



# **Factly Compilation**

**9<sup>th</sup> to 14<sup>th</sup> October, 2023**

## Factly Compilation for the Month of October (Second Week) 2023

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### 1. Udangudi Panangrupatti gets GI tag

**Source:** The post is based on the article “Udangudi Panangrupatti gets GI tag” published in “The Hindu” on 9th October 2023

#### What is the News?

Udangudi ‘Panangrupatti’ from Tamil Nadu has received a Geographical Indication (GI) Tag.

#### What is Udangudi Panangrupatti?

Udangudi Panangrupatti is also referred to as palm jaggery.

It is prepared using the palm sap collected from the inflorescence of palmyra trees that grow on the red sand dunes in and around the Tiruchendur region in Tamil Nadu.

#### Uniqueness of Udangudi Panangrupatti:

**Firstly**, the palm jaggery preparation procedure in this area is traditional till date without inclusion of any additional modern strategies.

— Triple super phosphate and phosphoric acid are used in many other areas, but no such chemical additives are used in Udangudi Panangrupatti.

**Secondly**, the jaggery prepared from the palm sap from the region is unique due to the presence of red sand dune soil found in the region.

— This soil holds less groundwater. The moisture content in the atmosphere is less because of the dry climatic condition which leads to high sucrose content, in turn adding taste.

### 2. Army concludes 70 schemes under EP-4 worth ₹11,000 crore

**Source:** The post is based on the article “Army concludes 70 schemes under EP-4 worth ₹11,000 crore” published in “The Hindu” on 9th October 2023

#### What is the News?

The Indian Army and Air Force have completed the fourth phase of Emergency Procurements (EP) with the Army finalizing over 70 schemes worth nearly ₹11,000 crore and the Indian Air Force concluding 64 contracts worth around ₹8,137 crore.

#### What are Indian Armed Forces Emergency Procurement Powers?

Emergency Procurement Powers were granted to the Armed Forces by the Defence Ministry for the first time after the 2016 Uri terror attack, followed by the 2019 Balakot air strikes and the 2020 standoff with China in Eastern Ladakh.

Under this, the armed forces could procure weapons systems up to ₹300 crore on an urgent basis without any further clearance to cut short the procurement cycle.

These emergency procurements have to be completed within 12 months as per the Defence Ministry’s stipulations.

The armed forces are currently executing the fourth phase of the Emergency Procurements (EP).

#### What is the significance of these Emergency Procurements by these armed forces?

Emergency Procurements(EP) have not only ensured swift procurement but also led to cost savings primarily through procurement from the domestic defense industry.

Notably, about 50% of contracts in the first three tranches were awarded to domestic vendors, highlighting the increasing capability of the domestic defense industry

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The major upgrades facilitated through the EP mechanism include various defense equipment, surveillance systems, UAVs, communication systems and more contributing to bolstering India's defense capabilities.

### 3. PM releases commemorative coin and stamp on 500th birth anniversary of Veerangana Rani Durgavati

**Source:** The post is based on the article “PM releases commemorative coin and stamp on 500th birth anniversary of Veerangana Rani Durgavati” published in “PIB” on 9th October 2023

#### What is the News?

The Prime Minister performed bhoomi poojan of Veerangana Rani Durgavati Smarak aur Udyaan during the 500th birth anniversary of Rani Durgavati.

#### Who is Rani Durgavati?

Rani Durgavati (1524 – 1564) was the ruling Queen of Gondwana from 1550 until 1564. She was born in Mahoba's Chandela dynasty.

She is chiefly remembered for defending her kingdom against the Mughal Empire.

She was married to Dalpat Shah, the son of the Gond King Sangram Shah of the kingdom of Garha-Katanga. This kingdom is noted as one of the most powerful kingdoms of the Gond tribe.

However, Dalpat Shah died in 1550 and due to the young age of their son, Durgavati took the reins of the Gondwana kingdom.

**War with Mughals:** In 1562, Akbar conquered Malwa and made it a Mughal dominion. Consequently, the state boundary of the Rani touched the Mughal Empire.

– Rani's contemporary was a Mughal General, Khwaja Abdul Majid Asaf Khan. The prosperity of Rani Durgavati's state lured him, and he invaded Rani's state after taking permission from the Mughal emperor Akbar.

– When Rani heard about the attack, she decided to defend her kingdom with all her might. She maintained that it was better to die respectfully than to live a disgraceful life.

– However, soon the Mughals fortified the area and overwhelmed the Gonds. While fighting them in battle, she is believed to have stabbed herself with her dagger to not surrender to the Mughal forces.

**Recognitions and Honors:** In 1983, the Government of Madhya Pradesh renamed the University of Jabalpur as Rani Durgavati Vishwavidyalaya in her memory.

– The government of India issued a postal stamp commemorating her death on 24 June 1988.

– The train between Jabalpur Junction and Jammu Tawi is known as Durgavati Express after the name of the Queen.

– Indian Coast Guard in 2018 commissioned ICGS Rani Durgavati, the third Inshore Patrol Vessel (IPV) of its kind.

### 4. Recommendations of 52nd GST Council Meeting

**Source:** The post is based on the article “Recommendations of 52nd GST Council Meeting” published in “PIB” on 9th October 2023



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### What is the News?

The 52nd GST Council met under the Chairpersonship of the Union Minister for Finance.

### What is the GST Council?

Goods and Services Tax regime came into force after the Constitutional (122nd Amendment) Bill was passed by both Houses of Parliament in 2016.

The GST Council is a joint forum of the Centre and the states. It was set up by the President as per Article 279A (1) of the amended Constitution.

**Purpose:** The council is meant to make recommendations to the Union and the states on important issues related to GST, like the goods and services that may be subjected or exempted from GST, model GST Laws. It also decides on various rate slabs of GST.

**Members:** The members of the Council include the Union Finance Minister (chairperson), the Union Minister of State (Finance) from the Centre. Each state can nominate a minister in-charge of finance or taxation or any other minister as a member.

**Decisions:** The council is devised in such a way that the Union Government has 1/3rd voting power and the States have 2/3rd. The decisions are taken by the 3/4th majority.

### What are the key takeaways from the 52nd GST Council meeting?

The council recommended that Extra Neutral Alcohol (ENA), used for manufacture of alcoholic liquor for consumption be kept outside the GST ambit.

It clarified that the GST rate for corporate guarantees provided by a parent company to its subsidiaries will be levied at 18 per cent.

Millet flour in powder form, containing at least 70% millet by weight will not attract any GST if sold loose, but will face 5% levy if sold in pre-packaged, labeled form.

States also raised the issue of how the cess will continue under GST once it comes to an end in March 2026. Currently, cess is being used to pay off the borrowed amount meant to compensate states during the initial five-year period of GST which ended June 2022.

## 5. Territorial Army hires Chinese language interpreters, to induct cyber security experts next

**Source:** The post is based on the article “Territorial Army hires Chinese language interpreters, to induct cyber security experts next” published in “Indian Express” on 9th October 2023

### What is the News?

The Territorial Army (TA) is recruiting Chinese language interpreters for border personnel meetings (BPM) and cyber security experts to support the Army.

### What is Territorial Army (TA)?

Indian Territorial Army is an auxiliary military organization of the Indian Army.

It is a voluntary, part-time civilian force that receives military training and serves as a reserve force for the army to relieve it of static duties, to aid the civil power and to provide units for the regular Army as and when required.

**Origin:** The origins of India's Territorial Army can be traced to the days of the British Raj when the British raised a territorial army through the Indian Territorial Act, 1920.

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– This act divided the army into two parts — the Auxiliary Force and the Indian Territorial Force. The Auxiliary force was meant for the Europeans and Anglo-Indians, the Indian Territorial Force was for the Indians.

– Post-independence, the Territorial Army Act, 1948, was passed, resulting in the formation of the current Indian Territorial Army. The Army was inaugurated by C. Rajagopalachari in 1949.

**Eligibility:** Any citizen between the age of 18-42 can be a part of the TA service.

– The soldiers from the TA have to complete a mandatory two-month embodiment or service period in a year. It does not provide them a full-time career. They have the option of returning to civilian life after the two months.

**Functions performed by TA:** The primary role of the TA is to relieve the regular army from static duties such as road security and protection of communication lines.

– TA units are made available to the regular army as needed for specific tasks, such as aiding civil authorities during disasters or maintaining essential services.

– TA units also play a crucial role in protecting border infrastructure projects in sensitive areas, as well as railway projects in the northeast connecting Manipur and Nagaland.

– They are also involved in maintaining anti-infiltration obstacle systems along the Line of Control.

– In times of crisis, TA units can be called upon to support additional forces, as seen in the ongoing situation in Manipur.

– Ministries and state governments also frequently request the raising of TA units for various purposes, including plantation drives, petroleum supply, oil exploration and safeguarding critical infrastructure.

### 6. Sagar Parikrama: A successful journey towards resolving issues of fishers on ground

**Source:** The post is based on the article “Sagar Parikrama: A successful journey towards resolving issues of fishers on ground” published in “PIB” on 9th October 2023

#### What is the News?

The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying is undertaking a massive fishers and fish farmers outreach program namely Sagar Parikrama Yatra.

#### What is Sagar Parikrama?

Sagar Parikrama is an outreach program intended to reach out to the fishermen community across the entire coastal belt of the country.

It is being undertaken since March 2022 through a pre-decided sea route from Gujarat to West Bengal covering around 8000 km of India's coastline.

#### Objectives:

– To facilitate interaction with fishermen, coastal communities and stakeholders so as to disseminate information of various fisheries related schemes and programs being implemented by the Government;

– demonstrating solidarity with all fisher folk, fish farmers and concerned stakeholder as a spirit of Atma Nirbhar Bharat;

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- to promote responsible fisheries with focus on sustainable balance between the utilization of marine fisheries resources for food security of nation and livelihoods of coastal fisher communities and
- protection of marine ecosystems.

**Significance:** The fishermen, fisher communities and stakeholders in the coastal areas are likely to be benefitted with awareness of various beneficiary oriented schemes and programs being implemented by the Government and showcasing them the best practices that may be adopted.

### 7. India and Saudi Arabia sign MoU in Electrical Interconnections, Green / Clean Hydrogen and Supply Chains

**Source:** The post is based on the article “India and Saudi Arabia sign MoU in Electrical Interconnections, Green / Clean Hydrogen and Supply Chains” published in “PIB” on 9th October 2023

#### What is the News?

India and Saudi Arabia have signed a Memorandum of Understanding in the fields of Electrical Interconnections, Green / Clean Hydrogen and Supply Chains.

#### What is the purpose of the MoU signed between India and Saudi Arabia?

The MoU aims to establish a general framework for cooperation between the two countries in the field of electrical interconnection; exchange of electricity during peak times and emergencies; co-development of projects and co-production of green / clean hydrogen and renewable energy.

#### What is the Middle East and North Africa(MENA) Climate Week 2023?

MENA Climate Week 2023 is being held in Riyadh, Saudi Arabia. It aims to discuss climate solutions ahead of COP28.

It also had a session on “Global Stocktake of the Paris Agreement (GST)”.

#### What is the Global Stocktake of the Paris Agreement (GST)?

The global stocktake was established under Article 14 of the Paris Agreement.

It is a process for countries and stakeholders to see where they’re collectively making progress towards meeting the goals of the Paris Climate Change Agreement – and where they’re not.

It is done in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support and in the light of equity and the best available science.

The stocktake takes place every five years. The first GST started in Glasgow in 2021 and will conclude at the climate change conference in Dubai, UAE (at COP 28).

The outcome of the GST shall inform Parties in updating and enhancing, in a nationally determined manner, their action and support, as well as in enhancing international cooperation for climate action.

### 8. PATA and India to jointly promote Travel for LiFE in Asia-Pacific region

**Source:** The post is based on the article “PATA and India to jointly promote Travel for LiFE in Asia-Pacific region” published in “PIB” on 9th October 2023

#### What is the News?

Pacific Asia Travel Association(PATA) will work with India to expand the Travel for LiFE initiative across the Asia Pacific region.



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The Ministry of Tourism will set up a PATA desk to strengthen engagement with PATA on Travel for LiFE and other areas of cooperation in the tourism sector. This is the first major international partnership for the Travel for Life program.

### What is Travel for LiFE Initiative?

'Travel for LiFE' is a sectoral program under **Mission LiFE** targeted towards the tourism sector.

**Launched on:** September 27, 2023 on World Tourism Day.

**Launched by:** Ministry of Tourism in partnership with the Ministry of Environment, Forest and Climate Change (MoEFCC), United Nations World Tourism Organisation (UNWTO), and the United Nations Environment Programme (UNEP).

The initiative embodies the ethos of "**Pro Planet People**" and operates on the fundamental principles of living "**Lifestyle of the planet, for the planet, and by the planet**".

**Aims:** To bring about significant behavioral changes in both tourists and tourism businesses, with a strong emphasis on environmental protection and socio-cultural sustainability.

**Themes:** The program covers eight core themes including energy conservation, water preservation, reducing single-use plastic, waste reduction, supporting local businesses and communities, respecting local culture and heritage, consuming local foods, and preserving nature.

**Certification:** The initiative also goes beyond raising awareness. It encourages tourism businesses to adopt sustainable practices and earn certification at bronze, silver, and gold levels within the program.

**Significance:** Travel for LiFE Program will position India as leader in promoting sustainable and responsible tourism and using tourism as a vehicle for achieving Sustainable Development Goals by 2030.

### What is the Pacific Asia Travel Association (PATA)?

Pacific Asia Travel Association (PATA) was founded in 1951. It is a not-for-profit membership-based association that acts as a catalyst for the responsible development of travel and tourism to, from and within the Asia Pacific region.

## 9. Prey base, habitat dictate Asiatic wild dog-tiger coexistence: study

**Source:** The post is based on the article "**Prey base, habitat dictate Asiatic wild dog-tiger coexistence: study**" published in "**The Hindu**" on **9th October 2023**

### What is the News?

A recent study in Manas National Park in Assam has found that dholes (Asiatic wild dogs) and tigers may have a positive association due to overlapping prey availability of suitable habitats.

### What is the study conducted on Dholes?

A study was conducted titled 'Do dholes segregate themselves from their sympatrids? Habitat use and carnivore co-existence in the tropical forest'.

– **Sympatric** refers to animals, plant species, and populations within the same or overlapping geographical areas.

The study aimed to assess the relative abundance index, habitat use, and factors influencing dhole co-existence with other sympatric carnivores in Manas National Park, a UNESCO World Heritage Site.

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– **Note:** Manas National Park in Assam and the adjoining Royal Manas National Park in Bhutan form one of the largest areas of conservation significance in South Asia representing the full range of habitats from the subtropical plains to the alpine zone. The range of habitats in the cross-border national park is ideal for the dholes.

### What are the key findings of the study?

The study found a positive relationship between dhole habitat use and tigers challenging the assumption of antagonistic interactions between the two species.

The positive association could be attributed to overlapping prey availability or habitat suitability, suggesting the possibility of co-existence or cooperative behaviors between dholes and tigers.

**Significance of this study:** The study highlights the importance of good habitats and forests, such as Manas National Park, as wildlife mega-cities or hotspots that provide various niches and possibilities.

– Any disruption to such ecological balance could have far-reaching consequences.

### What is Dhole?



Dhole (*Cuon alpinus*) is a wild carnivorous animal and is a member of the family Canidae and the class *Mammalia*. They are also known as Asian wild dogs.

Historically, dholes purportedly occurred throughout southern Russia all across central Asia, south Asia and southeast Asia.

But recent research and current distribution maps indicate that they are restricted to south and southeast Asia with the northernmost populations in China.

In India, Dholes are found in three clusters namely the Western and Eastern Ghats, central Indian landscape and North East India.

According to a 2020 study, Karnataka, Maharashtra and Madhya Pradesh rank high in conservation of dhole.

**IUCN Status:** Endangered

**CITES:** Appendix II

**Wildlife Protection Act:** Schedule II

### 10. Why Punjab wants to ban the cultivation of PUSA-44 paddy variety

**Source:** The post is based on the article “Why Punjab wants to ban the cultivation of PUSA-44 paddy variety” published in “Indian Express” on 10th October 2023

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### What is the News?

Punjab Chief Minister has announced that the state will ban the cultivation of the PUSA-44 paddy variety from 2024.

### When did Punjab farmers begin cultivating PUSA-44?

PUSA-44 is a variety of paddy. It was developed in 1993 by the Delhi-based Indian Council of Agricultural Research (ICAR).

Subsequently, Punjab's farmers started sowing it in a few areas initially. After getting a high yield from the crops, they started increasing the area under PUSA-44 by multiplying the seed.

By the end of 2010s, it had gained widespread popularity among farmers across the Punjab, covering approximately 70 to 80% of the area under paddy cultivation.

By 2018, the Punjab government reduced the area under PUSA-44 to 18% of the total area under paddy, but it rebounded to 22% in 2022.

### What are the reasons behind the ban of PUSA-44?

**Extended Maturity Period:** PUSA-44 takes about 160 days to mature, which is much longer (about 35-40 days) than other paddy varieties.

**Water Conservation:** Punjab is facing severe groundwater depletion and banning PUSA-44 is a measure to conserve irrigation water.

**Stubble Burning:** PUSA-44 is harvested right before the ideal time for wheat sowing which is around November 1st.

– Farmers typically need 20 to 25 days between paddy harvesting and wheat sowing to effectively handle stubble disposal.

– However, PUSA-44's late harvest makes it difficult to manage stubble through both in-field and out-of-field methods. This leads to more incidents of stubble burning.

– Moreover, PUSA varieties produce about 2 percent more stubble compared to shorter varieties, which is a significant concern when cultivated extensively.

## 11. ICMR to set up study to develop solutions to remedy childhood undernutrition

**Source:** The post is based on the article “ICMR to set up study to develop solutions to remedy childhood undernutrition” published in “The Hindu” on 10th October 2023

### What is the News?

The Indian Council of Medical Research (ICMR) is forming a team to conduct a research study on improving the nutrition of children aged 6 to 24 months in India.

### What is the study ICMR planning to conduct?

ICMR has formed a team to conduct a research study on improving the nutrition of children aged 6 to 24 months in India.

This age range is crucial for a child's growth and poor nutrition during this time can lead to issues like stunting and undernutrition.

Complementary feeding is important but faces challenges like inadequate quantity and quality of food, improper feeding practices and timing.

ICMR believes that the current Take Home Ration (THR) program can be enhanced to improve child nutrition. They emphasize the need for not only providing the right food but also ensuring that children actually eat it.

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Hence, that's why ICMR is planning to conduct this study to identify ways to promote proper complementary feeding practices and provide optimal nutrition to reduce childhood undernutrition.

### What is Complementary Feeding?

Complementary feeding is defined as the process starting when breast milk alone is no longer sufficient to meet infants' nutritional requirements, resulting in the need for other foods and liquids along with breast milk.

The ICMR points out several challenges in complementary feeding such as not giving enough or good-quality food, not feeding properly, starting too early or late, and not giving enough food frequently.

### What is the Take Home Rations (THR) programme?

The Take Home Rations (THR) programme is part of the Supplementary Nutrition Programme (SNP) under [Integrated Child Development Services \(ICDS\)](#).

It offers fortified rations for use at home for children aged 6 to 36 months as well as pregnant and lactating women, with the goal of bridging the nutrition gap among them.

## 12. **Vocal for local: NSG takes on invasive vilayati kikar, to regreen 5-km stretch of Manesar campus with local trees**

**Source:** The post is based on the article "**Vocal for local: NSG takes on invasive vilayati kikar, to regreen 5-km stretch of Manesar campus with local trees**" published in "**Indian Express**" on 10th October 2023

### What is the News?

National Security Guard (NSG) has decided to take on the vilayati kikar (*Prosopis juliflora*) populating its Aravali hills campus after it was found to be responsible for the depleting water table.

### What is Vilayati kikar (*Prosopis juliflora*)?



**Source:** Indian Express



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Vilayati kikar (*Prosopis juliflora*) is a thorny shrub or tree growing up to 15 m height.

It is an invasive Mexican tree species. It was introduced by the British in Delhi in the 1930s.

**Harmful Impact:** The roots of the tree can grow over 50 meters deep, depleting groundwater.

– The trees also make it difficult for native species to germinate around them.

**Court on *Prosopis juliflora*:** The Madras High Court in 2016, passed an interim order clearing removal of *Prosopis juliflora* as they were depleting the water table in areas already struggling for water.

**Why is the National Security Guard (NSG) taking action against vilayati kikar (*Prosopis juliflora*)?**

The National Security Guard (NSG) was given 1,600 acres of land along the Delhi-Ajmer highway in Manesar to construct its campus.

Initially, there were 98 functional borewells on this land. However, presently, 63 of these borewells have dried up.

The NSG has identified vilayati kikar (*Prosopis juliflora*), a non-native plant species, as one of the factors contributing to the declining water table.

To address the issue of depleting water resources and to promote local biodiversity, the NSG has initiated a project.

This project covers an area of 1,000 acres on the campus, spanning a 5-km stretch. The primary goal of the project is to restore the Aravalli hills with indigenous plant species.

Importantly, the NSG is removing the vilayati kikar trees before planting new native saplings. This action is necessary because vilayati kikar is an invasive species that inhibits the growth of other plants in its vicinity.

### 13. Minister of Cooperation addressed 89th General Council meeting of the National Cooperative Development Corporation (NCDC)

**Source:** The post is based on the article “Minister of Cooperation addressed 89th General Council meeting of the National Cooperative Development Corporation (NCDC)” published in “PIB” on 10th October 2023

**What is the News?**

The Union Minister of Cooperation addressed the 89th General Council meeting of the National Cooperative Development Corporation (NCDC).

**What is the National Cooperative Development Corporation (NCDC)?**

The National Cooperative Development Corporation (NCDC) is a statutory Corporation set up under an Act of Indian Parliament in 1963.

**Parent Ministry:** Ministry of Cooperation

**Functions:**

- To plan, promote and finance programmes for production, processing, marketing, storage, export and import of agricultural produce, food stuffs, certain other notified commodities.
- To assist different types of cooperatives and to expand its financial base.
- To finance projects in the rural industrial cooperative sectors and for certain notified services in rural areas like water conservation, irrigation and micro irrigation, agri-insurance, agro-credit, rural sanitation, animal health, etc.



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- To give loans and grants to State Governments for financing primary and secondary level cooperative societies and direct to the national level and other societies having objects extending beyond one State.
- To go in for direct funding of projects under its various schemes of assistance on fulfillment of stipulated conditions.

### 14. Periodic Labour Force Survey(PLFS) Annual Report 2022-2023 Released

**Source:** The post is based on the article “Periodic Labour Force Survey(PLFS) Annual Report 2022-2023 Released” published in “PIB” on 10th October 2023

#### What is the News?

The National Sample Survey Office(NSSO) has released the Periodic Labour Force Survey (PLFS) Annual Report 2022-23.

#### What is the Periodic Labour Force Survey(PLFS)?

**Launched in:** 2017 by National Sample Survey Office(NSSO)

**Objectives:** To estimate the key employment and unemployment indicators (viz. Worker Population Ratio(WPR), Labour Force Participation Rate(LFPR), Unemployment Rate(UER)) in the short time interval of three months for the urban areas only in the ‘Current Weekly Status’ (CWS).

- To estimate employment and unemployment indicators in both ‘Usual Status’ (ps+ss) and CWS in both rural and urban areas annually.

#### Click Here to read more about PLFS

#### What are the key findings of PLFS Annual Report 2022-23?

**Labour Force Participation Rate(LFPR):** It increased significantly over the last six years, from 36.9 per cent in 2017-18 to 57.9 percent in 2022-23.

- In rural areas, LFPR increased from 50.7% in 2017-18 to 60.8% in 2022-23 while for urban areas it increased from 47.6% to 50.4%.

- LFPR for male in India increased from 75.8% in 2017-18 to 78.5% in 2022-23 and corresponding increase in LFPR for females was from 23.3% to 37.0%.

**Worker Population Ratio (WPR):** In rural areas, WPR increased from 48.1% in 2017-18 to 59.4% in 2022-23 while for urban areas it increased from 43.9% to 47.7%.

- WPR for male in India increased from 71.2% in 2017-18 to 76.0% in 2022-23 and the corresponding increase in WPR for females was from 22.0% to 35.9%.

**Unemployment Rate (UR):** India’s unemployment rate dropped to a six-year low in the financial year July-June 2022-23 to 3.2 per cent.

- In rural areas, UR decreased from 5.3% in 2017-18 to 2.4% in 2022-23 while for urban areas it decreased from 7.7% to 5.4%.

- UR for male in India decreased from 6.1% in 2017-18 to 3.3% in 2022-23 and corresponding decrease in UR for females was from 5.6% to 2.9%.

### 15. Smart fence along Myanmar border in the pipeline: govt.

**Source:** The post is based on the article “Smart fence along Myanmar border in the pipeline: govt.” published in “The Hindu” on 10th October 2023

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### What is the News?

The Government of India is planning to build an advanced smart fencing system of 100 km along the Myanmar border to strengthen the existing surveillance system.

### What is the Free Movement Regime(FMR) along the India Myanmar Border(IMB)?

India shares a 1,643-km border with Myanmar which passes through Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km) and Mizoram (510 km).

A Free Movement Regime (FMR) exists between India and Myanmar.

Under the FMR, every member of the hill tribes, who is either a citizen of India or a citizen of Myanmar and who is resident of any area within 16 km on either side of the Indo-

Myanmar border can cross the border on production of a border pass (one year validity) issued by the competent authority and can stay up to two weeks per visit.

The Manipur government has suspended the FMR since the 2020 post COVID-19 pandemic.

### Why was FMR conceptualized between India and Myanmar?

The border between India and Myanmar was demarcated by the British in 1826, without seeking the opinion of the people living in the region.

The border effectively divided people of the same ethnicity and culture into two nations without their consent.

Hence, that's why FMR was conceptualized to facilitate people-to-people contact. Apart from that, FMR was also supposed to provide impetus to local trade and business. The region has a long history of trans-border commerce through customs and border haats.

### Why is the Government now planning to build a smart fencing system along the India Myanmar Border?

Unfenced border and unregulated migration from Myanmar have been attributed as some of the factors responsible for the ethnic violence in Manipur.

In 2022, out of the 201 insurgency-related incidents registered in all the northeast States, as many as 137 incidents were registered in Manipur.

## 16. District Mineral Foundation Funds Transforming Lives of Mining Affected Areas / People

**Source:** The post is based on the article “**District Mineral Foundation Funds Transforming Lives of Mining Affected Areas / People**” published in “**PIB**” on 10th October 2023

### What is the News?

District Mineral Foundations (DMFs) have been set up in as many as 644 districts of 23 states/UTs which have DMF rules in place.

Seventeen states/UTs of the country have already formed DMF in all the districts.

### What is the District Mineral Foundation(DMF) Trust?

Section 9B of the Mines & Minerals (Development & Regulation) (MMDR) Act, 1957 empowers the State Government to establish District Mineral Foundation(DMF) Trust as a non profit body in all the Districts affected by mining for the benefit of the people and areas affected by mining activities.

The object of the DMF is to work for the interest and benefit of persons and areas affected by mining related operations in such a manner as may be prescribed by the State Government.

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### What is Pradhan Mantri Khanij Kshetra Kalyan Yojana(PMKKY)?

The Ministry of Mines launched the Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) in 2015.

**Purpose:** It is meant to provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations(DMFs).

**Objectives:** (a) to implement various developmental and welfare projects/programs in mining affected areas, and these projects/ programs will be complementing the existing ongoing schemes/projects of State and Central Government; (b) to minimize/mitigate the adverse impacts, during and after mining, on the environment, health and socio-economics of people in mining districts and (c) to ensure long-term sustainable livelihoods for the affected people in mining areas.

**Utilization of Funds:** PMKKKY provides for utilization of at least 60% of the funds for high priority areas like: (i) drinking water supply; (ii) environment preservation and pollution control measures; (iii) health care; (iv) education; (v) welfare of women and children; (vi) welfare of aged and disabled people; (vii) skill development; and (viii) sanitation.

The remaining 40% of the funds shall be utilized for other priority areas (i) physical infrastructure; (ii) irrigation; (iii) energy and watershed development; and (iv) any other measures for enhancing environmental quality in mining districts.

### 17. What is multimodal artificial intelligence and why is it important?

**Source:** The post is based on the article “What is multimodal artificial intelligence and why is it important?” published in “The Hindu” on 10th October 2023

#### What is the News?

This article talks about Multimodal artificial intelligence and its importance.

#### What is Multimodal artificial intelligence?

Multimodal artificial intelligence refers to a type of AI system that can understand and process information from multiple modalities or sources, such as text, images, videos, audio, and other forms of data simultaneously.

This means it can analyze and extract insights from various types of data to gain a more comprehensive understanding of a situation or problem.

Some notable developments in multimodal AI include **OpenAI’s GPT-3.5 and GPT-4 models**, which can analyze images and engage in spoken conversations and Google’s multimodal large language model called **Gemini** which leverages its vast image and video database for understanding multiple modalities.

#### Why is Multimodal artificial intelligence important?

**Enhanced Understanding:** Multimodal AI can provide a richer and more nuanced understanding of data by combining information from different sources. For example, it can analyze both the text and images in a news article to gain a deeper understanding of the content.

**Improved Accuracy:** Combining data from multiple modalities can lead to improved accuracy in tasks like natural language processing (NLP), computer vision, and speech recognition. It helps AI systems make more informed decisions.

**Real-World Applications:** Multimodal AI has a wide range of practical applications, such as in healthcare (integrating medical images with patient records), autonomous vehicles (processing

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both visual and sensor data), and content recommendation systems (analyzing text and user behavior).

**Better User Experience:** In applications like virtual assistants or chatbots, multimodal AI can better understand and respond to users by considering both their spoken words and visual cues.

**Problem Solving:** Multimodal AI can help address complex problems that require insights from different data sources. For instance, in disaster response, it can analyze text reports, satellite images, and sensor data to assess the situation and plan a response.

### 18. Claudia Goldin wins 2023 Economics Nobel Prize for research on workplace gender gap

**Source:** The post is based on the article “Claudia Goldin wins 2023 Economics Nobel Prize for research on workplace gender gap” published in “The Hindu” on 10th October 2023

#### What is the News?

The Nobel Prize for economics has been awarded to Harvard University professor Claudia Goldin for her research that has advanced the understanding of the gender gap in the labour market.

#### Who is Claudia Goldin?

Claudia Goldin was born in 1946. She currently holds the position of Henry Lee Professor of Economics at Harvard University.

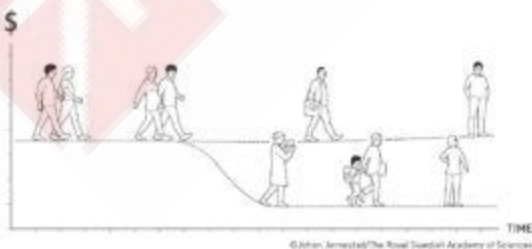
**Work on Gender gap in labour market:** Claudia Goldin’s extensive research on gender disparities in the labor market spanning over 200 years reveals several key insights:

– **U-Shaped Female Labor Force Participation:** Female participation in the labor market doesn’t show a consistent upward trend over time. Instead, it follows a U-shaped curve. Initially, it declined as society shifted from agrarian to industrial in the early 19th century. It later increased with the growth of the service sector in the early 20th century. This pattern is influenced by changes in economic structure and evolving societal norms about women’s roles.

– **Education and the Contraceptive Pill:** Women’s education levels have steadily risen throughout the 20th century and often surpass those of men in high-income countries. Access to contraception, notably the contraceptive pill, played a vital role in enabling women to plan their careers more effectively.

– **Persistent Earnings Gap:** Despite modernization, economic growth and increased female employment, the earnings gap between men and women remained largely unchanged for a long time.

– This is because young women’s expectations for their careers are often shaped by the experiences of previous generations such as their mothers who delayed their return to work until their children were older.



– **Impact of Motherhood:** Goldin’s research indicates that the bulk of the gender earnings gap now exists between men and women in the same occupation and it primarily emerges after the



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birth of the first child. This suggests that parenthood significantly influences the gender pay gap in contemporary times.

### 19. What is Hemochromatosis, the rare genetic disorder that causes organ dysfunction?

**Source:** The post is based on the article “What is Hemochromatosis, the rare genetic disorder that causes organ dysfunction?” published in “Hindustan Times” on 11th October 2023

#### What is the News?

Health experts have revealed all about Hemochromatosis or ‘bronze diabetes’.

#### What is Hemochromatosis?

Hemochromatosis is a disorder associated with deposits of excess iron that causes multiple organ dysfunction.

The organs affected by hemochromatosis include the liver, pancreas, heart, thyroid, joints, skin, gonads and pituitary.

Hemochromatosis has been dubbed “**bronze diabetes**” because of the skin darkening and concomitant pancreatic illness.

**Types:** It is primarily classified into two types:

**Hereditary hemochromatosis:** It is a genetic disorder driven by a mutation in the HFE gene, resulting in individuals being homozygous for the C282Y variant.

– This genetic anomaly sets the stage for a lifelong struggle with excessive iron absorption within the intestines.

**Secondary hemochromatosis:** It differs from the hereditary form as it is typically caused by external factors like frequent blood transfusions, excessive iron supplementation, or certain medical conditions.

– The iron accumulation in secondary hemochromatosis is often more rapid and can have a similar impact on organ function.

**Symptoms:** With the buildup of harmful levels of iron, hemochromatosis can cause symptoms including feeling tired or weak, pain in the joints, pain in the abdomen over the liver and darkening of skin color.

**Treatment:** Treatment options include therapeutic phlebotomy, which involves regular blood removal to reduce iron levels and iron-chelating medications to help manage iron overload. Phlebotomy is usually performed once or twice a week.

### 20. RBI proposes card-on-file tokenization for debit and credit cards: What this means for online shoppers

**Source:** The post is based on the article “RBI proposes card-on-file tokenization for debit and credit cards: What this means for online shoppers” published in “TOI” on 10th October 2023

#### What is the News?

The Reserve Bank of India (RBI) Governor has recently proposed the introduction of card-on-file tokenization (CoFT) facility at the issuer-bank level.



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### What is Tokenisation?

Tokenisation replaces a debit or credit card's 16-digit number with a unique token that is specific to the user's card and specific for one merchant at a time.

The token hides the true details of your card, so that in case a data leak happens from the merchant website, the hackers cannot misuse the card. This token contains no personal information and keeps changing.

Tokens can be used for online transactions, mobile point-of-sale transactions, or in-app transactions. A customer can choose whether or not to let his, her card tokenized.

### What has RBI announced now for card-on-file tokenization (CoFT) facility?

RBI has introduced Card-on-File Tokenization (CoFT) in 2021 and began implementation from 2022.

Until now, the cardholders had to create different tokens through each merchant's application or webpage. This would require time and effort from the users.

Going forward, tokens will be created at the issuer bank level and linked to their existing accounts with various e-commerce applications.

This will eliminate the duplication of the tokenization process at each app or website along with increased transaction security resulting in reduced card-data-related frauds.

## 21. NeGD launches State Capacity Building Workshops Under Digital India programme

**Source:** The post is based on the article "NeGD launches State Capacity Building Workshops Under Digital India programme" published in "PIB" on 10th October 2023

### What is the News?

National e-Governance Division, Ministry of Electronics & Information Technology is organizing State Capacity Building Workshops under its Capacity Building Scheme.

These workshops aim to help people understand how emerging technologies can enhance service delivery and how to create policies and strategies for the changing digital environment.

### What is Capacity Building scheme?

Capacity Building scheme under Digital India programme envisions building adequate and relevant capacities at all levels in the Government.

**Launched in:** The scheme was initially approved in 2008. In 2015, the scheme was continued under Digital India programme.

**Implemented by:** National e-Governance Division, Ministry of Electronics & Information Technology.

### What is the Digital India Programme?

The Digital India programme was launched by the Prime Minister in 2015.

**Aim:** To transform India into a knowledge-based economy and a digitally empowered society by ensuring digital services, digital access, digital inclusion, digital empowerment and bridging the digital divide.

**The programme is coordinated by the** Ministry of Electronics & Information Technology (MeitY) with the Ministries and Departments in the Central and State Governments partnering it in their respective domain areas.

### Major Initiatives under Digital India Programme:

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**Aadhaar:** Aadhaar provides 12 digit biometric and demographic based identity that is unique, lifelong, online and authenticable.

**Common Services Centres** – CSCs are offering government and business services in digital mode in rural areas through Village Level Entrepreneurs (VLEs).

**DigiLocker:** Digital Locker provides an ecosystem with a collection of repositories and gateways for issuers to upload the documents in the digital repositories.

**Unified Mobile Application for New-age Governance (UMANG)** – for providing government services to citizens through mobile.

**MyGov** – It is a citizen engagement platform that is developed to facilitate participatory governance.

**CO-WIN** – It is an open platform for management of registration, appointment scheduling & managing vaccination certificates for Covid-19.

**Jeevan Pramaan:** Jeevan Pramaan envisages to digitize the whole process of securing the life certificate for Pensioner.

**National Knowledge Network:** A high speed data communication network has been established to interconnect Institution of higher learning, and research.

**Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA):** It aims to usher in digital literacy in rural India by covering 6 Crore rural households (one person per household).

**FutureSkills Prime:** It was launched by MeitY in collaboration with NASSCOM. It aims at re-skilling/ up-skilling IT professionals in 10 new/emerging technologies which include Augmented/Virtual Reality, Internet of Things, Big Data Analytics, Artificial Intelligence among others.

### 22. **Gaganyaan” Test Vehicle Space flight, that is, “Gaganyaan” Test Vehicle Development flight (TV-D1) scheduled on 21st October, says Union Minister**

**Source:** The post is based on the article **“Gaganyaan Test Vehicle Space flight, that is, “Gaganyaan” Test Vehicle Development flight (TV-D1) scheduled on 21st October, says Union Minister”** published in **“PIB” on 10th October 2023**

#### **What is the News?**

The Union Minister has announced that the “Gaganyaan” Test Vehicle Development flight (TV-D1) will be launched from Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

#### **What is Test Vehicle Development Flight (TV-D1)?**

Test Vehicle Development Flight (TV-D1) is intended to test the ‘crew module ’ or the part of the Gaganyaan vehicle where the Indian astronauts will be housed.

The test involves launching the crew module to outer space and bringing it back to earth and recovering it after touchdown in the Bay of Bengal.

Additionally, there’s a crew escape system that can safely return the astronauts to the sea if there are any issues during the launch.

The success of this test will set the stage for the first unmanned “Gaganyaan” mission and ultimately manned mission to outer space in low earth orbit.

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### What is Gaganyaan Mission?

Gaganyaan mission envisages demonstration of human spaceflight capability by launching a human crew to an orbit of 400 km and bringing them back safely to earth, by landing in Indian sea waters.

The prerequisites for Gaganyaan mission include development of many critical technologies including 1) human rated launch vehicle for carrying crew safely to space 2) Life Support System to provide an earth like environment to crew in space and 3) crew emergency escape provision and evolving crew management aspects for training, recovery and rehabilitation of crew.

The mission is expected to be executed in the second half of 2024.

[Click Here to read more](#)

### 23. State-owned NBFCs put under PCA norms

**Source:** The post is based on the article “State-owned NBFCs put under PCA norms” published in “The Hindu” on 11th October 2023

#### What is the News?

The Reserve Bank of India(RBI) has announced that it will bring state-owned non-banking finance companies(NBFCs) under the prompt corrective action (PCA) framework from October 2023.

#### What is the Prompt corrective action (PCA) framework?

Prompt Corrective Action or PCA is a framework under which financial institutions with weak financial metrics are put under watch by the RBI.

The objective of the PCA framework is to enable supervisory intervention at appropriate time and require the supervised entity to initiate and implement remedial measures in a timely manner, so as to restore its financial health.

The framework is also intended to act as a tool for effective market discipline.

The framework also does not preclude the Reserve Bank of India from taking any other action as it deems fit at any time in addition to the corrective actions prescribed in the framework.

The PCA Framework for NBFCs came into effect from October 1, 2022 based on the financial position of NBFCs on or after March 31, 2022.

#### What happens when an NBFC is put under the PCA framework?

The RBI has drawn up a menu of corrective actions for NBFCs/ core investment companies (CICs), depending on the level of breach of the risk threshold. These actions include:

1) Restriction on dividend distribution/remittance of profit 2) requiring promoters/shareholders to infuse equity and reduce leverage 3) restriction on issue of guarantees or taking on other contingent liabilities on behalf of group companies (only for CICs) 4) restriction on branch expansion; special supervisory actions and 5) discretionary actions related to governance, capital, profitability and business.

### 24. India, Italy ink agreement to boost defence cooperation

**Source:** The post is based on the article “India, Italy ink agreement to boost defence cooperation” published in “PIB” on 10th October 2023

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### What is the News?

India and Italy have signed an agreement on defence cooperation.

### What is the purpose of India-Italy agreement on Defence cooperation?

The agreement will promote bilateral cooperation in areas such as security and defence policy, research and development, education in the military field, maritime domain awareness, sharing of defence information and industrial cooperation including co-development, co-production and setting up of joint ventures.

### How are the trade relations between India and Italy?

Italy is India's fourth largest European trading partner and the 12th largest foreign investor in the country with FDI reaching the US\$2 billion mark in 2020.

The bilateral trade between India and Italy, has reached around US\$ 16 Billion in 2022.

Over 600 Italian companies are present in India, and Italy has previously identified India amongst its top five priority countries for business.

India's primary exports to Italy comprise metals such as iron and steel, leather, chemicals, gems, and jewellery.

The relationship between India and Italy was elevated to strategic partnership in March 2023 during the visit of the Italian Prime Minister to India.

In 2021, India and Italy inked a Strategic Partnership on Energy Transition to advance collaboration on areas like green hydrogen and bio-fuels and Italy also joined the successful India-France led International Solar Alliance comprising over 90 members.

## 25. Competition Commission of India to host 8th BRICS International Competition Conference

**Source:** The post is based on the article “Competition Commission of India to host 8th BRICS International Competition Conference” published in “PIB” on 10th October 2023

### What is the News?

The Competition Commission of India (CCI) will be hosting the 8th BRICS International Competition Conference (BRICS ICC) 2023.

### What is BRICS International Competition Conference(BRICS ICC)?

BRICS International Competition Conference (BRICS ICC) is an important event under the framework of the BRICS Leaders' Meeting.

The conference is held biennially by the BRICS competition authorities on a rotation basis.

The conference was established at the meeting of the Heads of State of BRICS (then BRIC) countries in Yekaterinburg, Russia in 2009.

The first conference was organized by Russia in September 2009, followed by China (2011), India (2013), South Africa (2015), and Brazil (2017).

### Who is hosting the 8th BRICS International Competition Conference (BRICS ICC) 2023?

**Hosted by:** Competition Commission of India (CCI)

**Aim:** To provide a platform for promoting cooperation, experience sharing and mutual learning amongst the competition authorities of BRICS countries.

**Theme:** 'New Issues in Competition Law and Policy – Dimensions, Perspectives, Challenges'.



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### 26. National Security Council Secretariat organizes the 2nd Edition of the National Cyber Security Exercise 'Bharat NCX 2023'

**Source:** The post is based on the article “National Security Council Secretariat organizes the 2nd Edition of the National Cyber Security Exercise ‘Bharat NCX 2023’” published in “PIB” on 10th October 2023

#### What is the News?

The second edition of the National Cyber Security Exercise — ‘Bharat NCX 2023’ — is being conducted over a period of 12 days.

#### What is Exercise Bharat NCX 2023?

**Conducted by:** National Security Council Secretariat (NSCS) in strategic partnership with Rashtriya Raksha University (RRU)

**Aim:** To train senior management and technical personnel of Government/Critical Sector organizations and Public and Private agencies on contemporary cyber threats and handling cyber incidents and response.

– The participants will be trained on various key cyber security areas such as Intrusion Detection Techniques, Malware Information Sharing Platform (MISP), Vulnerability Handling & Penetration Testing, Network Protocols & Data Flows, Digital Forensics etc.

**Significance:** Bharat NCX India will help strategic leaders to better understand cyber threats, assess readiness, and develop skills for cyber crisis management and cooperation.

– This will also help develop and test cybersecurity skills, teamwork, planning, communication, critical thinking and decision-making.

### 27. What is Hamas, the Palestinian militant group?

**Source:** The post is based on the article “What is Hamas, the Palestinian militant group?” published in “The Hindu” on 11th October 2023

#### What is the News?

Israel and the armed Palestinian group Hamas are locked in an escalating conflict that has left thousands of people dead

#### What is Hamas?

Hamas stands for the Islamic Resistance Movement and in Arabic means “zeal”.

The group politically controls the Gaza Strip, a territory of about 365 sq km.

Hamas has been in power in the Gaza Strip since 2007 after a brief war against Fatah forces loyal to President Mahmoud Abbas, the head of the Palestinian Authority and Palestine Liberation Organization (PLO).

#### When was Hamas formed and what is its aim?

The Hamas movement was founded in Gaza in 1987 after the start of the first Intifada, an uprising against Israel’s occupation of the Palestinian territories.

The movement started as an offshoot of the Muslim Brotherhood in Egypt and created a military wing to pursue an armed struggle against Israel with the aim of liberating historic Palestine.

Unlike the PLO, Hamas does not recognise Israel’s statehood but accepts a Palestinian state on 1967 borders.



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The group as whole or in some instances its military wing is designated as a “terrorist” organization by Israel, the United States, European Union, Canada, Egypt and Japan.

What is the Gaza Strip?



**Source:** BBC

The Gaza Strip is a 41km (25-mile) long and 10km-wide territory between Israel, Egypt and the Mediterranean Sea.

Israel controls the airspace over Gaza and its shoreline and restricts who and what goods are allowed in and out through its border crossings. Similarly, Egypt controls who passes in and out through its border with Gaza.

According to the UN, about 80% of the population of Gaza depends on international aid, and about one million people rely on daily food aid.

### 28. Generic drugs are everywhere – and that’s a problem

**Source:** This post has been created based on the article “” published in **The Indian Express** on **12<sup>th</sup> October 2023**.

**UPSC Syllabus Topic: GS Paper 2 Social Justice — Issues relating to development and management of Social Sector/Services relating to Health.**

**News:** This article discusses the issue of unbranded generic drugs and the related problem of substandard and spurious drugs. It also highlights the need for Good Manufacturing Practices in the pharmaceutical sector to tackle these challenges.

**What are some allegations raised with respect to pharmaceutical companies?**

Manipulation of trials, hiding of side effects, establishing monopolies through patents and other means, bribing doctors and harming patients.

Asymmetric information with respect to pharmaceuticals leads to uninformed choice, and health-care costs for patients are also unnecessarily increased.

However, there is only a small amount of truth in all these allegations.

The real issue is the cost of drugs, since medicines account for a large share of costs, especially if it is out-of-pocket.

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Unregulated markets where tax evasion, spurious and substandard drugs, non-adherence to temperature and lack of other quality controls takes place, are also a cause of concern.

### What are the different types of medicine?

Broadly, medicines are of three types:

- (1) Still on patent and therefore, a brand;
- (2) Off patent and generic, but nonetheless produced by a reputed company, with a brand;
- (3) Off-patent, generic and unbranded.

For a particular course of treatment, there may be a choice and substitution between (1), (2) and (3), with variations in side effects as well as prices.

### What is the status of pharmaceutical manufacturing?

**Out of the 8,500 drug-manufacturing MSMEs, only 2,000 are GMP-compliant** (GMP = Good Manufacturing Practices).

**Enforcement of the Drugs and Cosmetics Act**, and also the **lack of enforcement**, increases the problem.

**Mashelkar Committee 2003 on drug regulatory issues** had stated that, “the extent of **substandard drugs varied from 8-10%** and spurious drugs (fake, counterfeit drugs) are less than half a percent.”

### What are the issues with unbranded generic medicine?

**Additional health costs of substandard generic drugs not taken into account:** Unbranded generic medicines are being pushed through **Jan Aushadi outlets** due to their prices being cheaper. However, there is a **health cost of substandard drugs** which is not being taken into account.

**Undue Influence by big pharma companies:** Pharma companies may lobby and influence pharmacies which will sell these generic medicines, just like they do with doctors.

A lack of information about the effects of unbranded generic medicines hampers patients' freedom of choice.

## 29. Elusive dancing frogs of Western Ghats a threatened species: Global Amphibian Assessment report

**Source:** The post is based on the article “**Elusive dancing frogs of Western Ghats a threatened species: Global Amphibian Assessment report**” published in “**Deccan Herald**” on **11th October 2023**

### What is the News?

The Second Global Amphibian Assessment report has been released.

### What is Global Amphibian Assessment?

It is a comprehensive analysis of 8,011 species worldwide.

The analysis was led by Re:wild, Synchronicity Earth and the IUCN SSC Amphibian Specialist Group.

### What are the key findings of the Second Global Amphibian Assessment Report?

**Amphibians on the brink of extinction:** Around 41% of amphibian species are on the brink of extinction.

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– This means around two out of every five amphibian species are at risk of extinction.

**Major threats to amphibians include** climate change, habitat loss, disease, fire, invasive species and over-exploitation.

**Out of 426 amphibian species assessed in India,** 139 are threatened (Critically Endangered, Endangered, and Vulnerable).

**Region rich in Amphibian Diversity:** The Western Ghats, a biodiversity hotspot spread across Kerala, Karnataka and Tamil Nadu is rich in amphibian diversity.

– However, around 64 species of amphibians found in the Western Ghats are on the list of endangered species.

– The *Micrixalus* genus (dancing frogs) in the Western Ghats is the most threatened frog genus in India.

**Note:** Dancing Frogs are endemic to the Western Ghats of India. They have a curious habit of waving their hind legs to defend their territory from intruding males during the breeding season.

– Nyctibatrachidae (night frogs) are also highly threatened in southern states.

**Amphibian Recovery Project:** Wildlife Trust of India has launched Amphibian Recovery Project in the Munnar Landscape of Kerala.

– The project is actively working to recover the population of threatened amphibians by addressing the challenges that cause the risk of extinction.

– Currently, the project is focussing on 5 species —Deccan Night Frog (Endangered), Resplendent Resplendent shrub frog (Endangered), Kadalar Swamp Frog (Endangered), Anaimalai Flying Frog (Vulnerable), and Meowing Night Frog (Near Threatened).

### 30. India launches Op Ajay to bring home citizens from Israel-Hamas war zone

**Source:** The post is based on the article “**India launches Op Ajay to bring home citizens from Israel-Hamas war zone**” published in “**Indian Express**” on 12th October 2023

**What is the News?**

India has launched Operation Ajay to facilitate the return of citizens from Israel amid a full-blown war with the Hamas group in Gaza.

**What is Operation Ajay?**

**Launched by:** India

**Aim:** To facilitate the return of citizens from Israel amid a full-blown war with the Hamas group in Gaza.

**What are the other similar operations of India?**

**Operation Dost:** It was the search and rescue operation initiated by the Government of India to aid Syria and Turkey, after the 2023 Turkey–Syria earthquake devastated both countries.

**Operation Kaveri:** It is a mission by India to evacuate its nationals from violence-hit Sudan.

**Operation Ganga:** It was launched to help stranded Indian nationals come back to India from Ukraine through special flights amidst the Russian invasion of Ukraine.

**Operation Devi Shakti:** Under this Operation, Indians and foreign nationals are being evacuated from Afghanistan following the Taliban’s takeover of the nation.

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**Operation Raahat:** It was launched by the Indian Armed Forces, to evacuate Indian citizens and foreign nationals of 41 countries from Yemen during the 2015 Yemen Crisis.

**Operation Maitri:** It was a rescue and relief operation in Nepal carried out by the government of India and Indian armed forces in the aftermath of the 2015 Nepal earthquake.

**Operation Safe Homecoming:** It was an operation launched by the Indian government in 2011 to evacuate its citizens, fleeing from the Libyan Civil War.

### 31. **Russia may pull out of Comprehensive Nuclear Test Ban Treaty(CTBT): How the treaty tried — and failed — to stop nuclear testing**

**Source:** The post is based on the article “**Russia may pull out of Comprehensive Nuclear Test Ban Treaty(CTBT): How the treaty tried — and failed — to stop nuclear testing**” published in “**Indian Express**” on 12th October 2023

**What is the News?**

Russia might revoke its ratification of the Comprehensive Nuclear Test Ban Treaty(CTBT).

**What is the Comprehensive Nuclear Test Ban Treaty(CTBT)?**

CTBT is a multilateral treaty that bans all nuclear explosions, whether for military or peaceful purposes.

The treaty was adopted by the **United Nations General Assembly in 1996.**

**For the treaty to enter into force,** it must be signed and ratified by 44 specific nuclear technology holder countries. But the eight of these 44 countries have not ratified the agreement yet. These eight countries are: China, Egypt, **India**, Iran, Israel, North Korea, Pakistan and the **United States.**

**Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization (CTBTO):** It is an international organization established by the States Signatories to the Treaty on 19 November 1996 and has its headquarters in Vienna, Austria.

– The objective of the organization is to achieve the object and purpose of the Treaty, to ensure the implementation of its provisions, including those for international verification of compliance with the Treaty and to provide a forum for consultation and cooperation among Member States.

**How did the Comprehensive Nuclear Test Ban Treaty(CTBT) come into being?**

**Nuclear Tests in 1940's:** USA conducted the world's 1st successful nuclear weapons test in 1945 whereas the Soviet Union tested its 1st nuclear weapon in 1949. These tests triggered a decades-long arms race between the two superpowers. Between 1945 and 1996, more than 2,000 nuclear tests were carried out.

**Limited Nuclear Test-Ban Treaty (LTBT), 1963:** It prohibited nuclear testing in the atmosphere, outer space, and underwater, but underground tests were still permitted.

**Threshold Test Ban Treaty (TTBT):** The US and Soviet Union agreed to sign the Threshold Test Ban Treaty (TTBT), which established a nuclear threshold by banning the two countries from conducting tests that would produce a yield exceeding 150 kilotons (equivalent to 150,000 tons of TNT).

**CTBT:** A major breakthrough came after the Cold War ended through the CTBT in 1996 that will prohibit all nuclear weapons tests and other nuclear explosions upon its entry into force.



## Factly Compilation for the Month of October (Second Week) 2023

### Did the CTBT stop nuclear testing?

Since the CTBT, 10 nuclear tests have taken place. India conducted two in 1998, Pakistan also two in 1998, and North Korea conducted tests in 2006, 2009, 2013, 2016 (twice) and 2017.

The United States last tested in 1992, China and France in 1996 and the Soviet Union in 1990. Russia, which inherited most of the Soviet nuclear arsenal, has never conducted a nuclear test.

### 32. What the GI tag can mean for the cashew industry in Goa

**Source:** The post is based on the article “What the GI tag can mean for the cashew industry in Goa” published in “Indian Express” on 12th October 2023

#### What is the News?

Goan cashew (kernel) has been granted the geographical indication (GI) tag.

#### How did cashew come to Goa and become a contributor to the economy?

Cashew was native to northeast Brazil in Latin America and was introduced to Goa by the Portuguese in the 16th century (1570).

At the time of its introduction on Indian coasts, cashew was known mainly as a crop for afforestation and soil conservation.

However, the economic value of cashew nuts became known about a century after its introduction.

The first cashew factory in Goa started operations in 1926 and the first consignment of cashew kernels was exported in 1930.

By 1961, the cashew processing industry accounted for about 60% of industrial production in Goa, a bulk of which was exported.

#### What is the significance of Goan Cashew getting GI Tag?

Cashew manufacturers and processors in Goa have said that the GI tag for Goan cashew would help consumers differentiate between authentic Goan cashews and cashews sourced from outside the state which are often marketed as ‘Goan cashews’.

### 33. Cabinet approves establishment of an autonomous body Mera Yuva Bharat

**Source:** The post is based on the article “Cabinet approves establishment of an autonomous body Mera Yuva Bharat” published in “PIB” on 12th October 2023

#### What is the News?

The Union Cabinet has approved the establishment of an autonomous body Mera Yuva Bharat (MY Bharat).

#### What is Mera Yuva Bharat (MY Bharat)?

Mera Yuva Bharat (MY Bharat) will be an autonomous body.

**Purpose:** To support youth development and youth-led development with the help of technology.

– To create a platform that encompasses the entire government’s efforts for youth development.

**Target group:** Mera Yuva Bharat will benefit the youth in the age-group of 15-29 years, in line with the definition of ‘Youth’ in the National Youth Policy.

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– In case of programme components specifically meant for adolescents, the beneficiaries will be in the age-group of 10-19 years.

**Features:** The body will allow youth to get access to resources & connection to opportunities. This will help them become community change agents and nation builders. This will also allow them to act as the Yuva Setu between the Government and the citizens.

**Key expected outcomes:** The establishment of MY Bharat will lead to achieve several key outcomes.

These include: 1) enhancing youth leadership skills 2) cultivating them as social innovators and community leaders 3) empowering them to become active drivers of development 4) aligning their aspirations with community needs 5) providing a unified platform for both young individuals and ministries and 6) facilitating two-way communication to connect youth with government initiatives.

### 34. Why Gaza is known as the world's biggest 'open air prison'

**Source:** The post is based on the article “Why Gaza is known as the world's biggest ‘open air prison’” published in “Indian Express” on 12th October 2023

#### What is the News?

Israel has announced a “total blockade” of Gaza, which includes a ban on food, water, fuel and electricity supplies.

Israel is able to impose such conditions on Gaza because Gaza has been under an air, land and sea blockade by Israel since 2007.

#### Where is Gaza?



**Source:** BBC

Gaza is a strip located on the Mediterranean Sea. It is one of two Palestinian territories, the other being the occupied West Bank.

Gaza is separated from Israel by a separation barrier and it has a southern border crossing with Egypt.

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It is under the control of the militant Islamist group Hamas since 2007.

Since then, Israel and Egypt have restricted the movement of goods and people in and out of Gaza saying their blockade is needed for security reasons.

### Why is Gaza called an Open Air Prison?

According to the U.N. Relief and Works Agency for Palestine Refugees in the Near East, the socioeconomic situation in Gaza has been in steady decline for more than a decade.

Longstanding restrictions on the movement of people and goods to and from Gaza have made living conditions extremely difficult.

Israel prevents all access to and from the Gaza Strip by sea and air. Movement of people and goods is restricted to three crossings: Rafah crossing, controlled by Egypt and Erez and Kerem Shalom crossings, controlled by Israel.

Around 63% of the population of Gaza is considered food-insecure, and 81% are living in poverty. Access to clean water and electricity were at crisis levels even before this month's hostilities.

Hence, due to these conditions created by the blockade, many experts refer to Gaza as an "open air prison".

### 35. Watermeal: Earth's tiniest flowering plant could feed and oxygenate astronauts in space

**Source:** The post is based on the article "Watermeal: Earth's tiniest flowering plant could feed and oxygenate astronauts in space" published in "Wion" on 12th October 2023

#### What is the News?

Scientists from Thailand are conducting groundbreaking research into the potential of Watermeal plants as a source of nutrition and oxygen for astronauts.

#### What is Watermeal?



Watermeal is the world's smallest flowering plant. It is known for its tiny size and floating habit on water bodies. It lacks roots, stems, or leaves.

Watermeal thrives in quiet, nutrient-rich freshwater environments like ponds, lakes and marshes.

It is also a producer of oxygen through photosynthesis and a rich source of protein. In Thailand, it has been part of the local diet for generations.

## Factly Compilation for the Month of October (Second Week) 2023

Why can watermeal be a source of nutrition and oxygen for astronauts?

**Firstly**, watermeal doesn't have any roots, stems or leaves. It is basically just a sphere floating on a body of water. That means we can focus directly on the effects that gravity shifts will have on its growth and development.

**Secondly**, as a complete protein, it offers astronauts a sustainable source of essential amino acids.

**Thirdly**, watermeal is a producer of oxygen. This means it can be vital for life support systems in space.

### 36. Cabinet approves royalty rates for mining of three critical and strategic minerals- Lithium, Niobium and Rare Earth Elements (REEs)

**Source:** The post is based on the article “Cabinet approves royalty rates for mining of three critical and strategic minerals- Lithium, Niobium and Rare Earth Elements (REEs)” published in “PIB” on 12th October 2023

What is the News?

The Union Cabinet has approved a royalty rate for lithium, niobium, and for Rare Earth Elements (REEs).

**Background:**

Recently, the Mines and Minerals (Development and Regulation) Amendment act, 2023 was passed by the Parliament.

The amendment delisted six minerals including Lithium and Niobium, from the list of atomic minerals, thereby allowing grant of concessions for these minerals to the private sector through auction.

Further, the amendment provided that mining lease and composite license of 24 critical and strategic minerals including Lithium, Niobium and REEs (not containing Uranium and Thorium) shall be auctioned by the Central Government.

Why have new royalty rates been approved for lithium, niobium and Rare Earth Elements (REEs)?

The Second Schedule of the MMDR Act provides royalty rates for various minerals.

The act currently specifies a royalty rate of 12% of the average sale price (ASP) for minerals that are not specifically listed in that Schedule. This rate is much higher than global benchmarks.

Hence, that's why new royalty rates have been specified by amending the Second Schedule of the Mines and Minerals (Development and Regulation) Act, 1957.

These amendments effectively aligns India's royalty rates with global benchmarks and paves the way for commercial exploitation of these minerals through auctions, which can be conducted by the Centre or states.

What are Lithium, Niobium and Rare Earth Elements(REEs)?

**Lithium:** It is an alkali metal. It is one of the key components in rechargeable batteries that find usage in mobiles, laptops, electric vehicles, and medical devices like pacemakers. It is also used in energy storage solutions.

**Rare earth elements:** It refers to a group of 17-odd minerals that cover ones like scandium, yttrium, and cerium, among others. Most of these are used as catalysts and magnets, with the



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most common usage being in alloys, glass, electronics, petroleum extraction, electric motors of hybrid and EVS and wind turbines, among others.

**Niobium:** It is a silvery metal with a layer of oxide on its surface which makes it resistant to corrosion.

– It is used in alloys, including stainless steel, to improve their strength, particularly at low temperatures.

– Alloys containing niobium are used in jet engines, beams and girders for buildings, and oil and gas pipelines. Given its superconducting properties, it is also used in magnets for particle accelerators and MRI scanners.

– The main source of Niobium is the mineral columbite, which is found in countries such as Canada, Brazil, Australia, and Nigeria.

### 37. 3.21 lakh appeals pending with Information Commissions: report

**Source:** The post is based on the article “3.21 lakh appeals pending with Information Commissions: report” published in “The Hindu” on 12th October 2023

#### What is the News?

The ‘Report Card on the Performance of Information Commissions in India, 2022-23’ has been released.

The report has been compiled based on the performance of Information Commissions across the country and on information accessed under the Right to Information (RTI) Act by the Satark Nagrik Sangathan (SNS), a citizens’ group working to promote transparency and accountability in governance.

#### What are the key findings of the report?

**Pending appeals:** More than 3 lakh appeals and complaints are pending in 27 State Information Commissions across the country.

– **Note:** In 2019, there were 2.1 lakh pending appeals/complaints. This number increased to 2.8 lakh in 2021 and then surpassed three lakh by 2022.

**Vacancies:** Four Information Commissions, namely Jharkhand, Telangana, Mizoram and Tripura are defunct because no new Information Commissioners were appointed after the incumbents left their positions.

– Further, six Information Commissions are currently without a head including the Central Information Commission and the State Information Commissions of Manipur, Chhattisgarh, Maharashtra, Bihar and Punjab.

**Time taken to dispose of an appeal:** West Bengal takes around 24 years and one month to dispose of an appeal. In comparison, Uttar Pradesh may take seven months to clear an appeal.

Maharashtra with the highest pendency cases may take four years and three months to clear a case.

### 38. Pharmacopoeial Discussion Group welcomes Indian Pharmacopoeia Commission as a member

**Source:** The post is based on the article “Pharmacopoeial Discussion Group welcomes Indian Pharmacopoeia Commission as a member” published in “PIB” on 14th October 2023

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### What is the News?

Indian Pharmacopoeia Commission (IPC) has joined as a member of the Pharmacopoeial Discussion Group(PDG).

IPC officially joined as a member of PDG at the PDG's Annual Meeting in Hyderabad.

### What is the Indian Pharmacopoeia Commission(IPC)?

[Click Here to read](#)

### What is Pharmacopoeial Discussion Group(PDG)?

PDG was established in 1989 by the European Union(EU), Japan and United States Pharmacopoeial Convention.

The World Health Organization joined it as an observer in 2001.

**Objective:** To reduce the challenges faced by drug manufacturers who have to conduct tests differently and meet various quality standards to comply with drug regulations that vary from country to country.

### What are the benefits of the Indian Pharmacopoeia Commission joining Pharmacopoeial Discussion Group(PDG)?

Enhances the international visibility and recognition of the Indian Pharmacopoeia.

Leads to the production of high-quality pharmaceutical products that meet global standards benefiting both domestic and export markets.

Will enable the Indian Pharmacopoeia commission to collaborate and align pharmacopoeial standards with major international regulatory authorities.

Helps improve the acceptance of Indian medicinal products in global markets.

Helps reduce trade barriers and facilitate the global trade of pharmaceutical products.

## 39. 'Project Nilgiri Tahr' launched in Tamil Nadu

**Source:** The post is based on the article "Project Nilgiri Tahr launched in Tamil Nadu" published in "The Hindu" on 14th October 2023

### What is the News?

Tamil Nadu has launched 'Project Nilgiri Tahr'.

### What is Project Nilgiri Tahr?

**Launched by:** Tamil Nadu

**Objectives:** 1) To develop better understanding of Nilgiri Tahr population, distribution and ecology 2) To re-introduce Nilgiri Tahr to their historic habitats 3)To address the threats to Nilgiri Tahr and 4) To increase awareness among public about the Nilgiri Tahr.

**Activities under the project:** The project will involve doing surveys every six months, keeping track of Nilgiri Tahr, helping sick ones, training support to staff and restoration of Shola grassland where Nilgiri Tahr survives.

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### What is Nilgiri Tahr?



Nilgiri Tahr is an ungulate **endemic to the Western Ghats**.

It is the **only mountain ungulate in southern India** amongst the 12 species present in India.

It is also the **state animal of Tamil Nadu**.

They are known for their gravity defying skills in climbing steep cliffs. That's why they are called **"Mountain Monarch"**.

**IUCN Status:** Endangered

**Wildlife (Protection) Act of India, 1972:** Schedule I

**Significance:** There are multiple references to **Nilgiri Tahr in the Sangam Tamil literature**. Two epics — Silappathikaram and Sivakasindamani — mention descriptions of the Nilgiri Tahr and its habitat.

The play, **Courtallar Kuravanji** written by Trikoondarasappa Kavirayar in 1600-1700 A.D. describes Nilgiri Tahr in a song "Kurathi malai valam koral".

The **late Mesolithic (10,000-4,000 BC) paintings** also highlight the significance of the Tahr in folklore, culture and life.

### 40. UN General Assembly elects 15 new members to Human Rights Council

**Source:** The post is based on the article **"UN General Assembly elects 15 new members to Human Rights Council"** published in **"UN"** on **14th October 2023**

### What is the News?

The UN General Assembly has elected 15 new countries to serve on the Human Rights Council.

### What is the United Nations Human Rights Council (UNHRC)?

United Nations Human Rights Council (UNHRC) is an intergovernmental body within the United Nations system.

**Created in:** 2006 to replace the United Nations Commission on Human Rights.

**Mandate:** It is responsible for 1) strengthening the promotion and protection of human rights around the globe and 2) addressing situations of human rights violations and making recommendations on them.

**Members:** It is composed of 47 member states elected by the United Nations General Assembly.

– The term of each seat is three years, and no member may occupy a seat for more than two consecutive terms.

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– The seats are distributed along the following lines: a) 13 for the African Group b) 13 for the Asia-Pacific Group c) 6 for the Eastern European Group d) 8 for the Latin American and Caribbean Group e) 7 for the Western European and Others Group.

**Universal Periodic Review (UPR):** It is a unique mechanism within the UNHRC designed to assess and review the human rights records of all United Nations member states.

**Headquarters:** Geneva, Switzerland.

### 41. Seven MeitY AI Working Groups submit first edition of IndiaAI Report

**Source:** The post is based on the article “Seven MeitY AI Working Groups submit first edition of IndiaAI Report” published in “PIB” on 14th October 2023

**What is the News?**

Seven working groups of the Ministry of Electronics and Information Technology (MeitY) have released the first edition of **IndiaAI report**.

**What is IndiaAI?**

IndiaAI is the **National AI Portal of India**.

**Launched in:** 2020

**Launched by:** It is a joint initiative by the Ministry of Electronics and IT, National e-Governance Division, and NASSCOM.

**Key Features:** The portal serves as a hub for AI-related knowledge, research, and collaboration.

– It provides news, articles and information about AI and provides insights into the global and Indian AI landscape.

– It also offers resources and career guidance for students, entrepreneurs, professionals and executives interested in AI.

**What are the key recommendations given by IndiaAI report?** The report suggests using public-private partnerships to:

- 1) produce semiconductors for AI purposes.
- 2) create GPU clusters, which are essential for AI applications and make them accessible to Indian startups and researchers.

**What is the Global India AI Summit?**

**To be organized by:** Ministry of Electronics and Information Technology.

**Purpose:** The summit will discuss various topics related to artificial intelligence (AI), such as next-gen learning, AI applications in areas like governance, healthcare, and electric vehicles, future AI research, AI computing, investment opportunities and developing AI talent.

### 42. Indian Railways' PSUs, RITES Ltd and IRCON granted Navratna status

**Source:** The post is based on the article “Indian Railways' PSUs, RITES Ltd and IRCON granted Navratna status” published in “PIB” on 14th October 2023

**What is the News?**

Ircon International Limited (IRCON) and RITES Ltd(RITES) have been announced as 15th and 16th Navratna respectively.



## Factly Compilation for the Month of October (Second Week) 2023

These are both Central Public Sector Enterprise (CPSE) under the Ministry of Railways.

### What is Navratna Status?

The Government of India had introduced the 'Navratna' status in 1997.

**Aim:** To identify Central Public Sector Enterprises (CPSEs) that had comparative advantages and to support them in their drive to become global giants.

**Criteria:** CPSEs fulfilling the following criteria are eligible to be considered for grant of Navaratna status:

- Having Schedule 'A' and Miniratna Category-1 status.
- Having obtained an 'excellent' or 'very good' MOU rating in three of the last five years.
- Having a composite score of 60 or above in six selected performance indicators such as Net Profit to Net worth, Manpower Cost to total Cost of Production, Earning Per Share among others.

### Benefits of Getting Navratna Status:

- Financial independence to invest up to ₹1,000 crore without seeking approval from the central government.
- Can invest up to 15% of their net worth on a single project or 30% of their net worth in a given year, subject to a cap of ₹1,000 crore.

**Navratna CPSEs:** 1) Bharat Electronics Limited 2) Container Corporation of India Limited 3) Engineers India Limited 4) Hindustan Aeronautics Limited 5) Mahanagar Telephone Nigam Limited 6) National Aluminium Company Limited 7) NBCC (India) Limited 8) NMDC Limited 9) NLC India Limited 10) Oil India Limited 11) Power Finance Corporation Limited 12) Rashtriya Ispat Nigam Limited 13) Rural Electrification Corporation Limited 14) Shipping Corporation of India Limited 15) Ircon International Limited (IRCON) and 16) RITES Ltd (RITES).

### What is Maharatna Status?

[Click Here to read](#)

### 43. RISE Initiative: World Bank and Japan collaborate to boost mineral investments and clean energy jobs for developing countries

**Source:** The post is based on the article "RISE Initiative: World Bank and Japan collaborate to boost mineral investments and clean energy jobs for developing countries" published in "The Print" on 14th October 2023

### What is the News?

The World Bank has partnered with several countries to launch the Resilient and Inclusive Supply-chain Enhancement (RISE) initiative.

### What is the RISE Initiative?

**Launched by:** World Bank in partnership with Japan, Italy, Republic of Korea, Canada and United Kingdom

**Aim:** To deal with two important problems: creating jobs and addressing climate change.

**Focus:** The initiative will focus on assisting emerging markets and developing countries in expanding their clean-energy production and increasing their involvement in the minerals industry.

- This effort is expected to stimulate economic growth and generate quality local jobs, ultimately contributing to poverty alleviation.

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**Funding:** The initiative has received substantial financial support from Japan, Canada, Italy, the Republic of Korea, and the United Kingdom

### 44. ImmunoACT's cell therapy to treat blood cancer gets CDSCO nod

**Source:** The post is based on the article “ImmunoACT’s cell therapy to treat blood cancer gets CDSCO nod” published in “The Hindu” on 14th October 2023

#### What is the News?

Immunoadoptive Cell Therapy Private Limited (Immune ACT) has received Central Drugs Standard Control Organisation (CDSCO) approval for the ‘first’ humanized Chimeric Antigen Receptor T cell (CAR-T cell) therapy named **NexCAR19**.

**Note:** ImmunoACT is an IIT Bombay incubated company.

#### What is NexCAR19?

NexCAR19 is an indigenously developed **CAR-T cell therapy**.

**Developed by:** IIT Bombay and Tata Memorial Centre.

**The therapy has been approved** for the treatment of relapsed / refractory B-cell lymphomas and leukemia.

#### What is CAR-T cell therapy?

**TREATMENT IN INDIA WOULD COST A 10TH OF ₹3-4CR IN US**

**CANCER & TREATMENT**

- Cancer is a disease in which some cells grow uncontrollably and destroy body tissues.
- It is the cause for nearly 1 in 6 deaths across the world.
- Most types of cancer treatment have been chemotherapy, radiation therapy, and surgery.

**NEWER THERAPIES | IMMUNOTHERAPY**

- Immunotherapy, designed to get diseased tissues using body's immune system to attack cancer cells.
- It's early days yet, but it is known to shrink/inactivate tumours in some people with advanced cancer.
- Results can last for a few years in a small percentage of patients.
- A type of immunotherapy called 'immune checkpoint inhibitors' used in cancers of lung, kidney, bladder, melanoma and lymphomas.

**CAR T CELLS**

- Another emerging immunotherapy is CAR-T cell therapy.
- It is used for blood cancers, including lymphoma, some forms of leukaemia, and multiple myeloma.
- It has also been called a "living drug".

**THE PROCESS**

- White blood cells include T cells whose main task is to tackle specific foreign particles.
- CAR-T stands for chimeric antigen receptors that are made in the laboratory.
- T cells are collected from the patient and re-engineered in a laboratory.
- Millions of the re-engineered T cells are made before being infused back into the patient.
- So far, long-term survival has been seen in fewer than half of the patients treated.

**DRAWBACKS**

- They are costly, turning into costs for a single infusion.

**NOW**

- A "first in India" gene therapy has been developed by IIT Bombay and Tata Memorial Hospital.
- With ₹15.5cr funding from BIRAC (Biotechnology Industry Research Assistance Council), trials to treat were conducted on at least 16 patients – 10 adult patients for lymphoma and 6 patients under 25 years for leukaemia.
- Doctors said the safety trials were encouraging.
- Treatment costs ₹3-4cr in the US, but would cost a 10th in India.

#### Source: TOI

CAR T-cell therapy, or chimeric antigen receptor T-cell therapy is a major breakthrough in cancer treatment.

Unlike chemotherapy which involves taking drugs, CAR T-cell therapies use a patient's own cells. They are modified in the laboratory to activate T-cells and target tumor cells.

Currently, this therapy is offered as a second-line treatment for late-stage leukaemia and lymphoma when patients do not respond to conventional treatments like chemotherapy and bone marrow transplants or experience relapsed cancer.

## Factly Compilation for the Month of October (Second Week) 2023

### How does CART-T cell therapy work?

First, a patient's T cells are extracted from their blood. The extracted T cells are then genetically modified in a laboratory.

Scientists then introduce a synthetic gene into the T cells, which encodes a chimeric antigen receptor (CAR). This receptor is designed to target a specific protein or antigen found on the surface of cancer cells.

After genetic modification, the T cells are cultured and allowed to multiply to create a larger population of these modified cells.

Once a sufficient number of CAR T cells have been generated, they are infused back into the patient's bloodstream. The CAR T cells then circulate throughout the body, seeking out and binding to the cancer cells with the targeted antigen.

When the CAR T cells encounter cancer cells with the specific antigen, they become activated and attack the cancer cells. This immune response can lead to the destruction of the cancer cells.

### 45. Minister of Electronics releases draft National Strategy on Robotics for public consultation

**Source:** The post is based on the article “Minister of Electronics releases draft National Strategy on Robotics for public consultation” published in “PIB” on 14th October 2023

#### What is the News?

The Ministry of Electronics and Information Technology (MeitY) has released the Draft National Strategy on Robotics.

#### What is the Draft National Strategy on Robotics?

**Aim:** To harness the potential of robotic technology and support its development to make India a global leader in robotics.

**Objectives:** To make India a global robotics leader by 2030.

– To build upon the mandates of the Make in India 2.0 plans which identified robotics as one of the 27 sub-sectors to further enhance India's integration in the global value chain.

**Core sectors:** The strategy has identified 1) manufacturing 2) agriculture 3) healthcare and 4) national security as the four core sectors to prioritize robotics automation.

**Implementation:** The National Strategy on Robotics is proposed to be undertaken as the 'National Robotics Mission'.

– This mission will be implemented through the establishment of the Robotics Innovation Unit (RIU) as an institutional framework under IndiaAI.

**Recommendations:** Create Centers of Excellence (CoEs) for research in robotics.

– Promote private sector participation in key robotic sectors.

– Support startups, utilize research capabilities in universities and establish dedicated zones for robotics industries.

– Fiscal interventions to facilitate local manufacturing of robotics hardware.

– Initially, the government should be a major buyer of Indian-made robotic systems. This can be done through a Public Procurement Policy for Robotics which encourages local production by favoring suppliers with a minimum domestic content requirement.

## Factly Compilation for the Month of October (Second Week) 2023

### Challenges in India's robotics sector:

- India relies heavily on importing robotics components, mainly from China and Japan.
- The cost of robotics hardware components is high.
- Insufficient investments in research and development hinder progress.
- Absence of dedicated legislation for robotics or allied technologies such as artificial intelligence.

### 46. ICRISAT joins One CGIAR global initiative

**Source:** The post is based on the article “**ICRISAT joins One CGIAR global initiative**” published in “**Hindu Businessline**” on 12th October 2023

#### What is the News?

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) has joined the One CGIAR integrated partnership.

This partnership involves the CGIAR System Organization and 12 One CGIAR research centres (including ICRISAT).

The aim behind this partnership is to work together to address climate-related challenges in food, land and water systems.

#### What is CGIAR (Consortium of International Agricultural Research Centres)?

CGIAR was established in 1971. It is a network of publicly-funded agri-food systems research centres.

**Aim:** To reduce rural poverty, increase food security, improve human health and nutrition, and sustainable management of natural resources.

**Members:** It consists of 15 international agricultural research institutes.

#### What is the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)?

ICRISAT is a non-profit, non-political organization founded in 1972. Its charter was signed by the FAO and the UNDP.

**Aim:** To conduct agricultural research for development in Asia and sub-Saharan Africa.

**ICRISAT holds a special status** as a UN organization in India. This makes it eligible for special immunities and tax privileges.

**Headquarters:** Patancheru, Hyderabad

- It also has regional centers in Mali and Kenya and research stations in several African countries.

**Recognition:** ICRISAT has been awarded the 2021 Africa Food Prize, for work that has improved food security across 13 countries in sub-Saharan Africa.

### 47. Notification issued for Green Credit Program (GCP) and Ecomark scheme Under LiFE Initiative

**Source:** The post is based on the article “**Notification issued for Green Credit Program (GCP) and Ecomark scheme Under LiFE Initiative**” published in “**PIB**” on 14th October 2023



## Factly Compilation for the Month of October (Second Week) 2023

### What is the News?

Government of India has notified two initiatives Green Credit Programme(GCP) and Ecomark scheme.

### What is the Green Credit Programme(GCP)?

Green Credit Programme(GCP) is a market-based mechanism that aims to incentivize voluntary environmental actions by various stakeholders like individuals, communities, private sector industries and companies.

**Features of the programme:** The program focuses on two key activities: water conservation and afforestation.

- These activities can earn green credits certificates.
- The certificates can be traded – that is, bought and sold – on a trading platform.
- To obtain these Green Credits, individuals and entities must register their actions through the government's website. The Administrator verifies the activities and will then grant a Green Credit certificate.

**Implementing and Monitoring Agency:** The Indian Council of Forestry Research and Education (ICFRE)

### What is Ecomark Scheme?

Ecomark Scheme provides accreditation and labelling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms.

Products accredited under this scheme will adhere to specific environmental criteria ensuring minimal environmental impact.

**Administered by:** Central Pollution Control Board in partnership with Bureau of Indian Standards(BIS).

**Significance:** Will build consumer awareness of environmental issues and encourage eco-conscious choices.

- Motivates manufacturers to shift towards environmentally friendly production.