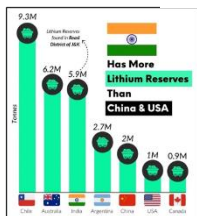
## LITHIUM MINING IN INDIA

### About Lithium:

- Lithium is a chemical element with the symbol Li and atomic number 3. It is a **soft, silvery-white** alkali metal.
- Lithium is a special metal in many ways. It's light and soft — it can be cut with a kitchen knife and so low in density that it floats on water.

### Applications of Lithium:

- The most important use of lithium is in **rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles (EVs)**.
  - Lithium is often dubbed as “**white gold**” for electric vehicles.



- Lithium metal is made into alloys with aluminium and magnesium, improving their strength and making them lighter.
  - Aluminium-lithium alloys are **used in aircraft, bicycle frames and high-speed trains**.

- Lithium has no known biological role. **It is toxic**, except in very small doses.

### Lithium Mining in India:

- National Mineral Exploration Trust (NMET) funded a private company that found lithium deposits in Korba ranging from 168 to 295 parts per million (ppm).
- Since November, the Mines Ministry has auctioned 38 critical mineral blocks, including lithium blocks in J&K and Chhattisgarh.
- Preliminary surveys in Korba showed lithium concentrations in bedrock samples ranging from 10 to 2,000 ppm, while Reasi’s deposits exceeded 200 ppm.
- Despite mixed domestic results, India has secured lithium assets abroad, such as in Argentina’s Catamarca province through Khanij Bidesh India Limited (KABIL), and is exploring opportunities in Sri Lanka and Australia.