



Factly Compilation

26th June to 1st July, 2023

Factly Compilation for the Month of June (Fourth Week) 2023

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1. [PM Modi, President Abdel Fattah El-Sisi sign strategic partnership pact between India and Egypt](#)

Source: The post is based on the article “**PM Modi, President Abdel Fattah El-Sisi sign strategic partnership pact between India and Egypt**” published in **The Hindu on 26th June 2023**

What is the News?

The Indian Prime Minister has concluded his first-ever visit to Egypt.

What are the key highlights from the Indian PM’s visit to Egypt?

Order of the Nile Award to PM: Egyptian President has conferred Indian PM with ‘Order of the Nile’ award, the country’s highest state honour. This is the 13th such state honour that several countries have conferred upon PM Modi.

Agreements signed: An agreement was signed to elevate the bilateral relationship to a “Strategic Partnership” was signed by the two leaders.

– Three MoUs in the fields of Agriculture, Archaeology & Antiquities and Competition Law were also signed.

Visited Al-Hakim Mosque: Indian PM visited the historic 11th-century Al-Hakim Mosque in Cairo, Egypt.

– Al-Hakim Mosque was restored with the help of India’s Dawoodi Bohra community.

– The Dawoodi Bohra Muslims are a sect of followers of Islam who adhere to the Fatimi Ismaili Tayyibi school of thought.

– They are known to have originated from Egypt and later shifted to Yemen, before establishing a presence in India in the 11th century.

Visit to Heliopolis War Cemetery: The PM visited [Heliopolis War Cemetery in Cairo](#) to pay respects to Indian soldiers who laid down their lives during World War I.

2. [The Titan tragedy: how did the Titanic tourist submersible operate?](#)

Source: The post is based on the article “**The Titan tragedy: how did the Titanic tourist submersible operate?**” published in **The Hindu on 26th June 2023**

What is the News?

The missing Titan submersible, found near the Titanic shipwreck in the North Atlantic Sea with debris indicating implosion, killed 5 people on board.

What is Titan?

Titan is a submersible or an underwater vehicle.

Operated by: It is operated by the privately owned U.S. company OceanGate which organizes underwater expeditions for both research and tourism.

Purpose: It is intended for site survey and inspection, research and data collection, film and media production, and deep sea testing of hardware and software.

– Its expeditions were meant to document the Titanic and its rate of decay on the ocean floor.

What is the difference between a submarine and a submersible?

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A submarine refers to an underwater vehicle that is largely independent and has power reserves to help it depart from a port or come back to the port after an expedition. However, the two categories can overlap,

Meanwhile, a submersible is generally smaller and has less power, so it needs to work with a ship in order to be launched and recovered. Titan was working with a vessel named Polar Prince.

How is the Titan operated?

Titan is made of carbon fiber and titanium. It is capable of going 4,000 meters undersea and moves as fast as three knots per hour.

There is space for five crew members to sit on the floor, though not stand. While there is a small porthole window at one end, below 1,000 meters no sunlight reaches the ocean, so the submersible would have to rely on its own lighting.

The submersible is dependent on external crew members, as it is bolted from the outside. Titan also has an integrated launch and recovery platform.

What caused the Titan implosion?

A catastrophic implosion that destroyed the Titan submersible would have occurred with incredible force and speed due to the crushing pressure that's present in deep water.

This submersible incident has ignited a worldwide debate about the ethics of dark tourism and the need to regulate technological innovation in high-risk sectors.

3. [The India-U.S. deal for 31 MQ-9B drones](#)

Source: The post is based on the article **“The India-U.S. deal for 31 MQ-9B drones”** published in **The Hindu on 26th June 2023**

What is the News?

India will start the formal acquisition process for the 31 weaponised MQ-9B Reaper drones, also known as Predator-B drones from the US in July, 2023.

What are MQ-9B Reaper drones?

MQ-9B is a High Altitude Long Endurance (HALE) Unmanned Aerial vehicle(UAV).

It has been developed by US based General Atomics Aeronautical Systems.

The MQ-9B has two variants — SkyGuardian and its sibling SeaGuardian. The Indian Navy has been operating the MQ-9B Sea Guardian since 2020.

Features: It can operate at over 40,000 feet.

- It also has a maximum endurance of 40 hours, making it useful for long-hour surveillance.
- It can support land, maritime surveillance, anti-submarine warfare, anti-surface warfare, strike, electronic warfare and expeditionary roles.
- It is equipped with advanced features such as automatic take-off and landing, detect and avoid system, anti-spoofing GPS, and encrypted communication links.

What are the benefits of acquiring MQ-9B Reaper drones by India?

Firstly, it can provide roughly 80% of the capability of a large human-flown maritime patrol aircraft at about 20% of its cost per hour. That makes it much more economical for navies.

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Secondly, for the Army and Air Force, it can provide round-the-clock surveillance looking far beyond the borders, for instance on the movement of Chinese military buildup and troop movement along the Line of Actual Control (LAC) and deep inside.

Thirdly, it also seamlessly integrates with other U.S.-origin platforms that India operates, the P-8Is, AH-64 Apache attack helicopters, MH-60R multi-role helicopters among others expanding MQ-9B's multi-domain mission set.

4. [Union Minister launches the GEMCOVAC® -OM, an Omicron-specific mRNA-based Booster vaccine](#)

Source: The post is based on the article **“Union Minister launches the GEMCOVAC® -OM, an Omicron-specific mRNA-based Booster vaccine”** published in **PIB on 23rd June 2023**

What is the News?

The Union Minister of Science and Technology has launched GEMCOVAC® -OM, an Omicron-specific mRNA-based Booster vaccine.

What is GEMCOVAC-OM?

GEMCOVAC-OM is an indigenously developed mRNA vaccine against the dominant Omicron variant of the COVID-19 coronavirus.

It is **India's first mRNA vaccine**.

Developed by: Pune based Gennova Biopharmaceuticals with funding support from the Department of Biotechnology (DBT) and Biotechnology Industry Research Assistance Council (BIRAC).

Features: It is a thermostable vaccine and does not require ultra-cold chain infrastructure used for other approved mRNA-based vaccines.

- It is delivered intra-dermally using a needle-free injection device system.
- It will for now only be available as a booster or “precaution dose”.

5. [Science for All | What is the chiral bose-liquid state?](#)

Source: The post is based on the article **“Science for All | What is the chiral bose-liquid state?”** published in **The Hindu on 23rd June 2023**

What is the News?

Recent research has suggested that the chiral Bose-liquid state could be a completely new form of matter.

Background

Normally we encounter three types of matter—solid, liquid, and gas.

But when we move beyond the realm of daily life, we see quantum states of matter such as Bose-Einstein condensate.

These are observed when we go to low temperatures near absolute zero or on atomic and subatomic scales, where particles can have very low energies.

Scientists are now claiming that they have found a new phase of matter called the chiral Bose-liquid state. This was discovered in a **frustrated quantum system**.

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What is a Frustrated Quantum system?

In quantum systems, there are billions of particles and billions of parameters governing their interactions. This means that not all quantum systems can be well-described and understood.

Some physical systems have competing interactions between particles or components that prevent the system from achieving its lowest energy state. This leads to a **state of frustration**, where the system cannot fully optimize its energy or configuration due to conflicting influences.

In these systems, the arrangement and behavior of particles or spins become highly complex and can give rise to emergent phenomena and novel states of matter.

How was the chiral bose-liquid state formed?

Researchers developed a **bi-layer semiconducting device**. The **top layer** is **electron-rich**, and these electrons can move freely. The **bottom layer** is **filled with "holes,"** or places that a roving electron can occupy.

Then the two layers are brought extremely close together. The machine is then triggered to create a local imbalance resulting in electrons not having enough holes to fill and this kicks off the novel state called the **chiral Bose-liquid state**.

In this state, **electrons can be frozen into predictable patterns**, making them resilient to changes in spin (a defining characteristic of subatomic particles) and even have electrons synchronize their movements.

It is very difficult to create such states of matter but going ahead may be used to fashion novel digital encryption systems.

6. [India joins US-led Mineral Security Partnership \(MSP\)](#)

Source: The post is based on the article **"India joins US-led critical mineral club, boost likely for EV, electronics"** published in **Indian Express on 23rd June 2023**

What is the News?

India has been inducted into the Mineral Security Partnership (MSP).

What is a Mineral Security Partnership (MSP)?

[Click Here to read](#)

What is the significance for India joining the Mineral Security Partnership (MSP)?

One of the key elements of India's growth strategy is powered by an ambitious shift in the mobility space through the conversion of a large part of public and private transport to electric vehicles.

This, alongside a concerted electronics manufacturing and semiconductor push, underlines the need to secure the supply of critical minerals.

Rare earth minerals in India:

Rare earth comprises 17 elements and is classified as light RE elements (LREE) and heavy RE elements (HREE).

Some REs are available in India such as lanthanum, cerium, neodymium, praseodymium, and samarium, while others such as dysprosium, terbium, and europium that are classified as HREE are not available in Indian deposits in extractable quantities.

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Currently, there is an overwhelming dependence on countries such as China for HREE which is one of the leading producers of RE with an estimated 70 percent of the global production.

India-Australia Critical Minerals Investment Partnership:

Recently, India and Australia decided to strengthen their partnership in the field of projects and supply chains for critical minerals under the Australia-India Critical Minerals Investment Partnership.

In March 2022, Australia confirmed that it would commit USD 5.8 million to the three-year India-Australia Critical Minerals Investment Partnership.

Under this partnership, India can take resources from Australia to meet the growing demand for critical minerals to help India's space and defence industries and the manufacture of electric vehicles.

Power ministry establishes UTPRERAK, a Centre of Excellence to Accelerate Adoption of Energy Efficient Technologies in Indian Industry

Source: The post is based on the article "**Power ministry establishes UTPRERAK, a Centre of Excellence to Accelerate Adoption of Energy Efficient Technologies in Indian Industry**" published in **PIB on 26th June 2023**

What is the News?

The Ministry of Power has set up UTPRERAK, a Centre of Excellence, dedicated to accelerating adoption of clean technologies by industries.

What is UTPRERAK?

UTPRERAK stands for Unnat Takniki Pradarshan Kendra.

It is a Centre of Excellence to Accelerate Adoption of Energy Efficient Technologies.

It has also been named as Advanced Industrial Technology Demonstration Centre (AITDC).

Setup by: Bureau of Energy Efficiency(BEE), Ministry of Power.

Located at: Badarpur, New Delhi campus of the National Power Training Institute (NPTI), Ministry of Power.

Functions of UTPRERAK:

- To become the key reference and resource institution on industrial energy-efficient technologies.
- To demonstrate and showcase energy-efficient technologies in key industry sectors.
- To act as an exhibition cum information centre and knowledge repository.
- To serve as a strategic capacity-building institution by providing intensive training to more than 10,000 energy professionals from the industry and other potential sectors over the next five years.
- To provide key inputs for national energy policy formulation, link education and research in energy-efficient solutions and develop innovative applied solutions for energy efficiency.

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7. Understanding the Wagner mutiny

Source: The post is based on the article “Understanding the Wagner mutiny” published in **The Hindu on 27th June 2023**

What is the News?

Recently, the Wagner Group, a Russian paramilitary organization, rebelled against Russia's defense establishment.

The rebellion happened due to the escalating tensions between the Russian Ministry of Defense and the head of Wagner.

However, after negotiations, the Wagner Group called off the rebellion.

What is Wagner Group?

Rebellion of Mercenaries

Yevgeny Prigozhin's short-lived mutiny against Russia's defence establishment showcased Mr. Putin's weakening authority.



- **2014:** Yevgeny Prigozhin (left), a staunch ally of President Vladimir Putin, founds Wagner Group, which takes part in Putin's annexation of Crimea
- **March 2022:** Wagner mercenaries group deployed to Ukraine
- **November:** Wagner spearheads Russia's battle for the town of Bakhmut in Ukraine's Donetsk region
- **February 2023:** Prigozhin accuses Russia's Defence Minister Sergei Shoigu (right) and top general Valery Gerasimov of withholding ammunition and supplies from his fighters
- **May:** Wagner forces capture Bakhmut
- **June:** Prigozhin claims Shoigu and Gerasimov misled Putin into invading Ukraine
- **June 10:** Shoigu gives Prigozhin 21 days to place his troops under the Defence Ministry command. Prigozhin refuses – demands Shoigu's dismissal

Sources: Institute for the Study of War, Reuters



- **June 23:** Prigozhin accuses Shoigu of missile attack on a camp of Wagner personnel
- **June 24, 07:30:** Wagner forces take a regional military HQ in Rostov-on-Don. Wagner advances as far as Krasnoe, 330km south of Moscow
- **June 25:** In a deal negotiated with President Lukashenko of Belarus, Kremlin drops criminal charges against Wagner in exchange for their return to bases. Prigozhin to relocate to Belarus

Pictures: Getty Images

© GRAPHIC NEWS

Source: The Hindu

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Wagner Group is a private military company and a network of mercenaries in Russia. The group was first identified in 2014 while backing pro-Russian separatist forces in eastern Ukraine.

At that time, it was a secretive organization, operating mostly in Africa and the Middle East. Since then, it has grown considerably.

Although private military forces are illegal in Russia, the Wagner Group registered as a company in 2022 and opened a new headquarters in St Petersburg, Russia.

The Wagner Group was heavily involved in Russia's capture of the city of Bakhmut, in eastern Ukraine.

Why has Wagner clashed with Russia's military commanders?

In recent months, the Wagner Group head has repeatedly accused the Russian Defence Minister and the head of the Russian army in Ukraine of incompetence and of deliberately undersupplying Wagner units fighting in Ukraine.

The confrontation escalated when Wagner Group accused top Russian defense officials of bombing Wagner troops in Ukraine, resulting in numerous deaths.

Later, the Wagner Group went on to seize control of the military headquarters in the southern Russian city and proceeded to remove the Russian military leadership.

At one point, Wagner troops were said to be getting closer to Moscow, without encountering any resistance.

However, as the escalation appeared to be heading toward possible confrontation, the group called off its troops and announced that they had agreed to leave Russia, following mediation by the Belarus President.

The deal included a pledge to stop the prosecution of the Wagner chief and the troops participating in what Russia called a mutiny.

What does the Wagner Group mutiny show?

The Wagner Group mutiny has set an example of challenging Russia's state institutions and walking away freely, something that's unheard of in Russia and could have echoes in the future.

This whole incident has also exposed Russian President Putin's weakening authority.

8. Assam delimitation draft: What changes it proposes, why it has led to protests

Source: The post is based on the article **"Assam delimitation draft: What changes it proposes, why it has led to protests"** published in **Indian Express on 27th June 2023**

What is the News?

Election Commission (EC) has released a draft delimitation document for Assam, proposing a change in boundaries of several Lok Sabha and Assembly constituencies of the state.

What is Delimitation?

[Click Here to read](#)

Why is Delimitation being done in Assam now?

The slated delimitation process was done in the rest of the country in 2008. But it was deferred in Assam (as well as some other Northeastern states) citing security concerns of the time.

A 2020 notification from the Law Ministry officially revived the exercise in Assam. Following that, in December 2022 the EC announced that it would initiate the Delimitation exercise.

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What are the key highlights of the Draft delimitation document for Assam?

The number of seats (126 Assembly and 14 Lok Sabha) have been retained the same. But the EC has proposed changes in several other areas, such as:

Reserved seats increased: SC assembly seats have increased from 8 to 9; ST assembly seats have increased from 16 to 19.

Districts with autonomous councils (administered under the Sixth Schedule of the Constitution) get more seats: one assembly seat increased in West Karbi Anglong District; three assembly seats increased in the Bodo Territorial Region.

Change in nomenclature: Kaliabor Lok Sabha constituency is now named 'Kaziranga'.

Why has the Draft delimitation document for Assam been criticized?

Firstly, the state's Bengali-origin Muslim community has opposed this draft, alleging that it deprives them politically. They have alleged that constituencies have been shaped in such a manner that minority areas have been mixed with majority [Hindu] populations.

Secondly, opposition parties had raised concerns about the use of 2001 Census data instead of the more recent 2011 Census records for delimitation.

9. Union Minister launches NANDI (NOC Approval for New Drug and Inoculation System) Portal

Source: The post is based on the article “**Union Minister launches NANDI (NOC Approval for New Drug and Inoculation System) Portal**” published in **PIB on 26th June 2023**

What is the News?

Union Minister of Fisheries, Animal Husbandry & Dairying has launched Nandi Portal.

What is Nandi Portal?

Developed by: Department of Animal Husbandry and Dairying (DAHD)

Full Form: Nandi stands for NOC Approval for New Drug and Inoculation System.

Purpose: The portal will allow new veterinary drugs and vaccines to be approved and granted no-objection certificates (NOCs) through online mode.

– The portal will also be integrated with the **SUGAM portal of the Central Drugs Standard Control Organization(CDSCO)** to make the approval process more streamlined.

Note: CDSCO lays down the standards for drugs, and regulates the import, manufacturing, and marketing of all medicines and vaccines in India including veterinary drugs.

– But the permission for veterinary drugs is granted only after consultation with the Ministry of Fisheries, Animal Husbandry, and Dairying. Earlier, this system was manual. Now, with the launch of Nandi portal, grants can be provided online.

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10. Centre approves funds for 16 States for Capital Investment under 'Special Assistance to States for Capital Investment 2023-24' scheme

Source: The post is based on the article “Centre approves Rs. 56,415 crore to 16 States for Capital Investment under ‘Special Assistance to States for Capital Investment 2023-24’ scheme” published in **PIB on 26th June 2023**

What is the News?

The Department of Expenditure, Ministry of Finance has approved capital investment proposals of Rs 56,415 crore in 16 States in the current financial year.

These approvals have been given under the 'Special Assistance to States for Capital Investment 2023-24' Scheme.

What is the Special Assistance to States for Capital Investment 2023-24 scheme?

“Special Assistance to States for Capital Investment 2023-24” was announced in the Union Budget 2023-24.

Aim of the scheme: To provide a boost to capital spending by State Governments.

Under the scheme, special assistance is being provided to the State Governments in the form of a 50-year interest-free loan up to an overall sum of Rs. 1.3 lakh crore during the financial year 2023-24.

Parts of the scheme: The scheme has eight parts:

- **Part I:** It is the largest with an allocation of Rs 1 lakh crore. This amount will be allocated amongst states in proportion to their share of central taxes and duties as per the award of the 15th Finance Commission.
- **Part II:** It aims at providing incentives to States for the scrapping of State Government vehicles and ambulances, waiver of liabilities on old vehicles, providing tax concessions to individuals for scrapping of old vehicles, and setting up of automated vehicle testing facilities.
- **Part-III & IV:** It aims at providing incentives to States for reforms in Urban Planning and Urban Finance.
- **Part V:** It aims at increasing the housing stock for the police personnel and their families within the police stations in urban areas.
- **Part VI:** It aims to promote national integration, carry forward the concept of “Make in India” and promote the concept of “One District, One Product (ODOP)” through the construction of Unity Mall in each State
- **Part VII:** It aims to provide financial assistance to States for setting up libraries with digital infrastructure at Panchayat and Ward level for children and adolescents.
- **Part VIII:** Incentives for implementing timely release of Centrally Sponsored Scheme funds by State Governments to vendors and beneficiaries.

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11. PM MITRA Parks: India is pioneering sustainable textiles contributing to lesser carbon footprint and promoting circular economy: Union Textile Minister

Source: The post is based on the article “India is pioneering sustainable textiles contributing to lesser carbon footprint and promoting circular economy: Union Textile Minister” published in **PIB on 26th June 2023**

What is the News?

The Union Minister of Textiles has talked about the Pradhan Mantri Mega Integrated Textile Region and Apparel (PM MITRA) Scheme at the inaugural function of the 69th India International Garment Fair (IIGF) at Greater Noida, Uttar Pradesh.

What is the PM MITRA Scheme?

[Click Here to read](#)

Where will the PM MITRA Parks be established?

[Click Here to read](#)

How will the PM MITRA Parks be established?

MITRA Parks will be set up at key locations, as ready to move, ready to start (through plug and play facilities), with common industrial infrastructure and facilities, allowing integration of supply and value chains in a contiguous area.

The minimum estimated area per MITRA Park is **1,000 acres**.

Governance: The **Ministry of Textiles** will oversee the execution of these parks.

– A **Special Purpose Vehicle (SPV)** owned by Centre and State Government jointly will be set up for each park which will oversee the implementation of the project.

Funding: The Ministry of Textiles will provide financial support in the form of Development Capital Support upto Rs. 500 crore per park to the Park SPV.

– A Competitive Incentive Support (CIS) up to Rs 300 crore per park to the units in PM MITRA Park shall also be provided to incentivise speedy implementation.

– Convergence with other Government schemes shall also be facilitated in order to ensure additional incentives to the Master Developer and investor units.

12. Senate India Caucus to push for ‘NATO plus five’ status for India

Source: The post is based on the article “Senate India Caucus to push for ‘NATO plus five’ status for India” published in **The Hindu on 25th June 2023**

What is the News?

U.S. Senate’s India Caucus Co-Chairs will introduce legislation to give India ‘NATO plus five’ defence status.

Note: Caucus is a closed meeting of a group of persons belonging to the same political party or faction usually to select candidates or to decide on policy.

What is NATO plus five?

NATO Plus is a grouping of the [North Atlantic Treaty Organization \(NATO\)](#) and five countries, including Australia, New Zealand, Japan, Israel, and South Korea.

The group works toward boosting global defence cooperation.

What are the benefits of India becoming a member of NATO plus five?

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India would 1) gain access to seamless intelligence sharing between these countries **2)** get access to the latest military technology without much of a time lag and **3)** will help in further strengthening India's defence partnership with the United States.

What are the drawbacks for India if it becomes a member of NATO plus five?

Impacts India – Russia ties: If India joins the US-led NATO alliance which is backing Ukraine in the current war with Russia, it will directly impact India's strong, established and deep ties with Russia.

Affects India's Strategic Autonomy: NATO membership may also affect India's strategic autonomy.

[13. 'Sedition law must to retain India's integrity](#)

Source: The post is based on the article **“Sedition law must to retain India's integrity” published in The Hindu on 28th June 2023**

What is the News?

The 22nd Law Commission headed by Justice Awasthi has recommended retaining Sedition Law (Section 124A of the Indian Penal Code) with safeguards to prevent its misuse.

Note: At present, Sedition Law is under suspension following directions issued by the Supreme Court in 2022.

What is Sedition?

[Click Here to read](#)

Why has the 22nd Law Commission recommended retaining Sedition Law?

Firstly, Sedition law is an important tool to safeguard the “safety and integrity of India” given the situation in many parts of the country, from Kashmir to Kerala and Punjab to the Northeast.

Secondly, special laws such as the Unlawful Activities (Prevention) Act (UAPA) and the National Security Act (NSA) operated in different fields and did not cover the offence of sedition and therefore, the specific law on sedition needed to be there too.

Thirdly, sedition law being a colonial legacy is not a valid ground for its repeal and several countries including the U.S., Canada, Australia, and Germany had their own such laws.

What are the recommendations given by the 22nd Law Commission to prevent the misuse of Sedition Law?

Procedural safeguards: Preliminary inquiry would be held by a police officer of the rank of inspector or above.

– The inquiry would be done within seven days from the occurrence of the incident and the preliminary inquiry report would be submitted to the competent government authority for permission for lodging of FIR in this regard.

– On the basis of the preliminary report, if the competent government authority finds any convincing evidence with regard to the commissioning of the offense of sedition, it may grant permission. It is only after the grant of permission that the FIR under Section 124A of the IPC shall be lodged.

Issue Guidelines: Central government may issue guidelines that are to be followed in case of the commission of a sedition offence and the said guidelines may clarify as to under what circumstances the said offence was committed.

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Punishment Term: Under the existing provision of Section 124A, punishment can be up to three years imprisonment, with or without a fine, which may go up to imprisonment for life, with or without a fine.

– Law commission has recommended that this punishment of up to three years with or without a fine may be increased to seven years with or without a fine.

14. [Mines Ministry to Unveil “List of Critical Minerals for India](#)

Source: The post is based on the article “**Mines Ministry to Unveil “List of Critical Minerals for India”** published in **PIB on 27th June 2023**

What is the News?

The Central government will be releasing for the first time “the list of Critical Minerals for India”.

What are Critical Minerals?

[Click Here to read](#)

What is the objective behind releasing the list of Critical Minerals for India?

Firstly, the list is designed to identify and prioritize minerals that are essential for various industrial sectors such as high-tech electronics, telecommunications, transport, and defense.

Secondly, the list will serve as a guiding framework for policy formulation, strategic planning, and investment decisions in the mining sector.

Thirdly, this initiative also aligns with the larger vision of achieving a ‘Net Zero’ target for India through the Government’s commitment to creating a robust and resilient mineral sector.

What are the challenges India faces in assuring resilient critical minerals supply chains?

India’s dependence on foreign countries for critical minerals: Manufacturing renewable energy technologies would require increasing quantities of minerals, including copper, manganese, zinc, and indium.

– Similarly, the transition to electric vehicles would require increasing amounts of minerals, including copper, lithium, cobalt, and rare earth elements.

– However, India does not have many of these mineral reserves, or its requirements may be higher than the availability, making India dependent on foreign partners to meet domestic needs.

Russia-Ukraine war: Russia is a significant producer of nickel, palladium, titanium sponge, & scandium and Ukraine is one of the major producers of titanium. The war between the two countries has implications for these critical mineral supply chains.

Policy issues: Many critical and strategic minerals constitute part of the list of atomic minerals in the Mines and Minerals (Development and Regulation) (MMDR) Act, 1957. However, the present policy regime reserves these minerals only for public sector undertakings.

What is the way forward for India in critical minerals?

Mines and Minerals (Development and Regulation) (MMDR) Act 1957 needs to be amended to exclude critical minerals such as atomic minerals.

Critical minerals must be prospected, explored, and mined on priority, as any delays may hinder India’s emissions reduction and climate change mitigation timeline.

India must actively engage in bilateral and plurilateral arrangements for building assured and resilient critical mineral supply chains.

The assessment of critical minerals for India needs to be updated every three years to keep pace with changing domestic and global scenarios

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[15. Rani Durgavati Gaurav Yatra' concludes in Madhya Pradesh: The story of the queen who fought the Mughal](#)

Source: The post is based on the article “**Rani Durgavati Gaurav Yatra' concludes in Madhya Pradesh: The story of the queen who fought the Mughals**” published in **Indian Express** on **27th June 2023**

What is the News?

Madhya Pradesh Government has launched the six-day Rani Durgavati Gaurav Yatra and marked June 24 as a day of sacrifice.

Who was 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.

Rani Durgavati 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.

The Chandelas of Mahoba and Rajgonds of Garha-Mandla dynasties became allies through this marriage.

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

War with Mughal: 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.

Legacy: 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 2018 commissioned *ICGS Rani Durgavati*, the third Inshore Patrol Vessel (IPV) of its kind.

[16. Our study shows growing zone of active tectonic deformation in northern Haryana plains south of Himalayas](#)

Source: The post is based on the article “**Our study shows growing zone of active tectonic deformation in northern Haryana plains south of Himalayas**” published in **Down To Earth** on **27th June 2023**

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What is the News?

A study has found signs of active tectonic deformations in the Piedmont alluvial plains of northern Haryana.

What is Tectonic Deformation?

Tectonic deformation refers to the changes in the Earth's crust caused by the movement and interaction of tectonic plates.

What was the study conducted by the researchers?

The study investigated the piedmont zone **between the Ghaggar and Yamuna river basins** in the frontal parts of the northwest Himalayas of Haryana.

It focused on the piedmont alluvial plains and covered parts of Panchkula, Ambala and Yamunanagar districts in Haryana and Mohali district in Punjab.

– **Note:** Piedmont plains are situated at the foot of mountains or hills.

How was this study conducted?

This study was conducted using satellite data and validated by geophysical ground penetrating radar (GPR) surveys.

GPR is an important tool, ideally suited for obtaining high-resolution profiles of the subsurface over a depth range of a few meters to several tens of meters.

What did the researchers find?

Researchers have found active signs of tectonic deformations in the piedmont alluvial plains of northern Haryana.

This active deformation zone could become a future seismic hazard zone.

The study also said that this active tectonics and geodynamic framework of the area may have played a role in the extinction of the Vedic Saraswati river that once flowed through the region.

17. The origin of Fast Radio Bursts

Source: The post is based on the article **“Do dead stars crash with the light of 500 million suns?”** published in **The Hindu on 28th June 2023**

What is the News?

Astrophysicists have developed a new theory about the origin of fast radio bursts (FRBs).

What are Fast Radio Bursts(FRBs)?

FRBs are bright bursts of radio waves that blaze for a few milliseconds before vanishing without a trace.

The first FRB was spotted in 2007. Since then, scientists have spotted more than 600 of these in their telescopes.

However, their origins are still unknown, and their appearance is highly unpredictable.

What is the present theory on the origin of these Fast Radio Bursts(FRBs)?

One of the leading theories developed to explain the origin of Fast Radio Bursts(FRBs) is that they are caused by magnetars, a type of slowly rotating neutron star.

Unfortunately, there has been no way to prove whether the theory is correct.

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What is the new theory developed by researchers to explain the origin of Fast Radio Bursts(FRBs)?

Researchers have said that FRBs could be triggered by a collision between two neutron stars and are released just before they crash into each other.

This impact could set off two different kinds of signals: wrinkles in space-time called gravitational waves and FRBs.

What is the significance of this study?

This theory will help in explaining the intense radio light 'seen' in the host galaxies of some FRBs. Some astronomers attribute this radio light to the glow around high energy events, such as a gigantic black hole at the center of the galaxy, devouring stars.

These findings will also help in the study of gravitational waves, which were first observed in 2015.

Moreover, the upcoming space-based gravitational wave detector [Laser Interferometer Space Antenna \(LISA\)](#) could provide further insights into these high-energy cosmic events and the structure of the universe.

18. [ExplainSpeaking: What is Greedflation? Does India also have it?](#)

Source: The post is based on the article **“ExplainSpeaking: What is Greedflation? Does India also have it?”** published in **Indian Express on 27th June 2023**

What is the News?

There is a growing consensus across the world that Greedflation is spiking inflation.

What is Inflation?

[Click Here to read](#)

What is Greedflation?

Greedflation simply refers to a situation where corporate greed fuels inflation.

Instead of the traditional wage-price spiral, it is the profit-price spiral that drives inflation.

This can result in a significant rise in the overall price level, leading to a decline in the purchasing power of the currency and contributing to inflation.

In developed countries like Europe and the US, there is a growing consensus that greedflation is the main reason contributing to inflation.

Is Greedflation happening in India?

The Indian corporate sector has generated superlative profits in the post-pandemic period. Profits during recent times have been nearly thrice the profits corporates earned earlier.

Higher profits then can come only from: 1) higher sales (with the same profit margins) 2) higher profit margins (with the same level of sales) or 3) a combination of higher sales and higher profit margins.

What is contributing to higher profits of corporates in India?

According to CMIE, 60% of the growth in net profit can be attributed entirely to the increase in profit margin.

The increase in sales contributed an additional 36% and the rest was a bonus from a combination of the two.

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Do these higher profits point to the existence of greedflation in India?

Data shows the existence of a sharp spike in profits. So, prima facie there is a very good chance that corporate greed also played a key role in spiking the inflation rate in India.

19. E Sewa Kendras – Bridging the digital divide & ensuring justice for All

Source: The post is based on the article “E Sewa Kendras – Bridging the digital divide & ensuring justice for All” published in **PIB on 27th June 2023**

What is the News?

Around 815 eSewa Kendras have been set up under 25 High Courts.

What are eSewa Kendras?

e-Sewa Kendras have been created in the High Courts and in one District Court in each State on a pilot basis. It is being expanded to cover all court complexes.

It is being set up at the entry point of the court complexes.

It enables litigants to obtain information with respect to case status and to obtain copies of judgments and orders. These centers also extend assistance in the e-filing of cases.

These Kendras represent a significant step for the common man and his right to access to justice.

About India’s first e-Resource Center:

In 2020, India’s first e-Resource Center named “Nyay Kaushal” was inaugurated at Nagpur in Maharashtra.

The e-Resource Centre will facilitate the e-filing of cases in the Supreme Court of India, High Courts, and District Courts across the country.

It will also assist the lawyers and litigants in accessing online e-Courts services and shall help those who cannot afford the technology.

20. Indian Ocean Dipole: What is it, how it can limit El Nino effects

Source: The post is based on the article “Indian Ocean Dipole: What is it, how it can limit El Nino effects” published in **Indian Express on 28th June 2023**

What is the News?

The El Nino phenomenon is likely to impact the Indian monsoon this year.

Therefore, high hopes are pinned on the development of a positive Indian Ocean Dipole (IOD) and its ability to counterbalance the El Nino effect.

What is El Nino?

[Click Here to read](#)

What is the Indian Ocean Dipole(IOD)?

[Click Here to read](#)

The IOD was identified as an independent system only in 1999.

A positive IOD event is often seen developing at times of an El Nino while a negative IOD is sometimes associated with La Nina.

During El Nino, the Pacific side of Indonesia is cooler than normal because of which the Indian Ocean side also gets cooler. That helps the development of a positive IOD.

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What is the impact of the Indian Ocean Dipole(IOD)?

A positive IOD helps rainfall along the African coastline and also over the Indian sub-continent while suppressing rainfall over Indonesia, southeast Asia and Australia. The impacts are opposite during a negative IOD event.

Compared to El Nino Southern Oscillation(ENSO) events, the impacts of IODs are much weaker.

Can Positive Indian Ocean Dipole(IOD) offset the impact of El Nino this year?

Positive IOD does have the potential to offset the impacts of El Nino to a small measure in neighboring areas and it has at least once in the past (1997) delivered on this potential.

Currently, El Nino is already firmly established in the Pacific Ocean this year. But the IOD is still in the neutral phase.

All international climate models suggest a positive IOD event may develop in the coming months

The India Meteorological Department (IMD) had also said there was an 80% chance of a positive IOD in the coming months.

Hence, high hopes are pinned on the development of a positive Indian Ocean Dipole (IOD) and its ability to counterbalance the El Nino effect.

[21. Seven products from Uttar Pradesh get Geographical Indication tag](#)

Source: The post is based on the article “**Seven products from Uttar Pradesh get Geographical Indication tag**” published in **The Hindu** on **28th June 2023**.

What is the News?

The Geographical Indications Registry in Chennai has given tags to seven different products from Uttar Pradesh.

Which Seven products from Uttar Pradesh got Geographical Indication tag?

Amroha Dholak: It is a musical instrument crafted from natural wood, specifically mango, jackfruit, and teakwood. These types of wood are carved into hollow blocks which are then fitted with animal skin, typically goatskin, to form the instrument.

Mahoba Gaura Patthar Hastashlip: It is a form of stone craft that originates from the Mahoba region. This craft utilizes a distinctive and delicate stone known as “Pyro Flight Stone” which is renowned for its radiant white color. The stone is carefully cut into multiple pieces, which are then skillfully crafted into various artistic items.

Mainpuri Tarkashi: It is primarily brass wire inlay work on wood. It was mainly used for khadaous (wooden sandals) since leather was considered unclean.

Sambhal Horn Craft: The raw materials used in the production of Sambhal’s horn and bone products are sourced from deceased animals.

Baghpat Home Furnishings: Baghpat and Meerut have a longstanding reputation for their distinctive handloom home furnishing products and cotton running fabric production, with Baghpat being particularly known for its use of frame looms in weaving.

Barabanki Handloom Product: Barabanki district is renowned for its handloom fabric knitting, catering to the significant demand for cotton clothing and traditional handloom products.

Kalpi Handmade Paper: Kalpi has a rich history as a hub for handmade paper manufacturing, with records indicating that Munnalal ‘Khadhari’, a follower of Mahatma Gandhi, introduced this craft to the region in the 1940s.

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[22. Union Minister of State for Panchayati Raj releases Report on Panchayat Development Index at National Workshop on Panchayat Development Index](#)

Source: The post is based on the article “**Union Minister of State for Panchayati Raj releases Report on Panchayat Development Index at National Workshop on Panchayat Development Index**” published in **PIB** on **28th June 2023**

What is the News?

The Ministry of Panchayati Raj has released a ‘Panchayat Development Index’ (PDI) has been formulated by the Centre to evaluate different indicators responsible for ensuring targeted development in villages.

About the Panchayat Development Index

The Index will be a compact statistical tool to measure and monitor development at panchayat level. On a pilot basis, data from four districts in Maharashtra — Pune, Sangli, Satara and Solapur — was compiled.

Function: The Ministry of Panchayati Raj is anchoring the process of **Localization of Sustainable Development Goals (LSDGs) in PRIs**. To this end, it is bringing together different stakeholders at one forum imbibing the spirit of the ‘Whole of Government & Whole of Society’ approach.

The Panchayat Development Index is a logical combination of various steps taken by the Ministry for years. It will tell what happens to the money that is spent on development, its outcome and what needs to be focused upon.

Aim: To measure the incremental progress towards the achievement of LSDGs through Panchayats.

Scoring method: PDI Committee interacted with 19 States on their efforts to develop LIFs for implementation of LSDGs; a participatory and theme-based planning process is adopted for development.

The PDI ranks panchayats on the basis of scores, and categorises them into four grades. Those with scores under 40% fall in grade D, 40-60% in grade C, 60-75% in grade B, 75 to 90% in category A, while those scoring above 90% will be categorised as A+.

Themes: The nine themes taken into account are poverty-free and enhanced livelihood in the village, healthy village, child-friendly village, water-sufficient village, clean and green village, village with self-sufficient infrastructure, socially just and socially secured villages, village with good governance, and women-friendly village.

Applications of the PDI: States/ UTs can use the PDI for Panchayati Raj Awards and emphasise on adopting a data-driven and evidence-based approach towards developmental activities. Once India achieve the Panchayat Development Index (PDI), India will be able to create villages that have all amenities like a city.

What are the findings of the pilot study of PDI?

The pilot study has shown how no attention has been paid on certain themes. The pilot study showed 70 per cent of the panchayats in the four districts of Maharashtra are in Category C, while 27 per cent are in Category B. Around 30 per cent of panchayats are in grade B in being clean and green villages, and 30 panchayats in grade C when it comes to being women-friendly.

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23. [‘Green credits’ scheme launched for eco push](#)

Source: The post is based on the following articles


“Centre plans ‘market’ scheme to promote sustainable living” published in **The Hindu** on **29th June 2023**.

“‘Green credits’ scheme launched for eco push” published in the **Business Standard** on **29th June 2023**.

What is the News?

The Environment Ministry has issued a draft notification detailing a proposed ‘Green Credits Scheme’.

About the Green Credits Scheme



IN FOCUS
Areas which will be part of the credit system

- Tree plantation
- Water
- Sustainable agriculture
- Waste management
- Air pollution reduction
- Mangrove conservation and restoration
- Ecomark
- Sustainable building and infrastructure

■ The mechanism will be implemented in a phased manner

■ Initially, two to three activities from the eight sectors are under consideration for designing and piloting the Programme

■ Further, more activities will be added from the selected sectors

Source: Business Standard

A Green Credit Programme is proposed to be launched at the national level.

Aim:

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-To leverage a competitive market-based approach for Green Credits thereby incentivising voluntary environmental actions of various stakeholders.

-To encourage private sector industries and companies as well as other entities to meet their existing obligations by taking actions which are able to converge with activities relevant to generating or buying Green Credits.

Tradable: These credits, through a yet-to-be-specified mechanism, can also be traded for money.

Focus sectors: The notification lists out eight sectors, or activities, that can qualify for generating credits.

They include **1)** tree plantation-based green credit to promote activities for increasing green cover through tree plantation and related activities; **2)** water-based green credit to promote water conservation, water harvesting and water use efficiency/savings, including treatment and reuse of wastewater; **3)** sustainable agriculture-based green credit to promote natural and regenerative agricultural practices and land restoration to improve productivity, **4)** soil health and nutritional value of food produced; and **4)** waste management-based green credit to promote sustainable and improved practices.

5) Air pollution reduction, **6)** mangrove conservation and restoration-based green credit to promote measures for the conservation and restoration of mangroves, **7)** Ecomark-based green credit encourages manufacturers to obtain eco-mark labels for their goods and services and **8)** sustainable building and infrastructure-based Green Credit encourage the construction of buildings and other infrastructure using sustainable technologies and materials.

Priority: The government's immediate priority was to "create supply (of green credits)" via voluntary actions and then "create demand by bringing in laws or rules that will incentivise companies and organisations to buy credits that can then be traded."

Benefits: The scheme will incentivise a host of activities including afforestation programmes, water conservation, waste management and remedying air pollution by allowing individuals and organisations to generate 'green credits'.

Concerns by experts: Unlike carbon markets, where only greenhouse gas emissions were traded, the Green Credit Scheme was "trickier" as it involved accounting for a wide range of actions. There are a few examples globally but nowhere in the world is such a wide range of actions considered.

[24. Cabinet approves Introduction of National Research Foundation Bill, 2023 in Parliament to strengthen research eco-system in the country](#)

Source: The post is based on the following articles

"Cabinet approves Introduction of National Research Foundation Bill, 2023 in Parliament to strengthen research eco-system in the country" published in **PIB** on **28th June 2023**

"Cabinet clears NRF Bill to offer strategic direction to research" published in **The Hindu** on **29th June 2023**

What is the News?

The Union Cabinet approved the National Research Foundation (NRF) Bill, 2023.

About the National Research Foundation(NRF) Bill, 2023

Establish NRF: The NRF will seed, grow and promote Research and Development (R&D) and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories.

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The bill will also repeal the Science and Engineering Research Board (SERB) established by an act of Parliament in 2008 and subsume it into NRF which has an expanded mandate and covers activities over and above the activities of SERB.

About National Research Foundation(NRF)

The NRF will be an apex body to provide high-level strategic direction of scientific research in the country as per recommendations of the National Education Policy (NEP). It will be established at a total estimated cost of Rs. 50,000 crore during five years (2023-28). The government will contribute ₹10,000 crore over five years.

Administrative Department of NRF: Department of Science and Technology (DST)

Governing Board of NRF: It will consist of eminent researchers and professionals across disciplines. **Prime Minister** will be the **ex-officio President** of the Board and the Union Minister of Science & Technology & Union Minister of Education will be the ex-officio Vice-Presidents.

Executive Council of NRF: Headed by the Principal Scientific Adviser.

Functions of NRF: NRF will **a)** forge collaborations among the industry, academia, and government departments and research institutions, **b)** create an interface mechanism for participation and contribution of industries and State governments, and **c)** focus on creating a policy framework and putting in place regulatory processes that can encourage collaboration and increased spending by the industry on R&D.

What are the potential benefits of establishing NRF?

Increase private investment: Current laws made it hard for private research organisations to contribute to a funding body such as the NRF. The NRF was meant to ensure that scientific research was conducted and funded equitably with greater participation from the private sector. When the NRF starts functioning, close to ₹36,000 crore is expected from the private sector (as investments into research)

Increase funding to state colleges and universities: At present, eminent institutions like the IITs and IISc get a bulk of research funding but State universities get very little, about 10% of the research funds. The NRF will correct this.

25. Package of innovative schemes for farmers: Unique package for farmers announced

Source: The post is based on the article “**Unique package for farmers announced**” published in **PIB** on **28th June 2023**

What is the News?

The Cabinet Committee on Economic Affairs (CCEA) has approved a unique package of innovative schemes for farmers with a total outlay of more than Rs.3.70 lakh crore.

About the package of innovative schemes

The schemes focused on the overall well-being and economic betterment of farmers by promoting sustainable agriculture. The initiatives will boost farmers' income, strengthen natural/organic farming, rejuvenate soil productivity, and ensure food security.

What are the salient features of the package of innovative schemes?

Market Development Assistance (MDA) for promoting Organic Fertilizers from Gobardhan Plants: The scheme is to support the marketing of organic fertilizers. Such as Fermented Organic Manures (FOM)/Liquid FOM/Phosphate Rich Organic Manures (PROM) produced as a by-product of Biogas Plants/Compressed Biogas (CBG) Plants set up under the umbrella GOBARDhan initiative.

These organic fertilizers would be branded in the names of Bharat Brand FOM, LFOM and PROM.

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This initiative will also facilitate the implementation of establishing 500 new waste-to-wealth plants under GOBARdhan scheme for promoting a circular economy, by increasing the viability of these BG/CBG plants. Parali and organic manure from Gobardhan plants to be used to enrich the soil and keep the environment safe and clean.

Introduction of Sulphur coated Urea (Urea Gold): The package announced the introduction of Sulphur coated Urea (Urea Gold) in the country for the first time. It is more economical and efficient than the currently used Neem coated urea.

The scheme aims to address the sulphur deficiency of soil and save input costs for the farmers. It will also save input costs for the farmers and also raise incomes for farmers with enhanced production & productivity.

Strengthened the Nano Urea eco-system: By 2025-26, eight Nano urea plants with a production capacity of 44 Crore bottles equaling to 195 LMT of conventional urea will be commissioned.

India to become Atmanirbhar in Urea by 2025-26: The scheme will revive 6 urea production units in India. These along with Nano Urea Plants will reduce India's current import dependency in urea and finally make us self-sufficient by 2025- 26.

What are the benefits of a package of innovative schemes?

The schemes will a) help in the **judicious use of chemical fertilizers**, thereby **reducing input cost of cultivation** for the farmers, b) promote natural/ organic farming, innovative and alternate fertilizers like Nano Fertilizers, Thereby restoring the fertility of our Mother Earth, and c) improve soil health, increase nutrient efficiency and safe environment due to reduction in soil and water pollution.

26. [Explained | Global tropical primary forest cover continued decline in 2022: study](#)

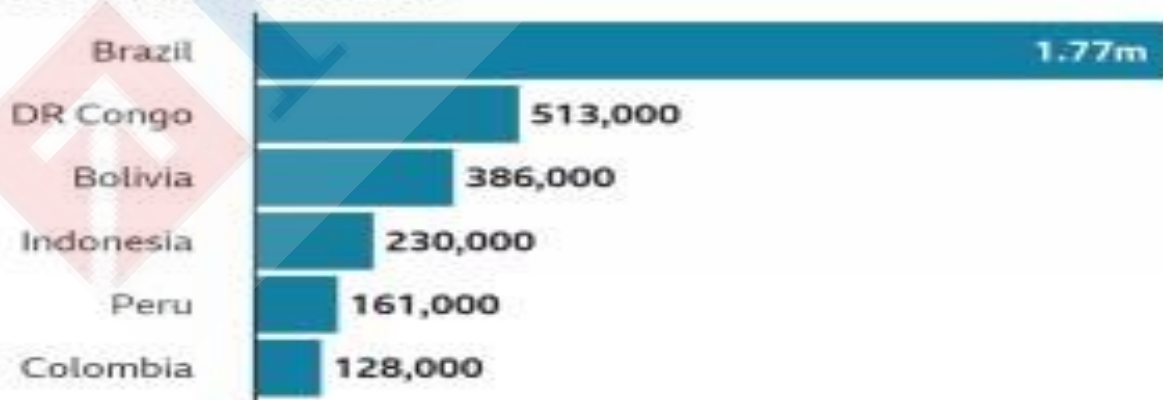
Source: The post is based on the article **“Explained | Global tropical primary forest cover continued decline in 2022: study”** published in **The Hindu on 29th June 2023**

What is the News?

World Resources Institute's (WRI) Global Forest Watch has released a research report on forest cover.

What are the key findings of the report by Global Forest Watch?

Top countries for primary tropical forest loss Hectares lost in 2022



Source: Global Forest Watch



Source: BBC

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Forest cover loss in Tropical areas: In 2022, Tropical areas lost 4.1 million hectares of forest cover – equivalent to losing an area of 11 football fields per minute.

– The primary forest cover loss in tropical areas in 2022 was 10% more than in 2021.

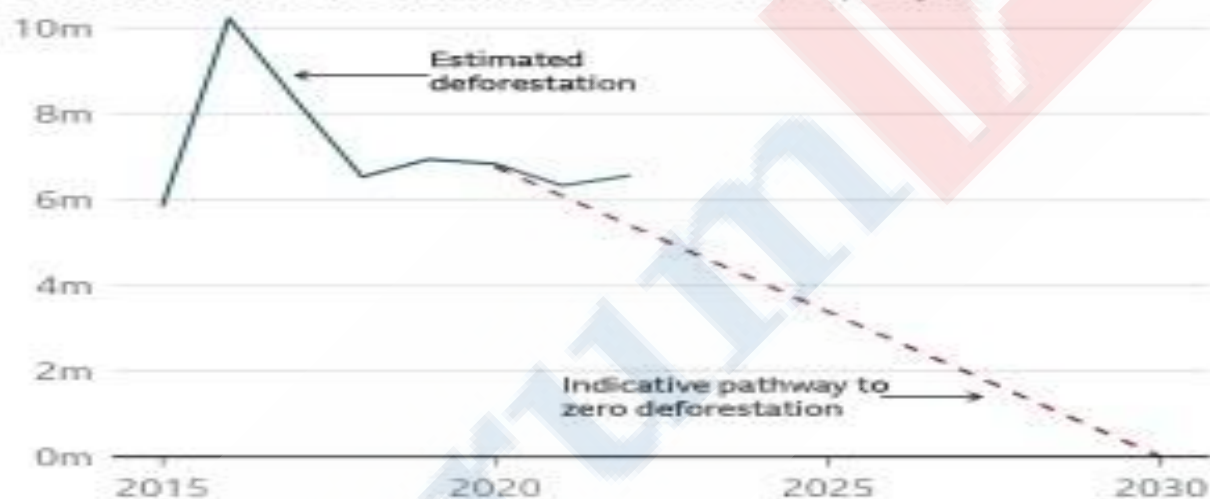
Note: Primary forests are mature, natural forests that have remained undisturbed in recent history. They often store more carbon than other forests and are rich sources of biodiversity.

– Primary forest loss is almost irreversible in nature: even if the green cover regrows, a secondary forest is unlikely to match the extent of biodiversity and carbon sequestering capabilities of a primary forest.

World is not on track to meet its forest-related commitments: Two key goals set by the World Resources Institute includes:

World off track to end deforestation by 2030

Global deforestation, millions of hectares per year



Some year-to-year variability may be due to measurement accuracy

Source: Global Forest Watch

BBC

Source: BBC

– **Ending deforestation by 2030:** For this, the global deforestation rate **needs to decrease by at least 10% annually** to meet the 2030 target.

In 2022, the deforestation rates reduced **by 3.1% compared** to the 2018-2020 baseline. But it is still far away from the 2030 goal.

– **Restoring 350 million hectares of lost and degraded forests by 2030.** The overall change in tree cover over the past two decades has been a **net loss of 100 million hectares**. This indicates that forests are still being lost instead of being restored at the required rate.

Countries Tropical forest cover: Brazil and the Democratic Republic of Congo are the two countries with the most tropical forest cover and both registered losses of this resource in 2022.

– On the other hand, Indonesia and Malaysia managed to keep their primary forest cover loss to record-low levels in 2022.

India: India lost 43.9 thousand hectares of humid primary forest between 2021 and 2022, which accounts for 17% of the country's total tree cover loss in the period. The total tree cover loss in India between 2021 and 2022 was 255 thousand hectares.

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[27. The Open Market Sale Scheme for wheat and rice](#)

Source: The post is based on the article **“The Open Market Sale Scheme for wheat and rice”** published in **The Hindu on 29th June 2023**

What is the News?

States have been looking at alternative ways of procuring wheat and rice after the Food Corporation of India's (FCI) has imposed quantity restrictions and has also refused to allow States to procure these two food grains through its Open Market Sale Scheme (OMSS).

What is the Open Market Sale Scheme?

Under the Open Market Sale Scheme, the Food Corporation of India (FCI) from time to time sells surplus food grains from the central pool, especially wheat and rice in the open market to traders, bulk consumers, retail chains and so on at predetermined prices.

The FCI does this through e-auctions where open market bidders can buy specified quantities.

States are also allowed to procure food grains through the OMSS without participating in the auctions for their needs beyond what they get from the central pool to distribute to NFSA (National Food Security Act) beneficiaries.

What is the objective behind introducing the Open Market Sale Scheme?

The objective is to activate the OMSS during the lean season, the time between harvests, to improve and regulate domestic supply and availability of the two grains and bring down their prices in the open market essentially making the scheme a measure to curb food grain inflation.

How has the Central Government revised the Open Market Sale Scheme?

[Click Here to read](#)

How have the States reacted?

In Karnataka, the Anna Bhagya scheme to give rice to marginalized families was a part of the Congress government's poll promise. Congress has accused the Centre of conspiring to “fail” the State government's poll guarantee by ensuring the State did not receive the required amount of rice to implement the scheme.

Tamil Nadu is trying to purchase 50,000 tonnes of rice from government agencies other than FCI.

The Kerala government does not procure grains under the OMSS but is planning legal steps against the Centre's overall food distribution policy.

[28. Rockies, Alps, Himalayas: More rain, less snow in Northern hemisphere mountains as temperatures rise, says report](#)

Source: The post is based on the article **“Rockies, Alps, Himalayas: More rain, less snow in Northern hemisphere mountains as temperatures rise, says report”** published in **Down To Earth on 29th June 2023**

What is the News?

Researchers have found that climate change will cause a shift from snowfall to rainfall on mountains across the Northern Hemisphere.

What are the key findings of the study?

Climate change could cause a shift from snowfall to rainfall in mountain regions across the Northern Hemisphere.

The Himalayas and other mountains across the Northern Hemisphere are likely to see 15% more rain for every 1-degree Celsius rise in temperature due to climate change.

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For 2 degrees and 3 degrees rise, the world would see a 30 percent and 45 percent increase in rain.

This shift from snowfall to rainfall will increase the risk of disasters such as floods, landslides, and soil erosion.

One-quarter of the global population lives in or downstream from mountainous regions. They are going to be directly affected by this risk.

However, not all mountain regions are at high risk. The Himalayas and the North American Pacific Mountain ranges, including the Cascades, Sierra Nevada, and coastal ranges (from Canada to Southern California) are more threatened than the Rockies or the Alps.

[29. UNODC World Drug Report 2023 warns of converging crises as illicit drug markets continue to expand](#)

Source: The post is based on the article **“UNODC World Drug Report 2023 warns of converging crises as illicit drug markets continue to expand”** published in **UN on 29th June 2023**

What is the News?

The UN Office on Drugs and Crime (UNODC) has released the World Drug Report 2023.

What are the key findings of the World Drug Report 2023?

Globally, over 296 million people used drugs in 2021, an increase of 23 percent over the previous decade.

The number of people who suffer from drug use disorders has reached 39.5 million, a 45 percent increase over 10 years.

Only one in five people suffering from drug-related disorders were in treatment for drug use in 2021 with widening disparities in access to treatment across regions.

Youth populations are the most vulnerable to using drugs and are also more severely affected by substance use disorder in several regions.

Large inequalities in access and availability of controlled drugs for medical use persist, particularly for pain management. The disparity is particularly prevalent between the global North and South, and across urban and rural areas.

Drug trafficking is accelerating environmental devastation, particularly in the Amazon Basin. The production of illicit drugs contributes to deforestation, pollution, and the use of harmful chemicals, leading to ecological harm and the loss of biodiversity.

The opium ban in Afghanistan had a positive result, but concerns remain about the production of synthetic drugs. However, farmers' income has suffered in Afghanistan due to the Opium ban by the Taliban.

What are the key recommendations given by the report?

Public health, prevention, and access to treatment services must be prioritized worldwide.

Law enforcement forces need to keep pace with criminal business models and the proliferation of cheap synthetic drugs that are easy to bring to market.

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[30. India slips to 40th spot in world competitiveness ranking](#)

Source: The post is based on the article “**India slips to 40th spot in world competitiveness ranking**” published in **India Today on 29th June 2023**

What is the News?

The International Institute for Management Development (IMD) has released the World Competitiveness Ranking 2023.

What is the World Competitiveness Ranking?

The World Competitiveness Ranking is a comprehensive annual report and worldwide reference point on the competitiveness of countries.

It analyzes and ranks countries according to how they manage their competencies to achieve long-term value creation.

It evaluates countries based on four key factors: economic performance, government efficiency, infrastructure and business efficiency.

What are the key findings of World Competitiveness Ranking?

Top three countries: Denmark, Ireland and Switzerland have been named the top three among 64 economies.

India: India has been ranked 40th. India has slipped three spots from the previous year but has improved from its 43rd rank in 2019-2021.

Observations made on India: India has witnessed improvements in government efficiency but slightly underperformed in business efficiency, infrastructure, and economic performance when compared to other countries.

– The top three contributing factors that positively impacted India’s score are: Exchange rate stability, compensation levels, and advancements in pollution control.

– **Challenges for India:** Sustaining high GDP growth, managing financial market volatility, controlling inflation and fiscal deficit, accelerating digital transformation and mobilizing resources for infrastructure development.

[31. India, Philippines to explore scope of joint sales, patrols to boost defence partnership](#)

Source: The post is based on the article “**India, Philippines to explore scope of joint sales, patrols to boost defence partnership**” published in **The Hindu on 29th June 2023**

What is the News?

The 5th India-Philippines Joint Commission on Bilateral Cooperation meeting was held recently.

What are the key highlights from the India-Philippines meeting?

Defence: India has offered the Philippines a Line of Credit (LoC) to help it meet its defence requirement.

– India will also be opening a resident Defence Attaché office in Manila.

Note: A defence attaché (DA) is a member of the armed forces who serves in an embassy as a representative of his/her country’s defence establishment abroad and in this capacity enjoys diplomatic status and immunity. The DA is usually responsible for all aspects of bilateral military and defence relations.

Economy: The two countries signed a bilateral MoU for the constitution of a Joint Working Group (JWG) on Fintech, which would provide the institutional framework for cooperation on digitization of payments, direct benefit transfer using National ID and financial inclusion.

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Science and Technology cooperation: Both countries discussed domains including cyber security, artificial intelligence, and space cooperation. A new issue that was discussed was cyber trafficking.

[32. India's largest radio telescope plays vital role in detecting universe's vibrations](#)

Source: The post is based on the following articles:

– **“India slips to 40th spot in world competitiveness ranking”** published in **The Hindu on 30th June 2023**

– **“Indian telescope & astronomers help global team hear ‘humming of gravitational waves’”** published in **TOI on 30th June 2023**

What is the News?

India's Giant Metrewave Radio Telescope (GMRT) was among the world's six large telescopes that played a key role in providing evidence confirming the presence of gravitational waves.

What is the Giant Metrewave Radio Telescope (GMRT)?

GMRT is a low-frequency radio telescope that helps investigate various radio astrophysical problems ranging from nearby solar systems to the edge of the observable universe.

Located at: Pune, Maharashtra

Operated by: National Centre for Radio Astrophysics (NCRA), a part of the Tata Institute of Fundamental Research, Mumbai.

What are Gravitational waves?

[Click Here to read](#)

How did the researchers confirm the presence of gravitational waves?

An international team of astronomers were able to detect the low-frequency ripples created by the gravitational waves for the first time after years of research.

These ripples were observed using the world's largest radio telescopes including India's Giant Metrewave Radio Telescope (GMRT).

These telescopes studied signals from dead stars which are known as pulsars.

Pulsars are also known as cosmic clocks. They are rapidly spinning neutron stars that send out radio signals at regular intervals which are seen as bright flashes from the Earth.

As these signals are accurately timed, there is a great interest in studying these pulsars and to unravel the mysteries of the Universe.

Researchers while observing signals from pulsars found that some signals arrive early while others, with a slight delay (less than a millionth of a second).

These nano-hertz signals were heard as humming from the Universe. Researchers said that this was caused due to the presence of gravitational waves and due to signal irregularities emerging from pulsars.

Why is this discovery significant?

The discovery is a significant breakthrough in understanding the gravitational wave spectrum and it has opened a new window of exploration in astrophysics. It has also deepened the understanding of the Universe and is a great example of the power of international collaboration.

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[33. Mahila Samman Savings Certificate, 2023](#)

Source: The post is based on the article “**Public Sector Banks and eligible Private Sector Banks authorized to implement and operationalise Mahila Samman Savings Certificate, 2023**” published in **PIB on 1st July 2023**

What is the News?

The Department of Economic Affairs, Ministry of Finance has permitted all Public Sector Banks and eligible Private Sector Banks to implement and operationalise the Mahila Samman Savings Certificate, 2023.

What is Mahila Samman Savings Certificate Scheme?

Mahila Samman Savings Certificate is a one-time savings scheme for women.

The scheme was announced in the Union Budget FY 2023-24 to provide financial security to every girl and woman in India.

Key Features of the Mahila Samman Savings Certificate Scheme:

Who can open the account? An account under this scheme can be opened by a woman for herself or by the guardian on behalf of a minor girl child.

Tenure: An account can be opened under this scheme on or before March 31, 2025, for a tenure of two years

Interest rate: The deposit made under MSSC will bear interest at the rate of 7.5% per annum which will be compounded quarterly.

Limit on minimum and maximum investment: Minimum of ₹1000 and any sum in multiple of 100 may be deposited within the maximum limit of ₹200,000.

Maturity of the investment under this scheme is two years from the date of opening of the account under the scheme.

Partial withdrawal upto 40% of eligible balance can be availed after the expiry of one year from the date of opening of the account

Significance of the scheme: This scheme is a commendable initiative by the Government to empower women and promote their financial independence.

– As the scheme yields high returns on investment in a short span of 2 years, it will definitely increase women investors especially in rural areas.

[34. Government to Develop National Maritime Heritage Complex in Lothal, Gujarat for an estimated cost of ₹4,500 Cr.](#)

Source: The post is based on the article “**Government to Develop National Maritime Heritage Complex in Lothal, Gujarat for an estimated cost of ₹4,500 Cr.**” published in **PIB on 1st July 2023**

What is the News?

The Central Government will be holding a meeting to review the progress in the construction of the National Maritime Heritage Complex (NMHC).

About National Maritime Heritage Complex (NMHC):

National Maritime Heritage Complex (NMHC) is being developed at Lothal, Gujarat.

Developed by: Ministry of Ports, Shipping and Waterways under the **Sagarmala programme.**

Features: The complex will include the world’s highest lighthouse museum and world’s largest open aquatic gallery.

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– It will also have several innovative and unique features such as Lothal mini recreation to recreate Harappan architecture and lifestyle; four theme parks – Memorial theme park, Maritime and Navy theme park, and Climate theme park.

Significance: It will be a one of its kind project to not only display India's rich and diverse maritime heritage and also help Lothal to emerge as a world-class international tourist destination.

— This project will also provide tremendous job opportunities to the local people and will transform the socio-economic condition of the entire region.

What is Lothal?

Lothal was one of the southernmost sites of the Indus Valley civilization, located in the Bhāl region of what is now the state of Gujarat. The port city is believed to have been built in 2,200 BC.

The meaning of Lothal (a combination of Loth and (s) thal) in Gujarati is “the mound of the dead”.

– **Note:** The name of the city of Mohenjo-Daro (also part of the Indus Valley Civilisation, now in Pakistan) means the same in Sindhi.

Archaeologist **SR Rao** led the team which discovered Lothal.

Features: Lothal was a symbol of India's maritime power and prosperity. It was also a thriving trade center in ancient times, with its trade of beads, gems, and ornaments reaching West Asia and Africa.

– It also had the world's earliest known dockyard, connecting the city to an ancient course of the Sabarmati River.

Lothal was **nominated in 2014 as a UNESCO [World Heritage Site](#)**, and its application is pending on the tentative list of UNESCO.

35. [Centre to Issue Norms Against 'Dark Patterns' in Online Advertisements](#)

Source: The post is based on the following articles:

– **“Centre to issue norms against ‘dark patterns’ in online advertisements”** published in **The Hindu on 1st July 2023**

– **“Department of Consumer Affairs urges online platforms to refrain from adopting ‘dark patterns’ harming consumer interest”** published in **PIB on 1st July 2023**

What is the News?

The Central Government has said that strict action will be taken against online players if they do not stop the menace of ‘dark patterns’.

What are Dark Patterns?

Dark Patterns involves using a design and choice architecture to trick, coerce or influence consumers to make choices not in their best interest.

What are some examples of Dark Patterns?

False Urgency: This tactic creates a sense of urgency or scarcity to pressure consumers into making a purchase or taking action.

Basket Sneaking: Websites or apps use dark patterns to add additional products or services to the shopping cart without user consent.

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Subscription Traps: This tactic makes it easy for consumers to sign up for a service but difficult for them to cancel it, often by hiding the cancellation option or requiring multiple steps.

Forced Action: This involves forcing consumers into taking an action they may not want to take, such as signing up for a service in order to access content.

Bait and Switch: This involves advertising one product or service but delivering another, often of lower quality.

Hidden Costs: This tactic involves hiding additional costs from consumers until they are already committed to making a purchase

Disguised Ads: Disguised ads are advertisements that are designed to look like other types of content, such as news articles or user-generated content.

What are the measures the Government of India is taking against Dark Patterns?

Engaging in such deceptive and manipulative conduct by using dark patterns in online platforms constitutes 'unfair trade practice' under the [Consumer Protection Act, 2019](#).

Consumers can report instances of 'dark patterns' or provide feedback and report such manipulative online practices on the National Consumer Helpline (NCH).

The Centre has also constituted a 17-member task force to prepare guidelines on protecting consumers against dark patterns.

36. [CERT-In issues "Guidelines on Information Security Practices" for Government Entities for Safe & Trusted Internet](#)

Source: The post is based on the article **"CERT-In issues "Guidelines on Information Security Practices" for Government Entities for Safe & Trusted Internet"** published in **PIB on 1st July 2023**

What is the News?

Indian Computer Emergency Response Team (CERT-In) on Friday issued "Guidelines on Information Security Practices" for government entities for safe and trusted Internet. The guidelines have been issued under section 70B of the Information Technology Act, 2000.

What is the purpose of Guidelines on Information Security Practices for Government Entities?

The guidelines are a roadmap for government entities and industries to reduce cyber risk, protect citizen data and continue to improve the cybersecurity ecosystem in the country.

The guidelines will apply to all Ministries, Departments, Secretariats, and Offices specified in the First Schedule to the Government of India (allocation of business) Rules, 1961, along with their attached and subordinate offices.

What are the key guidelines issued by CERT-In?

MAKING FOOLPROOF

- Report security breaches within six hours of being noticed
- Mandatory cyber security audits every six months
- Employees to be logged out when inactive for more than 15 minutes
- Admin access to system only with the approval of chief information security officer

Source: Business Standard

Firstly, Government organizations should mandatorily report cyber incidents to CERT-In within six hours of noticing them, as private entities do. They must do so even if third parties flag such incidents. The information shall be shared with stakeholders like sectoral CERTs and regulators.

Secondly, Government offices need to conduct an internal and external audit of their entire cyber infrastructure and deploy appropriate security controls based on the audit.

– Internal information security audits shall be conducted at least once in six months, while third-party security audits need to be conducted annually.

Thirdly, Government organizations need to appoint a Chief Information Security Officer (CISO) who would be accompanied by a dedicated cybersecurity team, separate from the IT operations team.

Fourthly, Government employees can now use only standard user (non-administrator) accounts for accessing the computers for regular work. Admin access will be given to users only with the approval of the chief information security officer (CISO).

Fifthly, Government bodies shall maintain an inventory of authorized hardware and software for their organization, along with a mechanism for automated scanning to detect any unauthorized device or software.

Lastly, the guidelines recommend the use of complex passwords with a minimum length of 8 characters; Never store any usernames and passwords on the Internet browser; and do not store any payment-related information on the Internet browser.

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[37. India backs 2016 ruling favouring the Philippines in South China Sea](#)

Source: The post is based on the article “**India backs 2016 ruling favouring the Philippines in South China Sea**” published in **The Hindu on 1st July 2023**

What is the News?

India has asked China to abide by the 2016 arbitration decision, which had ruled in favour of the Philippines and rejected China’s territorial claims in the South China Sea.

Background:

In 2013, the Philippines instituted an arbitration proceeding against China in the Permanent Court of Arbitration under the UN Convention on the Law of the Sea (UNCLOS).

The arbitration tribunal ruled in favour of the Philippines in 2016, but this was rejected by China, which had called it “null and void”.

China, which claims rights to most of the South China Sea up to the [nine-dash line](#) has become more assertive in recent years leading to flare-ups in the region.

What is the stand of ASEAN on the territorial claims of the South China Sea?

ASEAN does not have a common stance on issues related to China’s claims on the [South China Sea](#) due to differing views of its member nations.

What is India’s stand on the 2016 arbitration decision by the South China Sea?

India’s response in 2016 had been a cautious one, having merely “noted” the arbitration decision. This has remained India’s position till recently.

Now the joint statement issued by India and the Philippines marks the first time India has explicitly called upon China to adhere to the arbitration ruling, despite China’s persistent dismissal of its validity.

[38. After stock limits, India to import 12 lakh tonnes of tur dal to keep prices in check](#)

Source: The post is based on the article “**After stock limits, India to import 12 lakh tonnes of tur dal to keep prices in check**” published in **The Hindu on 1st July 2023**

What is the News?

India will be importing 12 lakh tonnes of the Tur Dal in the current fiscal, up by 35% from the last year, to boost domestic availability and contain price rise.

Why have Tur Dal prices increased?

Low Domestic Production: Tur Dal (pigeon peas) has low domestic production in 2022-23. It has remained at 30 lakh tonnes in the 2022-23 crop year (July-June) against 39 lakh tonnes last year.

Hoarding by traders and alleged cartelisation in imports also contribute to price rise.

Note: Hoarding is the purchase and warehousing of large quantities of a commodity with the intent of benefiting from future price increases.

– A cartel is an organization created between a group of producers of a good or service to control supply or to regulate or manipulate prices.

What are the measures the government of India is taking to control Tur Dal prices?

Central government has imposed stock limits on tur dal till October 31 to bring down the prices.

It has also decided to offload 50,000 tonnes from the buffer stock in the market.

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The Department of Consumer Affairs has announced the formation of a committee to monitor the stock of Tur held by various entities such as importers, millers, stockists, traders, and others.

To facilitate smooth and seamless imports, the government has removed the 10% duty applicable for Tur imports from non-Least developed countries(LDC) countries.

39. Sick sea lions washing ashore in California due to algae bloom

Source: The post is based on the article “**Sick sea lions washing ashore in California due to algae bloom**” published in **The Hindu on 29th June 2023**

What is the News?

Hundreds of sea lions are found dead or sick on California beaches due to toxic offshore algae blooms.

What are Sea Lions?

Sea Lion is a marine mammal in the scientific group pinniped, meaning “wing foot” or “feather foot”. They belong to the family Otariidae.

They are known for their semi-aquatic lifestyle, spending a significant amount of time both on land and in the water.

They are carnivores, eating fish, squid, crabs, and clams. The largest species, the northern sea lion also eats seals.

Currently, there are six subspecies of sea lions: Australian sea lions, California sea lions, Galápagos sea lions, New Zealand sea lions, South American sea lions, and Steller sea lions.

What is Algal Bloom?

An algal bloom or algae bloom is a rapid increase or accumulation in the population of algae in freshwater or marine water systems. It is often recognized by the discoloration in the water from the algae’s pigments

Algal Bloom is a natural phenomenon, but can also occur because of human causes such as climate change and an excess of nitrates washed out to sea.

Algal blooms cause the production of a neurotoxin called domoic acid.

While some marine life is not affected at all by domoic acid, the neurotoxin can accumulate in animals lower on the food chain and affect those higher up who are feeding on the filter fish that count algae as their main food source.

Sea lions, who eat huge amounts of filter fish or other organisms, seem to be especially susceptible to domoic acid as a neurotoxin.

Note: Humans are unaffected unless they eat infected shellfish.